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The Relationship between Body Art, Temperament and Risky Behavior

among the Lebanese Culture

Isabelle Matossian

A Thesis submitted to the Faculty of Social & Behavioral Sciences in partial fulfillment of the requirements for the Master of Arts degree in Psychology – Emphasis Clinical at Haigazian University.

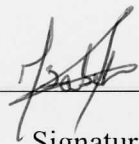
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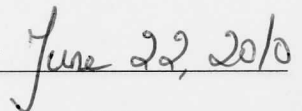
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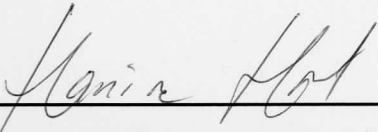
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The Relationship between Body Art, Temperament and Risky Behavior
among the Lebanese Culture

Isabelle Matossian


Approved by:



Dr. Hanine Hout, Ed.D., Advisor



Dr. Marwan Gharzeddine, Ph.D., Reader



Dr. Daoud Tawil, Ph.D., Reader

DEDICATION

To all artsy people in Lebanon

Acknowledgement

I would like to express my deepest gratitude and recognition to my Professors Dr. Hanine Hout, Dr. Marwan Gharzeddine, and Dr. Daoud Tawil for all the years of knowledge, inspiration, and light, and for their continuous support, guidance, and feedback in this thesis.

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ABSTRACT

The present study examined the relationship of body art – tattoos and piercings- and temperament to involvement in risky behavior on a sample of Lebanese people between the ages of 15 and 35 ($N = 104$). In addition, this study investigated the effect of gender in involvement in risky behavior. The study relied on self-report measures where participants were asked to provide demographic and body art related information, and fill two questionnaires: the Cognitive Appraisal of Risky Events (CARE) and the Temperament Evaluation of Memphis, Pisa, Paris and San Diego Auto-questionnaire (TEMPS-A). Results were computed to assess correlates (of body art and risky behavior, as well as temperament and risky behavior), and T-test was performed to detect differences between means of males and females. The results of the study showed that there were no correlations between number of piercing and involvement in risky behavior, tattoos only correlated with heavy drinking but not with the rest of risky behaviors – illicit drug use, risky sexual activities, and academic behavior-. Results also showed that gender is a variable that positively predicts involvement in risky behavior. In addition, the results of the study showed that hyperthymic temperament is not correlated to heavy drinking, risky sexual activity, and involvement in body art, and that irritable temperament is not correlated to illicit drug use and heavy drinking. In conclusion, this study did not support the existing literature on the association between body art, temperament and risky behavior among the Lebanese sample.

The Relationship between Body Art, Temperament, and Risky Behavior among Lebanese Population

“Tattoos and piercings have been around since before Christ and are still to this day highly recognized form of acceptance in the generation we live in.” (“Nature and perception,”).

The art of tattooing and body piercing is becoming increasingly common in the Lebanese culture. Today, more and more teens, adolescents, and adults of all ages, socioeconomic status, and levels of educational background permanently ink their skins with symbols and unique designs, and pierce different parts of their bodies.

Despite the increase of body art in different cultures and among educated people, tattoos and piercings continue to carry a stigma associated with deviance and risky behavior (Kahl).

In today’s society, people with tattoos and body piercings are perceived negatively as demonic, unprofessional, and aggressive, and judged to be people full of involvement in illegal and risky behaviors (“Nature and perception,”).

Past studies have revealed a positive relationship between participation in body art and risky behavior -among adolescents, college students, and adults-, such as illegal drug use, cigarettes, alcohol, driving while intoxicated, and unsafe sexual practices (Finkel & Burger, 2002; Carroll, Riffenburgh, Oberts, & Myhre, 2002). However, there is no available research investigating the relationship between body art and involvement in risky behavior in Lebanon.

The present study bridged this gap in the literature by examining participation in body art and involvement in risky behavior among the Lebanese people. It also investigated the effect of

temperament on involvement in risky behavior, as well as the role of gender, age, and number of tattoos and piercings in the involvement of risky behavior.

Background of the Study

Body Art (i.e., tattoos and body piercings) is not a new product of history. Its practice has been around the world for thousands of years (Burger & Finkel, 2002). Grappling with the metaphysical importance of symbols, people in tribes and villages have wanted to make symbols on themselves from as far back as 1.5million years ago (Rush, 2005).

The 1990s saw the dramatic rise of spectacular forms of body modification, which included the tattoo renaissance and the rise in body piercing (Burger & Finkel, 2002). According to cultural anthropologist, John A. Rush, people physically alter their bodies for spiritual growth, rite of passage, group identification, social control, or peer conformity (Rush, 2005). Other researchers claim that youths pierce and ink their skins for many common reasons that range from achieving a sense of independence and social identity, to expressing their personal views to the world and communicating their thoughts and emotions visually (Burger & Finkel, 2002).

Despite all the increases in the popularity of body modification in the past decades, and regardless of what the reasons behind involvement in body art are, previous studies have revealed a positive correlation between risky behaviors (such as the use of drugs, cigarettes, and alcohol) and participation in body modification (Roberts & Ryan, 2002; Stephens, 2003; Conklin, 2010). Community publications, articles in popular magazines, and numerous researches discuss the relation between tattoos and piercings, and risky behavior among college students and adults. For instance, Forbes (2001) found an association between tattoos and piercings and risk-taking behavior such as great use of alcohol and marijuana, and less social

conformity. Burger and Finkel (2002) found that students with body modifications were more likely to engage in high-risk behaviors such as drunk driving and unsafe sex, than those without body modifications.

Some medical literature on tattooing and body piercing have focused on the risks of these procedures, and the behavioral surveys have revealed increases in sexual risk-taking behavior associated with body piercing, and increases in violent and problem behavior associated with tattoos (Carroll et al., 2002).

The Department of Pediatrics in Naval Medical Center San Diego, assessed tattoos and body piercings as markers of risk-taking behaviors in adolescents. This study found that those with body art were more likely to have engaged in risk-taking behaviors and at greater degrees of involvement than those without either. The risk-taking behaviors investigated included disordered eating behavior, gateway drug use, hard drug use, sexual activity, and suicide (Carroll et al., 2002).

Many researchers state that there is a strong correlation between risk taking behavior and the quantity of the person's tattoos and body piercings (Sheehan and Manuel, 2007). According to Carroll et al., hard drug use was associated with number of body piercing.

As far as gender is concerned, body art has caught on with both genders. However, men and women vary dramatically in their choices of tattoo designs and piercing locations, and women have more piercings in multiple places than men, whereas men have more tattoos (Nordile, 2004). The UF study found that men scored higher than women on sensation seeking tendencies and involvement in extreme sports, illicit drug use, & dangerous driving (Nordile, 2004).

Other studies on gender differences and involvement in risky behavior reported that males score higher on risky behavior scale than females (Drews, Allison, & Probst, 2000); Violence was associated with males having tattoos and with females having body piercings; Suicide was associated with females having tattoos and younger age of both tattooing and body piercing; Tattoos and body piercings were found to be more common in females than males (Carroll et al., 2002).

On another level, personality's relationship to risky behavior and body modification was also studied, leading to the evolution of many theories. Some researchers focused on comprehensive assessment of personality and misbehavior and their respective relationships to body art (Nathanson, Paulhus, & Williams, 2003), others focused on personality differences between body-modified and non-modified individuals (Wohlrab, Stahl, Rammsayer, & Kappeler, 2007). It is also worth mentioning that as far as risky behavior and personality is concerned, many researchers state the importance of genetics and environment. For instance, Zietsch, Verweij, Bailey, Wright, & Martin, 2010, found a link between risky sexual behavior, genetics, and personality.

As for the role of temperament in involvement in risky behavior, several studies have assessed underlying temperamental characteristics and their relation to substance use, alcohol, and risky sexual behaviors. Results indicated that adolescents with irritable and hyperthymic temperaments experienced high levels of alcohol use and substance abuse. However, no direct significant relationships were found between risky sexual behaviors and specific temperaments (Moore et al., 2005; Wills & Dishion, 2004; Colder & Chassin, 1997).

As mentioned above, past studies have revealed a positive relationship between participation in body art and risky behavior, and stated the role of gender, quantity of tattoos and piercings, and the role personality in risky behavior and body modification. However, to our knowledge, the field of body art and risky behavior is not studied in Lebanon, and moreover there are no studies linking temperament to risky behavior.

Statement of the Problem

In light of the above mentioned research, the purpose of this study was to investigate the relationship between participation in body art and involvement in risky behavior in Lebanon. In addition, this study investigated the effect of temperament on involvement in risky behavior. Finally, the role of gender, tattoos and piercings were also studied in how they differ in the involvement of risky behavior.

More specifically and taking into account the relevant literature, the following hypotheses were tested:

1. There is a positive relation between number of piercings and involvement in risky behavior.
2. There is a positive relation between tattoos and each of illicit drug use, risky sexual activities, academic or work behaviors, and heavy drinking.
3. Male participants score higher on illicit drug use, heavy drinking, and high risk sports subscales in the Past Frequency CARE scale than female participants.
4. Irritable temperament correlates positively with each of illicit drug use and heavy drinking.

5. Hyperthymic temperament correlates positively with each of heavy drinking and risky sexual activity.
6. Body art is positively correlated with hyperthymic temperament.

The Professional Significance of the Study

A large number of research studies have examined the relationship between body art and risky behavior; however, there was no available research in this field targeting the Lebanese people. Therefore, the significance of this study is that it is the first initiative taken to assess the association between body art and risky behavior in Lebanon. In addition, this study investigated the effect of temperament on involvement in risky behavior. This was done by using a new scale, the Temperament Evaluation of the Memphis Pisa Paris and San Diego Auto questionnaire (TEMPS-A).

Since TEMPS-A focuses on a dimension of personality that is not influenced by the environment, clinicians can use this information about temperament and risky behavior without any need to control for environmental changes. Identifying the role of affective temperaments in involvement in risky behavior helps in understanding how and why individuals get involved in specific risky behaviors, and allows counselors, health psychologists, and others to take into consideration which intervention would be appropriate for each health risk behavior, and therefore to provide the right counseling advice and therapy approaches.

Studies on tattoos and body piercing might represent and provide useful insights into adolescent risky behavior such as drug and alcohol use in Lebanon, and therefore can alert practitioners to the possibility of other risk-taking behaviors in adolescents. So when any kind of body art –tattoo or piercing- is encountered during a routine clinical examination, the physician

should/can use this information to ask further questions to the client and prompt in-depth assessment for high-risk behaviors, to specifically examine potential patterns of risky behavior, especially drug and alcohol use, and therefore, provide targeted preventive counseling measures.

Tattoo and body piercing discovery can also be an important part of a health maintenance visit to best direct adolescent medical care. Finally, this study can also set a point of reference for future studies on risky behaviors in the country.

Therefore, this study bridged this gap in the literature by examining randomly chosen young people between the ages of 16 and 35 with body art and their involvement in risky behavior. Furthermore, this study investigated the temperament of these participants to see if different styles of temperament would mediate the relationship between participation in body art and involvement in risky behavior.

Overview of Methodology

The present research was quantitative in nature. The research design was non-experimental and correlational as it studied the relationship between the presence of body art – tattoos and piercings- involvement in risky behaviors, and temperament. It relied on correlation analysis, t-test, and self-report measures where participants were asked to provide demographic and body art related information, and fill two questionnaires: the TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Auto –questionnaire) and the Cognitive Appraisal of Risky Events (CARE).

Definition of Terms

Body Art: Body art is a type of art made on the human body. The most common forms of body art are tattoos and body piercings. Other types include scarification, branding, and painting. (The Concise Oxford Dictionary of Art and Artists).

Tattoo: The word tattoo comes from Tahitian ‘tatu’ which means to mark something. It is originally called painting or staining. Tattoos are created by permanent injection of ink into the skin, using a sharp instrument (www.medterms.com).

Body piercing: Body piercing is the practice of adorning the body with jewelry or ornamentation by piercing a hole into the flesh (as in earlobe) (www.WordReference.com).

Risky behavior: Risky behavior refers to any kind of behavior that involves heavy drinking, illicit drug use, risky sexual activities with new and regular partners, aggressive and illegal behaviors, high risk sports, and academic / work behaviors (Fromme, Katz, & Rivet, 1997).

Academic or work behaviors: Refers to skipping classes or work, and getting low grades (Fromme, Katz, & Rivet, 1997).

CARE: The Cognitive Appraisal of Risky Events (CARE) is a 30-item measure that assesses risks involved in an individual’s behavior. The 30 items reflect six factors. Illicit Drug Use, Aggressive an Illegal Behavior, Risky Sexual Activities, Heavy Drinking, High Risk Sports, and Academic or Work Behaviors. (Fromme et al., 1997).

Temperament: Temperament refers to our inborn or innate rather than learnt personality traits; these traits are genetic in nature and appear to be stable across an individual’s life span (www.moodtreatmentcenter.com/temperament).

Depressive temperament: Depressive temperament is a type of affective temperament which includes traits as dejection, gloominess, cheerlessness, joylessness, unhappiness, inadequacy, worthlessness, low self-esteem, pessimism, guilt feelings, remorse, self-blame, self-criticism, judgmental towards others, and need of more than 9 hours of sleep (Akiskal, 1989).

Cyclothymic temperament: Cyclothymic temperament is a type of affective temperament characterized by periodic changes in mood and behavior (passionate involvement in activities then loss of joy in life), thinking (sharpened and creative thinking followed by periods of confusion and apathy), sleep (decreased need followed by increased need for sleep), energy levels, self-esteem (grandiose overconfidence alternating with lack of self-confidence), work (uneven work record), romantic failure (uninhibited people-seeking alternating with introverted self-absorption), episodic pattern of substance use, etc. (Akiskal et al., 1979).

Anxious temperament: Anxious temperament is a type of affective temperament characterized by traits such as worrying and anxiety expressed as somatic symptoms such as headaches, pain, and nausea (Akiskal, 1989).

Hyperthymic temperament: Hyperthymic temperament is a type of affective temperament characterized by cheerful, exuberant, upbeat, optimistic, over energetic, overconfident, vivid, active, extroverted, verbally aggressive, self assured, self-employed, strong-willed, risk-taking, sensation-seeking lifelong traits. Individuals with hyperthymic temperament have great relevance to territoriality and leadership, and are described as strong, productive, cheerful and joking; generous and spendthrift; expansive; robust and tireless; and pushy and meddlesome (Akiskal, 1989). **Irritable temperament:** Irritable temperament is a type of affective temperament characterized by being irritable, impulsive, edgy, jealous, skeptical, scientific, protective, and

mistrustful of others **TEMPS-A**: The Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Auto-questionnaire, is a 87-item self-filled instrument that measures level of temperament. The instrument consists of five subscales that correspond to five types of affective temperaments: depressive, hyperthymic, cyclothymic, irritable, and anxious type (Akiskal et al., 2005).

Delimitations

This study was not representative of the whole Lebanese population as it was conducted only in Beirut.

CHAPTER 2

Review of Literature

The aim of this chapter was to give an overview of what has been studied and discussed so far in the literature of body art –tattoos and piercings- and its relation to risky behavior and temperament.

History of Body Art in Ancient Times

Body art -tattoos and piercings- is considered to be the most primitive kind of body modification in the history of mankind. It has a cultural history of different tribes, who used body art for different reasons or cultural rituals ("The History of,").

Tattoos

“The word tattoo is derived from the Tahitian word ‘ta-tau’, which means ‘to mark something’. It is originally called ‘painting’ or ‘staining’.” Tattoos are considered to be permanent form of body art, which come in different designs and patterns (Tattoos & Body Piercings).

In 1991, scientists found an Otzi frozen in a glacier between Italy and Austria, with a total of fifty-eight tattoos on his body. The Otzi, also known as Iceman, dates back to over 4,000 B.C. The tattoos consisted of simple dots and lines, without any clear images. The scientists explained them as a process involved in medical or spiritual healing ("The History of,").

In ancient times tribal tattoos were the earliest tattoos. These tribal drawings show that tattoos were practiced by different cultural tribes for different meanings, reasons, and expressions. The most artistic and original designs of tattoos of ancient times date back to the

Polynesian people, who covered their whole bodies with sophisticated, geometrical designs. The Polynesians tattooed their bodies for signs of beauty and strength. The South American tribes tattooed their bodies as a reminder of success and bravery in battle. In Mexico tattoos symbolized faith as the Mexicans tattooed their gods and idols on their skin. In Japan, tattoos were used for punishment. In England, Japanese artists tattooed the Royals with symbols of wealth and authority ("The History of,").

As for the native tribes, they practiced therapeutic tattooing. "The Ojibwa, for instance, tattooed the temples, forehead, and cheeks of those suffering from headaches and toothaches that were believed to be caused by malevolent spirits. Songs and dances that were supposed to exorcise the demons accompanied the tattooing ceremony." (Gilbert, Steve, *Tattoo History: A Source Book*, p.90)

Besides the signs of beauty, strength, success, bravery, wealth, authority, and therapeutic reasons, tattoos were also used as a mechanism of social control and punishment. For example, the Romans tattooed the foreheads of Christians as a punishment; During the Holocaust in Nazi in World War II, Jews were tattooed in concentration camps for identification purposes (Rush, 2005). As for the Greeks, "respectable Greeks did not indulge in decorative tattooing, which they associated with barbarians. The Greeks, however, learned the technique from the Persians, and used to mark slaves and criminals so they could be identified if they tried to escape." (Gillbert, Steve, *Tattoo History: A Source Book*, p.15)

According to some Biblical passages in the Old and New Testament, marks and writings on the body were used as a symbol of ownership or devotion to a master. For example, slaves

were pierced in their ears to symbolize permanent devotion and belonging to their master. Others received

marks on their foreheads or palms to denote a close relationship with and protection by God.

They believed these marks had the protective power to deliver them from the sword of the avenging angel. (Zelyck L., 2005).

Piercing

The word piercing refers to the practice of body piercing or cutting a part of the human body, to create an opening in which jewellery may be worn. Body piercing has been practiced in various forms by both sexes since ancient times throughout the world ("Wikipedia, the free,").

Many different cultures have a history of different kinds of piercing with different heritage and background. The oldest and most common type of piercing is the ear lobe piercing that was again found on Otzi, or the Iceman's ears. About 4,000 years ago, nose piercings were first discovered in the Middle East. As for the tongue piercing, the first tribes to practice it were the ancient Aztecs, Mayas, Kwakiutul, and Tlinglit tribes ("The History of,").

Just like tattoos, piercings were practiced by different cultural tribes for different meanings, reasons, and expressions. Rites of passage, adornment, sexual practices, and religious purposes were part of the reasons for piercing (Koeing & Carnes, 1999). In the Old Testament, body jewelry was considered a mark of beauty, wealth, status, and attractiveness, especially for Bedouin and nomadic tribes (Roberts, 2004). The ancient Aztecs, Mayas, Kwakiutul, and Tlinglit tribes, pierced their tongues as part of rituals to draw blood for the gods. Egyptian piercings reflected status and love of beauty. The Roman soldiers and warriors pierced their nipples to show strength, courage, and bravery, and also to hang on them the capes of their

leather breast plates while in battle. Eskimo men and women pierced their lips to increase the size of their lips (Stratton, 2008).

The only piercing that does not have any ancient cultural background is the navel or belly piercing (Stratton, 2008).

Body Art in Modern Times

Tattoos

Throughout the centuries/ in modern times, the drawings and meaning of body art changed. In the 1960s, the hippies introduced new drawings/images like butterflies, ying yang symbols, and peace signs in body art, and transformed the history of tattooing. For them body art was a symbol of “Flower Power” (Brill, 2006).

Nowadays, tattoos have invaded popular culture, and can be seen on celebrities, lawyers, professional athletes, and many people among different professions. “According to US News and World Report, tattooing is the country’s sixth fastest growing retail business and growing at the rate of one new tattoo parlor opening its doors every day” (Burger& Finkel, 2002).

Nowadays, getting a tattoo or a piercing is a completely volunteer choice, and the reasons for getting them vary from the reasons for the tribal tattoos, and also vary from one person to another. Common reasons for participation in body art are, self-expression, expressing personal meaning, doing something out of the ordinary, individuality, identity, or rebellion, and to attract attention to different parts of their bodies. Gang and prison members get inked and pierced as an expression of independence, defiance, or group belonging. They ink their skins with anything from skulls and cross bones to body art slogans, barcodes, animal, etc. (Brill, 2006).

Piercings

During the Dark Ages, interest in the practice of body piercing decreased as it was condemned by the medieval church, to be a sinful act. The Western civilization also abandoned the practice for a few hundred years. However, as the Renaissance period emerged, the interest in body piercing and its practice resumed, and became part of the mainstream Western culture again. Nowadays, body ornamentation is becoming more and more popular, and all the fashion or entertainment magazines have pictures of famous celebrities with body piercings (Roberts).

Though the interest in body piercing resumed during the Renaissance period, the reasons for getting pierced differed as compared to the reasons of old times. Nowadays, individuals pierce their bodies for decoration, beauty, attention, rebellious feeling, sexual pleasure, self-expression, and to look different, special, dangerous, and like a punk. Men and women wear many piercings on their ears - the most common pierced bodypart-, followed by piercings on the septum, the tongue, nose, eyebrow, and bellybutton ("The History of,").

In spite of all the history and reasons of body art, countless research has been conducted regarding body art and its association to risk taking, and a small amount of research has been done regarding body modified individual's temperament, and personality. Previous studies indicate that there is an association between having tattoos and risk-taking behaviors (Roberts & Ryan, 2002; Stephens, 2003; Sheehan & Manuel, 2007; Conklin, 2010).

Body Art and Risky Behavior

In April, 2001, a study performed by Dr. Timothy Roberts, a pediatrician at the University of Rochester Children's Hospital, was published. It was a comprehensive study and analysis of tattoos which focused on the detailed analysis of 6072 young people with tattoos,

between the ages of 11 to 21. The participants were from different ethnic groups, and economic and social backgrounds. This study showed that today's young people with tattoos engaged in sexual intercourse nearly four times more, were over two times more likely to experience alcohol related problems, express violent behavior, and drop out of high school, and used illegal drugs two times more. Therefore, the results of this study revealed that tattooing in adolescents was significantly associated with sexual intercourse, substance use, violence, and school problems, and it was concluded that permanent tattoos have strong associations with high-risk behaviors in adolescents (Roberts & Ryan, 2002).

Another research on analysis of tattoos and its association to risky behavior was conducted on young men and women entering military service. Controlling for age and gender, results showed that individual with tattoos were more likely to smoke, drink heavily (as in 5 or more drinks in one sitting), use smokeless tobacco, and ride in a vehicle with someone who had been drinking, than were non-tattooed individuals (Stephens, 2003).

A population based survey on assessment of piercing among adolescents as a marker for risk behaviors indicated that body piercing is a marker for risk behaviors for both males and females, and that there is an association between number of piercings and type of risky behavior. Having more than one piercing was associated with having multiple sex partners, marijuana use, and use of illegal drugs in females. As for males, multiple piercing was associated with increase in suicide attempts (Suris, Jeannin, Chossis, and Michaud, 2007).

Another survey conducted by sociologist Jerome Koch on 1,750 college students with both piercings and tattoos, concluded that people with fewer body art report lower levels of involvement in deviance as compared to those with multiple tattoos and piercings, and those

loaded up with 4 or more tattoos, 7 or more piercings, or piercings located in their private areas (nipples and/or genitals) were more prone to socially unacceptable behavior, like illicit drug use, binge drinking, arrests, use of bad language, academic problems (like cheating), and promiscuity/ having multiple sex partners (Conklin, 2010).

Research in the UK has found a relationship between tattoos and engaging in risky behavior among adolescents and adult males (Farrington, 1991, in Putnins, 1997, p.14).

Forbes (2001) found an association between tattoos and piercings and risk-taking behavior such as great use of alcohol and marijuana, and less social conformity. Burger and Finkel (2002) examined the association between participation in body modification and involvement in risky behaviors among a college student population. Results suggested that a positive relationship exists between body modification and very high-risk activities such as higher levels of alcohol risk and unsafe sex with strangers, and that males reported more participation in unsafe sexual practices and illegal drug use than females. Braithwaite et.al, (2001) examined the relationship of alcohol and drug use to tattoos and body piercing, and found that the highest reported substances used in this sample were alcohol and marijuana.

Body Art, Risky Behavior, and Gender

Research on body art has caught on with both genders and shown that the motivations of getting a tattoo or piercing, and their quantity, differ between males and females. As for research on gender differences in involvement in different kinds of risky behavior, research has also revealed differences within the sexes. Suris et al., (2007) reported that females with multiple piercings were more involved in having multiple sex partners, marijuana use, and use of illegal drugs. As for males, multiple piercing was associated with increase in suicide attempts.

The UF study on body art and gender preferences reported that women have more piercings in multiple places than men, whereas men have more tattoos. The study also found that men with tattoos or piercings scored higher than women on sensation seeking and new, unique, and intense life experiences, like involvement in extreme sports, illicit drug use, and dangerous driving. In other words, men were more likely than women to seek out new and intense experiences (Nordile, 2004).

In a study done by Drews, Allison, & Probst (2000), which specifically focused on behavioral and self-concept differences between tattooed and non-tattooed students, it was reported that concerning gender differences in risky behavior involvement, males had more sexual partners and arrests, and females had more shoplifting and drug use risky behaviors.

Another study on gender differences and involvement in risky behavior reported that *males score higher on risky behavior scale than females. As for violence, it was associated with males having tattoos and with females having body piercings* (Drews et al., 2000).

History of Temperament

Temperament refers to the innate style or “how” we react to internal and external stimuli. “Historically, the concept of temperament was part of the theory of the four humours, with their corresponding four temperaments. The concept played an important part in pre-modern psychology, and was explored by philosophers such as Immanuel Kant and Hermann Lotze.” (Wikipedia, the free encyclopedia).

In the second century, the four classical temperaments – melancholic, sanguine, phlegmatic, and choleric – based upon the four humours or bodily fluids, were described by the

physician Galen. They were based upon the four humorous or bodily fluids. People are a combination of many characteristics of several temperaments, but one kind of temperament usually predominates at any given time (*Wikipedia, the free encyclopedia*).

The Melancholic/black bile temperament is characterized by deep, solitary thinking, love of solitude and silence, introspection, compassion, perfectionism, and kindness. However, a melancholic has a tendency to become overly preoccupied with tragedy, sadness, and melancholy, and get easily discouraged from proceeding with things in life (Harris, 1998).

The Sanguine/blood temperament is characterized by being cheerful, optimistic, light-hearted, generous, sensitive to other's sufferings, docile, sincere, spontaneous, active and creative, and confident. A person of sanguine temperament can also be impulsive and confident, and react quickly and strongly to almost any situation, but the reaction is usually of short duration, and the stimuli are quickly forgotten (Harris, 1998).

The Phlegmatic temperament corresponds to people who are calm, relaxed, self-content, very consistent, kind, curious, and rational. The characteristics of a phlegmatic person make him a good administrator and diplomat. In the social life, the phlegmatic is a reliable, compassionate, and dependable friend (Harris, 1998).

The Choleric/yellow bile temperament the most memorable leaders were choleric. The choleric temperament refers to having great energy, activity, enthusiasm, ambition, keen intellect, and broad mindedness. But on the negative side, a choleric can be cold and heartless, easily angered, stubborn, and hypocrite (Harris, 1998).

Assessment of Temperament

The concept of temperament changed over the years due to all the advances in science and psychology, and lots of researchers focused on its definition and study in the last 50 years. According to Rothbart, Ahadi, & Evans (2000), temperament is biologically based and relatively stable across the life span. Thomas and Chess (1977), described temperament as having strong genetic and neurobiological basis. As for Emil Kraepelin, the German psychopathologist, he introduced the existence of four basic affective temperaments and listed them as: the depressive, cyclothymic, manic, and irritable (Akiskal, 2001).

Based on all the studies over the past 50 years, several scales were constructed to measure and assess temperament within the context of personality. Some of these scales were Cloninger's Tri-Dimensional Personality Questionnaire (TPQ) (Karam, Mneimneh, Salamoun, Akiskal, & Akiskal, 2005), Zuckerman et. al's five factor scale (Zuckerman, Kuhlman, Joireman et al., 1993), and Gray's two-factor scale (1970). Between the years 1977-1979, Akiskal et. al developed an instrument that measured four types of affective temperaments: depressive, hyperthymic, cyclothymic, and irritable, and later added to it the anxious type (Karam et al., 2005). More recently, a new instrument: the TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris and San Diego), was developed (Akiskal et. al, 2005b). this scale was a self-report version translated and validated in different languages- the Egyptian Arabic, the French, the German, the Turkish, the Japanese- to facilitate clinical and epidemiological research (Karam et. al, 2005).

Temperament and Risky Behavior

Identifying the role of temperament in involvement in risky behavior helps us in understanding the type of risky behaviors individuals choose. To our knowledge there are very few published articles that link temperament to risky behavior, more precisely, to substance use, risky sexual behavior, and alcohol use. In a study by Moore et al. (2005), 230 individuals were assessed for underlying temperamental characteristics, substance use, and risky sexual behaviors. Results indicated that “heavy users of cocaine, other stimulants, and alcohol were more likely to have an irritable-explosive temperament, and heavy users of opioids were more likely to show depressive and hyperthymic traits.” However, no direct significant relationships were found between risky sexual behaviors and specific temperaments. Colder & Chassin (1997), studied temperament and adolescent alcohol involvement by assessing effects of impulsivity, positive affectivity, and negative affectivity on adolescent alcohol use and alcohol-related impairment. Results showed that impulsive adolescents with low levels of positive affectivity experienced higher levels of alcohol use and alcohol related impairment as compared to non impulsive adolescents or impulsive adolescents with high positive affectivity. Several studies focused on temperament and alcohol abuse in young adulthood found that irritable, active, and impersistent temperament were related to alcohol abuse and substance use (Wills & Dishion, 2004).

Personality and Body Modification

Regarding personality and body modification, many articles have been published about the differences in personalities of body-modified (i.e. tattooed and/or pierced) and non-modified people, and about the association between different personality types and involvement in different kinds of risky behavior. Understanding these differences in personalities of people with

and without body art, and understanding the association between different personality types and involvement in risky behavior helps us in further investigating the role of temperament in involvement in risky behavior.

Cyders, Flory, Rainer, & Smith, (2009), conducted a research on the role of personality dispositions to risky behavior in predicting drinking among first year college students, and found that sensation seeking personality trait (the tendency to seek out novel and thrilling experiences), and positive urgency trait (the tendency to act rashly when experiencing extremely positive affect), are related to increases in the frequency and quantity of alcohol drinking.

Concerning differences in personality characteristics between body-modified and non-modified individual, Wohlrab et al., (2007) compared participants with and without body art (i.e. tattoos and piercings) with respect to demographic traits, the Big Five Inventory (to record basic personality dimensions), and Sensation Seeking Scale (as body modification by itself is counted as a risky event and extreme sensation seeking). Results indicated that modified and non-modified individuals did not differ in relation to demographic variables. However, striking differences were found in relation to personality. The findings suggested that individuals with body modification are greater sensation seekers and follow a more unrestricted mating strategy than their non-modified contemporaries.

Personality and Risky Behavior

Research on body piercing, personality, and sexual behavior has reported that women with body piercings compared to others without piercings were more likely to have personality traits of low constraint or high negative emotionality, and reported greater frequency of sexual activity with many sexual partners (Skegg et al., 2007).

Research on Personality correlates of tattooing and body piercing in a college sample revealed that compared to their non-tattooed counterparts, tattooed participants scored significantly lower on agreeableness and conscientiousness, and significantly higher on need for uniqueness. As for body pierced participants, they scored significantly lower on conscientiousness and significantly higher on openness to experience, when compared to their counterparts (Tate & Shelton, 2008).

Another study evaluated the importance of personality characteristics in influencing young girls' (fifth graders) tendency to participate in health-compromising behaviors, and found that unconscientious and disagreeable girls were susceptible to participation in risky behaviors (Markey, Markey, & Tinsley, 2003).

Manuel and Shehhan (2007) assessed the personalities as well as the participation of college students with tattoos or piercings in risk taking behavior, and found that women with tattoos scored higher on impulsivity, men with piercings scored significantly higher on exhibitionism and sensation seeking, and significantly lower on harm avoidance, and women with piercings scored significantly higher on social recognition (Manuel & Sheehan, 2007).

Purpose of the study and hypotheses

The objective of the present study was to investigate the association between body art, temperament, and involvement in different kinds of risky behavior in Lebanon. Based on the results of previous western studies of body art, temperament, and risky behavior, the study aimed at investigating the following:

1. There is a positive relation between number of piercings and involvement in risky behavior.

2. There is a positive relation between tattoos and each of illicit drug use, risky sexual activities, academic or work behaviors, and heavy drinking.
3. Male participants score higher on illicit drug use, heavy drinking, and high risk sports subscales in the Past Frequency CARE scale than female participants.
4. Irritable temperament correlates positively with each of illicit drug use and heavy drinking.
5. Hyperthymic temperament correlates positively with each of heavy drinking and risky sexual activity.
6. Body art is positively correlated with hyperthymic temperament.

CHAPTER 3

Method**Participants**

One hundred and four participants (60 males, 44 females) participated in the current study. Armenian Lebanese participants represented 18.3 % (N = 19) of the sample, and the Lebanese participants represented 81.7% (N = 85) of the sample. The age range was between 17 and 38, with a mean age of 25.46 (SD=4.124). The religion distribution was 68.3% Christian (N = 71), 20.2% Muslim (N = 21), and 11.5 % Druze (N = 12). The sample had diversity of academic ranks: 18.3% high school (N = 19), 20.2% undergraduates (N = 21), 43.3% graduates with B.A. (N = 47), and 18.3% graduates with M.A. (N = 17). The majority of the sample (70.2%) indicated they were single (N = 73), 15.4 % were in a relationship (N = 16), 3.8 % were engaged (N = 4), and 10.6 % were married (N = 11). Of the total sample, the minimum number of tattoo was one, the maximum 10, and as for the piercing, the minimum number of piercing was one, and the maximum 26. The age at first tattoo ranged from 12 to 31 years and the age at first piercing ranged from 14 to 30 years. All individuals with one or more tattoos and piercings were considered to have a body modification. Pierced earlobes in women, regardless of the number, were not considered in the analyses because of their wide cultural acceptance. However, men with pierced earlobes were considered in the analyses. All participants in this study were volunteers.

Materials/ instruments

In addition to typical demographic data, participants were asked to list the number of tattoos and number of piercings they had, and mention the reasons for getting them (appendix A).

The TEMPS-A and the CARE. The TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Auto –questionnaire, appendix B) is a 87 true/false items questionnaire that measures level of temperament. The instrument consists of five subscales that correspond to five types of affective temperament scales: depressive (15 items), hyperthymic (19 items), cyclothymic (13 items), irritable (17 items), and anxious (23 items). The TEMPS-A Inventory has been used extensively in Lebanon since February, 2005.

The Cognitive Appraisal of Risky Events (CARE, appendix C) (Fromme, K., Katz, E.C., & Rivet, K. 1997), which is a 30-item measure that assesses risks involved in an individual's behavior. The risk preferences are divided into six domains. The six risk-variables assessed using the CARE in the current study were: illicit drug use, drinking behavior, risky sexual activities, aggressive and illegal behaviors, high risk sports, and academic / work behaviors, over the past six month period. The past frequency scale of CARE was used in the current study. Participants had to mention the number of times they engaged in each risky behavior in the past six months.

Variables to study

All the variables were transferred and analyzed on SPSS version 16.0. Descriptive analyses included means with standard deviation and percentages. T-test was performed to assess differences between means of genders. Bivariate Pearson correlations were conducted to analyze

the association between risky behavior and each of the following: number of piercing, tattoos, and temperament mean scores (depressive, cyclothymic, hyperthymic, irritable, and anxious).

Procedure

Surveys were administered to the participants randomly in coffee shops, pubs, malls, tattoo and piercing shops, university campuses, and schools, under the direction and supervision of the researcher. The participants were given a brief explanation about the purpose of the study. After their willingness to participate in the current study, a research packet was distributed to each participant. The packet included the demographic questionnaire, the TEMPS-A questionnaire, and the CARE past frequency scale. Participants were instructed to read the directions carefully and fill out the demographic, CARE, and TEMPS-A sections of the survey. The participants had as much time as needed to complete it. They were informed verbally that they were free to terminate their voluntary participation in the study at any time or omit answering any questions that they were uncomfortable answering. The survey did not ask any questions that would threaten the participant's confidentiality, such as his name or personal contact information. The researcher stayed with the participants all the time, to answer any questions they had as they completed the surveys. All participants completed the entire study, and none withdrew or terminated prematurely. Participants were told that their responses would be kept confidential, and that the results would not identify any of their characteristics.

CHAPTER 4

Results

This study used two scales: the Past Frequency questionnaire of the Cognitive Appraisal of Risky Events (CARE) and the Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Auto-questionnaire (TEMPS-A). The internal reliability of each subscale of the CARE and the TEMPS-A, as well as the total scales of CARE and TEMPS-A were determined by calculating Cronbach’s alpha for each scale and subscale. “The aggressive and illegal behavior” subscale of the CARE scale was removed from this study due to the unreliable results.

Regarding the Cronbach alpha of CARE questionnaire (see Table 1).

Table 1

Cronbach’s alpha for the subscales and total scale of CARE

Scale	Previous Cronbach’s alpha	Current Cronbach’s alpha
Illicit drug use		.739
Risky sexual activities		.561
Heavy drinking		.736
High risk sports		.660
Academic/work behaviors		.846
CARE		.759

Previous Cronbach’s alpha is not available on a note from the author “I do not have test-retest reliability on the Past Frequency scale and it would not be appropriate to have an internal reliability measure (as it is a frequency/count measure). Your committee should understand.”

Kim Fromme (fromme@psy.utexas.edu)

Regarding the Cronbach alpha of TEMPS-A scale (see Table 2).

Table 2

Cronbach’s alpha for the subscales and total scale of TEMPS-A

Scale	Previous Cronbach’s alpha	Current Cronbach’s alpha
Depressive	.66	.706
Cyclothymic	.83	.788
Hyperthymic	.82	.791
Irritable	.76	.734
Anxious	.88	.875
TEMPS-A		.894

Descriptives:

Table 3:

Descriptive statistics of age, number of tattoos, number of piercing.

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Age	104	21	17	38	25.46	4.124
Numberoftattoos	104	9	1	10	2.16	1.602
Numberofpiercing	104	25	1	26	2.90	3.142
Valid N (listwise)	104					

Table 4:

Descriptive statistics of age, number of tattoos, number of piercing, and Relationship status.

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Age	6	2	17	19	18.00	.894
Numberoftattos	6	1	1	2	1.17	.408
Numberofpiercing	6	2	1	3	1.83	.753
Relationshipstatus	6	1	1	2	1.17	.408
Valid N (listwise)	6					

Hypothesis 1: There is a positive relation between number of piercings and involvement in risky behavior.

To test the above relationship, a Bivariate Pearson correlation was computed between number of piercings and involvement in risky behavior. The results of the correlation between

number of piercing and involvement in risky behavior, $r(104) = -.019$, was not significant. Thus, hypothesis 1 was not accepted.

Hypothesis 2: There is a positive relation between tattoos and each of illicit drug use, risky sexual activities, academic or work behaviors, and heavy drinking.

To test the above relationship a Bivariate Pearson correlation was computed between tattoos and each of risky sexual activities, illicit drug use, academic behaviors, and heavy drinking. The results showed a correlation only between tattoos and heavy drinking. However, no correlations were found between tattoos and illicit drug use, risky sexual activities, and academic behavior.

Thus, hypothesis 2 was not accepted (see Table 5).

Further analysis of the relationship between tattoos and high risk sports, showed that there was a positive relationship between number of tattoos and high risk sports (see Table 5).

Table 5

Correlation between number of tattoos and illicit drug use, risky sexual activities, academic or behaviors, and heavy drinking.

Correlations					
		Illicit Drug Use	Risky Sexual Activity	Academic or work Behaviors	Heavy DRinking
Tattoos	Pearson Correlation				.200*
	Sig. (2-tailed)				.038
	N				104

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Hypothesis 3: Male participants score higher on illicit drug use, heavy drinking, and high risk sports subscales in the Past Frequency CARE scale than female participants.

To test the differences on illicit drug use, heavy drinking, and high risk sports between males and females on CARE, an independent samples T-test was conducted on the above mentioned subscales. Results showed a significant difference in scores for males and females on each of the 3 subscales. As predicted, male participants scored higher than female participants on each of the 3 subscales.

Thus, hypothesis 3 was accepted (see Table 6).

Table 6

T-test of mean differences between males and females.

Group Statistics						
	Gender	N	Mean	Std. Deviation	T	Sig.(2-tailed)
IllicitDrug	1	60	47.8750	83.40159	2.740	.007
	2	44	12.2444	30.12410		
HeavyDRinking	1	60	49.7812	79.64514	2.396	.018
	2	44	18.7273	38.72705		
HighRiskSports	1	60	29.5312	57.84351	2.017	.046
	2	44	11.1556	23.26425		

Hypothesis 4: There is a positive relation between irritable temperament and each of illicit drug use and heavy drinking.

To test the above relationship, a Bivariate Pearson correlation was computed between irritable temperament and each of illicit drug use and heavy drinking. The obtained results were not significant.

Thus, hypothesis 4 was not accepted (See Table 7).

Further analysis of the relationship between irritable temperament and the subscales of CARE showed a positive correlation between high risk sports and irritable temperament (see Table 10).

Table 7

Correlation between irritable temperament and illicit drug use and heavy drinking.

		IllicitDrug	HeavyDRinking	HighRiskSports
Irritability	Pearson	-0.19	-.012	.260**
	Correlation			
	Sig. (2-tailed)	.848	.901	.008
N		104	104	104

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 5: There is a positive relation between hyperthymic temperament each of heavy drinking and risky sexual activity.

To test the above relationship, a Bivariate Pearson correlation was computed between hyperthymic temperament and each of heavy drinking and risky sexual activity. The results of the correlation between hyperthymic temperament and each of heavy drinking and risky sexual activity were not significant.

Thus, hypothesis 5 was not accepted (see Table 8).

Table 8

Correlation between hyperthymic temperament and heavy drinking and risky sexual activities.

		Correlations	
		HeavyDRinking	RiskySexualActivities
Hyperthymic	Pearson Correlation	-.039	.179
	Sig. (2-tailed)	.699	.070
	N	104	104

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 6: There is a positive relation between body art (tattoos and piercing) and hyperthymic temperament.

To test the above relationship, a Bivariate Pearson correlation was computed between body art and hyperthymic temperament. The results of the correlation between hyperthymic temperament and number of tattoos, as well as the results of the correlation between hyperthymic temperament and number of piercings, were not significant.

Thus, hypothesis 6 was not confirmed (see Table 9).

Table 9

Correlations between number of tattoos, number of piercings, and Hyperthymic temperament.

Correlations

	Depressiv e	Cyclothymi c	HYperthymi c	Irritabilit y	Anxiou s	numeroftatto s	Numberofpiercing s
HYperthymic Pearson							
Correlatio n	-.349**	.002	1	.091	-.044	.149	-.175
Sig. (2- tailed)	.000	.985		.358	.654	.132	.076
N	104	104	104	104	104	104	104

** . Correlation is significant at the 0.01 level (2-tailed).

Further analysis of correlation between the subscales of CARE and TEMPS-A showed a strong positive relation between high risk sports and irritable temperament $r(104) = .260, p = .008, p < 0.01$. Results also showed a strong positive relation between academic or work behaviors and cyclothymic temperament $r(104) = .352, p = .000$ (see Table 10).

Table 10

Correlations between subscales of CARE and TEMPS-A

Correlations		Cyclothymic	Irritability
HighRiskSports	Pearson Correlation		.260**
	Sig. (2-tailed)		.008
	N		104
AcademicWork	Pearson Correlation	.352**	
	Sig. (2-tailed)	.000	
	N	104	

** . Correlation is significant at the 0.01 level (2-tailed).

Chapter 5

Discussion

The purpose of this study was to assess the value of tattoos and piercings as markers of other risk-taking behaviors in the Lebanese culture, and also investigate the role of temperament in involvement in risky behaviors.

The first goal of this study was to investigate the relationship between body art and risky behavior among Lebanese people, and examine the role of gender in involvement in risky events.

For investigating these relationships, participants who enrolled in the study filled in demographic information such as age, gender, nationality, level of education, and parental marital relations (married, divorced, widowed), and body art related information such as the number of tattoos and piercing they have, the age they got their first tattoo and piercing at, and the reasons for getting the tattoo(s) and piercing. In addition to the demographic information, participants filled in the Temperament Evaluation of Memphis, Pisa, Paris, and San Diego Auto-questionnaire (TEMPS-A), and the Cognitive Appraisal of Risky Events (CARE).

Body Art and Risky Behavior

Many researchers found an association between tattoos and piercings and risk-taking behavior such as illegal drug use, heavy drinking, participating in risky sexual activities, and academic problems (Burger & Finkel, 2002; Conklin, 2010; Forbes, 2001). The findings from the current study showed that having piercings was not significantly associated with any of the risk behavior variables both in males and females. On the other hand, results indicated that

having tattoos was associated with only two of the five risk variables: Heavy Drinking, and High Risk Sports.

In Lebanon, participation in drinking and high risk sports is a very common part of the lifestyle of people. Alcohol is available throughout the country and the Lebanese have a strong cultural connection to drinking. Therefore, the results provide a possible explanation for the involvement in high levels of alcohol and high risk sports in this population across Lebanon. It is possible that it is not the body art that leads these people to drinking, but the availability of alcohol everywhere.

Research conducted by Karam et al.(2000) on substance use in Lebanon among university students showed low rates of drug use and unsafe sex.

Research conducted by the United Nations on substance use and misuse in Lebanon showed that students had negative attitudes towards legalization of illicit drugs like cocaine and heroin, and reported that their parents would be very upset if they found their child has ever used drugs (Abdool et al., 2003).

The above mentioned two research findings may explain why the current research did not yield any significant association between body art and most risky behaviors among Lebanese population.

It is also possible that since drug use and sex are viewed as much more dangerous than others and less socially acceptable, participation in these activities was less common. The low amount of variance explained in risky sexual activities, can also be due to the very real fear of contracting HIV or other sexually transmitted diseases. In addition, females are likely to consider

sexual experience as an extremely dangerous or sinful event due to religion, family upbringing, and education.

Gender and Risky Behavior

Concerning gender differences in involvement in risky behavior, results of the current study indicated that gender added significantly to the prediction of three of the five risk variables measured: Illicit Drug Use, Heavy Drinking, and High Risk Sports. In each case, males were more likely to participate in the high-risk activity than were females. These findings were consistent with the findings of the studies done by Drews et al. (2000), and Nordile (2004).

Regarding the role of gender differences in regard to tattoos and piercings and involvement in risky behaviors, these differences can be explained in what society considers normative or acceptable for men and women, regardless of whether or not they have body art. Historically, different cultures expect and accept men to be more open to risky experiences such as illicit drug use, heavy drinking, and high risk sports. As for women, they are expected to be more into approval seeking, proper, and well-behaved behaviors, and less open to participate in risky events. These expectations haven't changed in recent times, and therefore the gender differences in involvement in risky events might be due to cultural expectations, beliefs, and upbringing, instead of due to having tattoos and piercing. Another explanation may be that women project themselves into future roles such as mother or moving into a higher social status, and therefore feel that engaging in risky behaviors may become liabilities. In contrast, men may be less concerned about what others think.

The UN research on Substance Use and Misuse in Lebanon showed that alcohol and drug abuse in Lebanon was only significantly associated with gender, and again was a predominantly male behavior (Abdool et al., 2003). From this study we can conclude that use of alcohol and drugs is more associated with gender than with the presence of tattoos and piercings.

Age and Risky Behavior

The role of age in involvement in risky events was also further investigated, and results showed that younger participants with tattoos and piercings scored higher on risky academic or work behaviors subscale than older participants. As for the rest of the risky events, age did not play any role.

A possible explanation to this is that older participants may have once been involved in the risky events measured, but as they grew older and got more involved in their professions, they grew out of it. Another explanation may be that older participants view themselves as examples of well-behaved adults in a world where they will soon become providers of family and children, and thus engage less in risky academic or work behaviors than younger ones. Therefore, the following research, unlike previous research, suggests that tattoos and piercings are not necessarily bound to any deviance or risky behavior in Lebanon, and therefore body art is not a reliable predictor of risky behavior in the Lebanese sample.

The second goal of this study was to examine the role of temperament on/in involvement in risky behavior. Specifically, the current study was the first to examine whether there is relationship between temperament and risky behaviors. Based on previous published literature, it was expected that there will be a positive correlation between body art and hyperthymic

temperament. It was also expected that participants scoring high on irritable and hyperthymic temperament would be more likely to participate in risk-taking activities, specifically in illicit drug use, heavy drinking, and risky sexual activities.

Body art, risky behavior, and temperament profiles

In Moore et al (2005), the authors reported that heavy users of drugs and alcohol were more likely to have an irritable temperament, and heavy users of drugs were more likely to show depressive and hyperthymic temperament. Other studies also found a correlation between irritable temperament and substance use (drugs and alcohol) and risky sexual behavior (Colder & Chassin, 1997; Wills & Dishion, 2004). However, the findings from this study showed that hyperthymic temperament failed to add any significance to body art and involvement in heavy drinking and risky sexual activity. The findings also showed that there was no relation between irritable temperament and illicit drug use and heavy drinking.

Dishion and Wills (2003) explained that social and family factors influence the self-control development of people with different temperaments. According to their study, a warm and positive parent-child relationship that provides positive discipline and adequate monitoring of the child's behavior, and healthy social relationships and environments, shape the development of self-control ability and reduce the chances of involvement in drug and alcohol abuse regardless of the kind of temperament they are born with.

It is worth mentioning that in a study based on alcohol use among college students in Lebanon, Karem, Kypri, and Salamoun (2007) found that protective factors as practice of faith,

belief in God, family upbringing, and peer attitudes towards drinking were important in determining amount of alcohol use patterns among college students.

Based on the findings of the above studies, it may be concluded that it is not the temperament but rather the child-parent relationship, other social relationships, and the environment that demonstrate involvement in heavy drinking and drug abuse.

Though hyperthymic and irritable temperament did not add any significance to involvement in heavy drinking, risky sexual activity and drug use in the current study, further analysis of the results of the correlation between the scores of CARE and TEMPS-A showed a strong positive relation between high risk sports and irritable temperament and between risky academic or work behaviors and cyclothymic temperament. Therefore, chances are that people who scored high on irritable temperament also engaged the most in high risk sports activities, and those who scored high on cyclothymic temperament also engaged the most in risky academic or work behaviors.

Illicit Drug Use and Academic or Work Behaviors

Further investigation of the association between the subscales of CARE scale showed a strong correlation between academic or work behavior and illicit drug use.

According to the UN study in Lebanon, users of at least one legal or illegal substance are more likely to have grades below 80, more likely to have skipped many school days, and have problematic conducts as compared to the never users (Abdool et al., 2003).

Conclusion

Historically, tattooing and piercing have been associated with deviant behavior. Such associations however appear to be changing and many may no longer even be valid. While previous studies have demonstrated that participation in risky behaviors is common in adolescents and adults with tattoos and piercing, the current study which is the first to deal with body art and risky behavior in Lebanon showed no such strong relationship between them, but yielded mixed results. Body art was not associated with a wide variety of risky events. The results found no association between quantity of piercing and involvement in risky behavior. However, an important finding from this study was the strong association of tattooing with heavy drinking and high risk sports.

Therefore, the following research, unlike previous research, suggests that tattoos and piercings are not necessarily bound to any deviance or risky behavior in Lebanon, and therefore body art is not a reliable predictor of risky behavior in the Lebanese sample.

The present study also does not indicate that irritable and hyperthymic temperaments indicate involvement in risk-taking behavior (unlike previous findings based on temperament and risk-taking behavior).

Before the results of this study are broadly generalized, the study's limitations must be recognized. The study is not representative of the whole Lebanese population, and it did not study participants with extreme cases of body art (i.e. participants with 5 or more tattoos and 5 or more piercings).

Although most hypotheses of this study were not supported, and despite the limitations, this study's findings bear information about certain characteristics body art commonly correlates with. This information can also help people understand the wrong stereotypes and prejudice they have about people with body art, and therefore not make assumptions about them before meeting them. Therefore the findings make it clear that appearance choices do not define a person, and that appearance cannot often be a reliable reference.

There were many findings that were not part of the hypotheses to be studied, but are worth mentioning. One of these findings is the reasons for individuals to acquire body art. It was shown that people in Lebanon are getting tattoos to gain attention, increase self-esteem, look sexy, increase their body satisfaction, identify with a group, express individuality, explore, experiment, signify special moments, to memorize a loved one that has passed on or an event, to rebel against their parents or society's expectations, to visually communicate their own thoughts and feelings, and even for religious reasons. These findings were similar to the reasons of body modification discussed in Kahl's study.

Another finding is that body art is shared by all socio economic statuses (low, middle, high), and that individuals of all ages, genders, levels of education, and professions are participating in the practice of body art. So what was once considered a practice of bikers, prisoners, and rebellious teenagers, has now entered into general society.

Therefore, we can conclude that today tattoos and piercings have become more of an art form than anything, and that tattoos are no longer just an art form of the elite or associated with societal deviants. People of all ages and from all walks of life are finding their own special meaning in tattoos. Once associated only with gangs, tattoos are done between friends sharing

common bonds and by individuals expressing their own uniqueness. The presence of body art is also no indication of what characteristics or temperament a person embodies.

For further future research, based on all the above mentioned findings and explanations, it is worth studying the role of protective factors - faith, religion, belief in God, family upbringing- on the relationship between body art, temperament, and risky behavior. For future studies, the researcher also suggests including extensive interviews with the participants about the reasons behind engaging or not engaging in risky events, in order to have more accurate contribution of gender and age to involvement in risky behaviors. Research on environmental influences, family education, and involvement of peers and family members in risky behaviors is also recommended, to further investigate the reasons of being involved or not involved in risky behavior. Finally, a larger and more population based sample is also needed as it might provide the number of participants with extreme body modifications needed to portray more accurately the role of body art and temperament in risky behaviors among the Lebanese population.

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Appendices

Appendix A Demographics

Appendix B CARE Scale

Appendix C TEMPS-A Scale

Appendix A

Age:

Gender:

Nationality:

Level of Education:

Work:

Religion:

SES: ? low class ? middle class ? high class

Relationship status:

Number of tattoo(s):

Place of tattoo(s):

Number of piercing:

Place of piercing(s):

How old were you when you got the 1st tattoo:

How old were you when you got the 1st piercing:

Reasons for getting tattoo(s):

Reasons for getting piercing(s):

Appendix B

For each of the activities below, please indicate how many times you have participated in this activity in the **past six months** (please write numbers).

Number of times in the past
6 months

1. Tried /used drugs other than alcohol or marijuana.
2. Missed class or work.
3. Grabbed, pushed, or shoved someone.
4. Left a social event with someone I have just met.
5. Drove after drinking alcohol.
6. Made a scene in public.
7. Drank more than 5 alcoholic beverages.
8. Not studied for exam or quiz.
9. Drank alcohol too quickly.
10. Disturbed the peace.
11. Damaged / destroyed public property.
12. Sex without protection against pregnancy.
13. Left tasks or assignments until the last minute.
14. Hit someone with a weapon or object.
15. Rock or mountain climbed.
16. Sex without protection against sexually transmitted disease.
17. Played non-contact team sports.
18. Failed to do assignments.
19. Slapped someone.
20. Not studied or worked hard enough.
21. Punched or hit someone with fist.

22. Smoked marijuana.
23. How many different sexual partners have u had in the past 6 months?
24. Snow or water skied.
25. Mixed drugs and alcohol.
26. Got into a fight or argument.
27. Involved in sexual activities without my consent.
28. Played drinking games.
29. Sex with someone I have just met or don't know well.
30. Played individual sports.

Appendix C

Answer True or False to each statement. True indicates that the statement expresses your thoughts, feelings, and behavior most of the time, since age 18.

NOTE: choose your answers based on how you think, feel, & behave MOST of the time and not on how you’ve been thinking, feeling, & behaving lately or sometimes.

	TRUE	FALSE
I'm a sad, unhappy person.		
People tell me I am unable to see the lighter side of things.		
I have suffered a lot in life.		
I think things often turn out for the worst.		
I give up easily.		
For as long as I can remember, I've felt like a failure.		
I have always blamed myself for what others might consider no big deal.		
I don't seem to have as much energy as other people.		
I often give into offers.		
I am the kind of person you can always depend on.		
I am a hard working person.		
I would work for someone else than be the boss.		
I'm the kind of person who doubts everything.		
My sex drive has always been low.		
I normally need more than 9 hours of sleep.		
I often feel tired for no reason.		
I get sudden shifts in mood and energy.		
My moods and energy are either high or low, rarely in between.		
My ability to think varies greatly from sharp to dull for no apparent reason.		
I can really like someone a lot, and then completely lose interest in them.		
I often start things and then lose interest before finishing them.		
My mood often changes for no reason.		

I constantly switch between being lively and sluggish.		
I sometimes go to bed feeling down, but wake up in the morning feeling terrific.		
I am told that I often get pessimistic about things, and forget previous unhappy times.		
I go back and forth between being outgoing and being withdrawn from others.		
My need for sleep varies a lot from just a few hours to more than 9 hours.		
I often have a strong urge to do outrageous things.		
I'm usually in an upbeat or cheerful mood.		
Life is a feast which I enjoy to the fullest.		
I like telling jokes. People tell me I'm humorous.		
I'm the kind of person who believes everything will eventually turn right.		
I have great confidence in myself.		
I often get many great ideas.		
I am always on the go.		
I can accomplish many tasks without even getting tired.		
I have a gift for speech, convincing and inspiring to others.		
I love to tackle new projects, even if risky.		
Once I decide to accomplish something, nothing can stop me.		
I am totally comfortable even with people I hardly know.		
I love to be with a lot of people.		
I am generous, and spend a lot of money on other people.		
I have abilities and expertise in many areas.		
I feel I have the right and privilege to do as I please.		
I am the kind of person who likes to be the boss.		
When I disagree with someone, I can get into a heated argument.		
My sex drive is always high.		
I am a grouchy (irritable) person.		
I am by nature a dissatisfied person.		

I complain a lot.		
I am highly critical of others.		
I often feel on edge.		
I often wound up.		
I am driven by an unpleasant restlessness that I don't understand.		
I often get so mad that I will just trash everything.		
When crossed, I could get into a fight.		
People tell me I blow up out of nowhere.		
When angry, I snap at people.		
I like to tease people, even those I hardly know.		
My biting humor has gotten me into trouble.		
I can get so furious I could hurt someone.		
I am known to swear a lot.		
I am a very skeptical person.		
I could be a revolutionary.		
I have been worrier for as long as I can remember.		
I'm always worrying about one thing or another.		
I keep on worrying about daily matters that others consider minor.		
I cannot help worrying.		
Many people have told me not to worry so much.		
I am unable to relax.		
I often feel jittery inside.		
When stressed, my hands often tremble.		
I often have an upset stomach.		
When I'm nervous, I may have diarrhea.		
When I'm nervous, I often feel nauseous.		
When I'm nervous, I have to go to the bathroom more often.		
When someone is late coming home, I fear they may have had an accident.		
I am often fearful of someone in my family coming down with a serious disease.		

I'm always thinking someone might break bad news to me about a family member.		
My sleep is not restful.		
I frequently have difficulty falling sleep.		
I am, by nature, a very cautious person.		
I easily get headaches when stressed.		
When stressed, I get an uncomfortable feeling in my chest.		
I'm an insecure person.		
Even minor changes in routine stress me highly.		
Sudden noises startle me easily.		