



RESEARCH ARTICLE

MOTOR STUNT-BIKERS : LIVING ON THE EDGE

Dr. Seema Vinayak* and Guneet Singh Assi

Department of Psychology, Panjab University, Chandigarh, India

ARTICLE INFO

Article History:

Received 17th January, 2012
Received in revised form
16th February, 2012
Accepted 25th March, 2012
Published online 30th April, 2012

Key words:

Motorcycle,
Personality,
Motor Stunt bikers.

ABSTRACT

This paper attempts to have an insight into the personality attributes of motor stunt-bikers. Motor stunt-biking is an acrobatic maneuvering on motorbikes. Majority of these stunt-bikers enter the arena just after 18 years of age. They generally avoid any public interaction on the issue, primarily, because of the element of illegality associated with stunt-biking. Therefore, eight male stunt-bikers in the age range 18-23 years who gave their consent were administered a semi-structured interview schedule and a personality test. The test was given to them individually at the place of their convenience. Personality profiles of stunt-bikers revealed them to be having lower I.Q., apprehensive, experiment-oriented, venturesome but also tense. They were found to be average on traits of warmth, emotional stability, conscientiousness, practicality and liveliness. However, the stunt-bikers were also found to be self-opinionated, hard to fool and adventurous in spirit. The demographic and interview schedule revealed their major inspirations and safety concerns.

Copy Right, IJCR, 2012, Academic Journals. All rights reserved.

INTRODUCTION

Every individual is a unique entity in itself. A person's individuality is amalgamation of different characteristic and personality traits held together to make a coherent personality. The people indulging in daring acts do so for innumerable reasons. Motorcycle stunt-biking, sometimes also referred to as stunt-biking or stunt-riding, is characterized by acrobatic maneuvering of the motorcycle by the rider. Common maneuvers in stunt-biking include wheelies, stoppies and burnouts. The history of the motorcycles can be traced back to the time when experimentations were done on bicycles in order to make it as a better mode of transport. It was during 1955 when parts of motorcycles were imported from UK (Royal Enfield Company) and assembled at a factory in Chennai (Madras Motors). This is regarded as the birth of the motorcycle industry in India. From 1981 to 2002, the total number of motorized two-wheelers rose from fewer than 3 million to 42 million in India—a 14-fold increase (Ministry of Road Transport and Highways, 2003). Nowadays, the population of motorcycles exceeds that of cars in this country. As of 2002, India with an estimated 37 million motorcycles/mopeds was home to the largest number of motorised two wheelers in the world (Motorcycle, n.d.). There is no organized literature on motor stunt biking. Newspaper reports and articles, besides online content, provide an overview of this activity. It was during 1918 when a British publication 'The Motor Cycle' came up with this observation, "Many of these young men have returned from the fields of the Great War, accustomed to brash, unsettling thrills and life lived on the razor's edge. Many have chosen to bestow their

discharge pay on fast, noisy motorbikes on which they take to public roads in dangerous, anti-social displays meant to impress females while upsetting livestock and the general populace. It stirs the imagination and fosters pity why so many of this great nation's youth would risk life and limb for the simple, childish thrill of acceleration and the rare accolades it brings." (Seate, 2009)

The history of motor stunt-biking in India is relatively new. After the motorcycles were introduced in the Indian market and these became an integral part of transport, stunt biking was still in its inception stage where professional stunts were used only for cinematic purposes. One could either see the stunts performed by army bikers during Republic Days or on special celebrations. Even on screen- this remained the domain of expert stunt riders who used to perform under strict safety measures. In the last one decade, the craze for motorbikes have increased, and in order to compete and stand out in the highly competitive market, more than the price or feature, the stunts became popular ways to attract young consumers. Though motor sports bikes made their entry in 1980s with the advent of Yamaha, it was in 2001 when Bajaj launched its sports motor bike 'Pulsar' alongwith TV commercials showing motor stunt biking. It fired the passion for stunt biking amongst Indian youth, and very soon it caught everyone's attention with a dedicated reality show, 'Bajaj Stunt Mania' hitting the small screen in 2009. And every year the show continues to gain popularity. In the meanwhile, the Bollywood had fired the passion through a flick 'Dhoom' in 2004 and subsequently many more such movies have followed that celebrated motor stunt-biking. The neo rich youngsters in colleges have taken it to the next level by forming groups and indulging in stunt biking at midnight on empty roads in metros

*Corresponding author: seemavin68@yahoo.co.in

and in cities like Chandigarh, where wide roads with low traffic at night, attracts them to try speed biking and even stunts.

Across the world, speeding and stunts on roads with full-blown traffic is becoming a common sight endangering their own and the lives of other road users. Serious crashes caused by gangs of motorcycle stunt riders are on the rise (Schechter, 2010). Recently a 25 year old youngster lost his life while trying to perform stunt without any safety gear or helmet on his motorbike (“Man dies performing stunt”, 2010). One can see ‘official’ motor stunt biking performances during several college functions and city carnivals. Youngsters enjoy the excitement of stunt performances, and the motor bikers learn and compete with their peers on lonely streets away from the eyes of the police. In Canada, where stunt motor biking is prohibited on public streets, one of the stunt riders confessed that, "My sport is misconceived as hooligans and criminals who go around harassing the public on the streets," says the 28-year-old electrical technician who's been stunting for four years (Sun, 2011). In India one may witness rowdy motor bikers creating chaos on roads, activist Ali commented, "We have to keep young people safe. This is breaking the law. Police must challan (charge for committing traffic offence) them, so that they start taking the right path." (“Rowdy bikers create chaos”,2011). Though individuals who endorse this activity claim that it is just another sport but one cannot deny the menace it creates, especially, on busy streets with many vehicles around, thus putting their own life as well as that of other road users in jeopardy. With law enforcement agencies as well as the society not having a positive supportive outlook for this type of activity, it is not surprising, that there is lack of literature. What eventually leads youngsters to indulge in some dare-devil stunts? As observed, ‘some do stunts for enjoyment, others for fame and glory and many to experience the adrenalin rush. This research paper aimed to look into the personality dimensions of these performers, in order to figure out their prominent personality traits. As put forth, “It's a world few people on the outside know about, and even fewer on the inside will talk about” (Sun, 2011).

MATERIALS AND METHODS

Subjects

The subjects comprised of eight motorcycle street stunt-bikers with an average experience of performance at various stunt shows of 1.45 years. All of these motor stunt-bikers were males with the age ranging between 18-23 years. The subjects were students belonging to the city of Chandigarh, India. Their passion for motor stunt-biking led them to form a small group who besides practising together on lonely roads, have graduated to do shows at college festivals and even have a movie assignment in hand.

Procedure

The subjects agreed to participate in this study though they had their apprehensions due to the illegality and negative portrayal associated with stunt-biking but on the assurance of confidentiality they agreed to participate in the study. Neutrality was maintained and the personality traits were mapped using the standardized questionnaire. Semi-structured

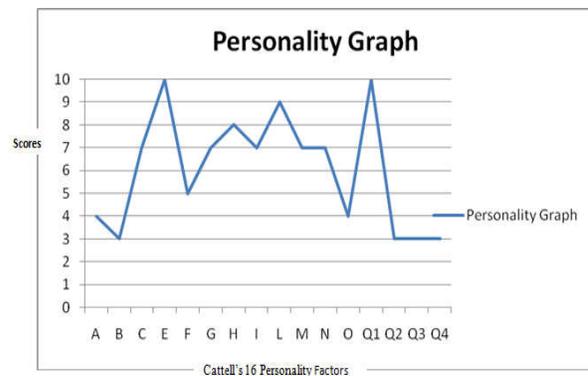
interviews and personality questionnaire developed by Cattell (16PF) was administered to each individual and the information was collected through face-to-face interaction at their place of convenience using structured questionnaire and the scale.

RESULTS

The aim of this research was to probe into the personality traits of youngsters involved in ‘motor stunt-biking’. Having been involved in performing dangerous stunts on roads, these individuals put their lives at risk. Their passion for motor stunt-biking can be due to several reasons, some pursue it for fun, others for gaining recognition and popularity. A small sample size of eight youngsters having a minimum experience of one year as a motor stunt-biker were administered the ‘16 PF’ by Cattell while a demographic data was collected and interview taken. This study revealed their safety concerns and pursuit for social approval. The following table shows the factors and the personality dimensions measured through Cattell’s 16 PF.

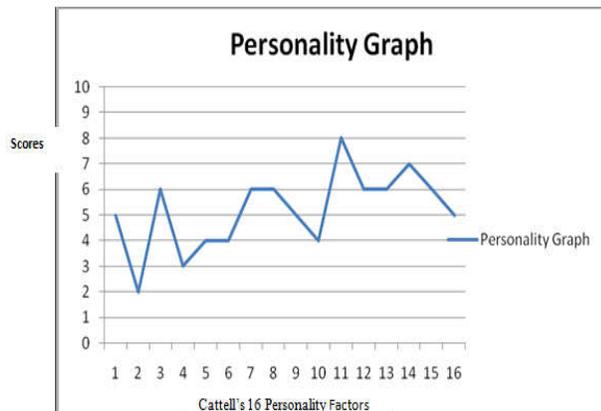
Factors	Assessment
A	Warmth or Extraversion
B	Reasoning
C	Emotional Stability
E	Dominance
F	Liveliness
G	Rule-Consciousness
H	Social Boldness
I	Sensitivity
L	Vigilance
M	Abstractedness
N	Privateness
O	Apprehension
Q1	Openness to Change
Q2	Self-Reliance
Q3	Perfectionism
Q4	Tension

Case Study I



Subject A is a case of a youngster aged 23, studying computer applications and engaged in motor stunt-biking for the past three years. His passion for motor stunt-biking brought him in touch with other youngsters having similar passion and led him to launch a small group which now performs stunt shows at various college fests and other events. Having performed more than eight shows so far, he has also performed motorbike stunts for a Punjabi movie. Even though after he suffered injuries and met with crashes while performing stunts, nothing seems to deter his spirit from being involved in these dangerous acts. He confesses that "I just love this sport. Motorbiking is life for me." Having been trained himself through various media like television, internet, films etc, he confesses that motor stunt-biking is considered illegal, and therefore they practice stunts in lonely spots late at night, to avoid being caught by police. This subject was found to be high on traits of dominance, suspiciousness and radicalism. The other traits that described his personality were social boldness/venturesome, lower scholastic mental capacity, group dependence and low integration. When measured on Cattell's 16PF Scale, his predominant personality traits were being assertive, bold, uninhibited and venturesome. These characteristics matched well with his profile as a leader of his group that he had established. He was also found to be group-oriented that established him as a team-player and group dependency to pursue an adventurous activity where group members provide emotional support and a kind of bonding and "legality" to otherwise an illegal activity. Low integration indicates that one is undisciplined, carelessness and the one who follows one's own urges. He was found to be low on perfectionism i.e. being undisciplined, in self-conflict, impulsive, careless of social rules and is uncontrolled. Lower scholastic mental capacity shows lower I.Q. level.

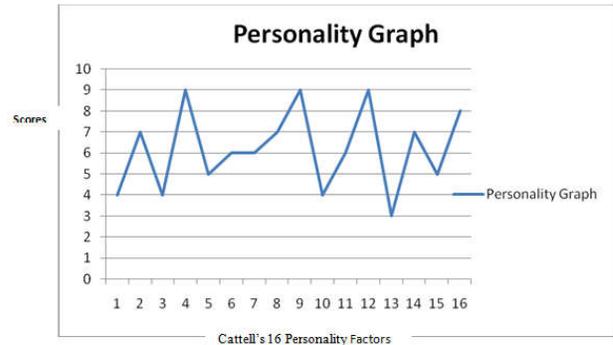
Case Study II



Subject B is a 19 year old boy pursuing diploma in engineering. He had been into motor stunt-biking for one year and considers his peer group to be his motivating factor. This subject also admitted his share of crashes and injuries while performing stunts. He too believed it to be an unlawful act though safe if one takes adequate safety precautions. On being asked about his own self-perception as a rider, he believed himself to be a calm, safe and cautious rider. He acknowledged that stunt riding is his passion. The results on the scale indicated him to be of low scholastic mental capacity, submissive, cooperative, easily led and the one who

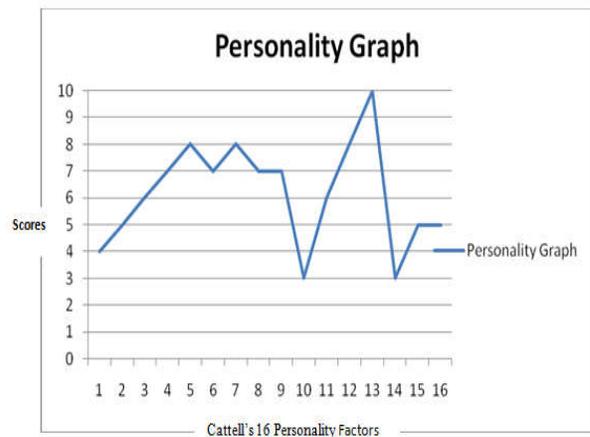
avoids conflict. The individual was found to be emotionally stable and controlled, venturesome and experimenting yet apprehensive and astute. At the same time, the subject had characteristic of a shrewd individual who would evade disclosure, and would like to keep himself aloof.

Case Study III



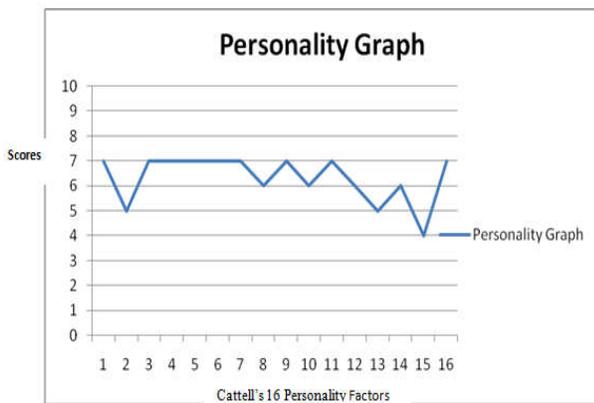
Subject C is the case of a youngster aged 21 pursuing bachelor's in engineering. He had been motor stunt-biking since last two years and also revealed that it was his peer group that led him to join this activity. The subject had not met with any crash or injuries while performing motor stunt biking so far. He too agreed that motor stunt biking is not an unlawful act and considered this activity as safe provided one is careful and focussed while performing stunts. Regarding his own self-perception as a rider, he too believed himself to be calm, safe and cautious. He also strongly endorsed the fact that stunt riding is his passion. This subject was found to be high on traits of dominance, suspiciousness and guilt proneness. The other traits that described his personality were high ergic tension and low emotional stability. He was found to be dominant which represents being forceful, assertive, competitive, stubborn and bossy. Suspiciousness was another trait found, which implies remaining skeptical, distrustful and vigilant. The attribute of guilt-proneness pointed towards being apprehensive, worrisome, insecure, and in self-doubt. High ergic tension reveals high energy but at the same time impatience and proneness to frustration. Emotionally less stable implies the tendency to be reactionary, easily affected by feelings and therefore getting easily upset.

Case Study IV



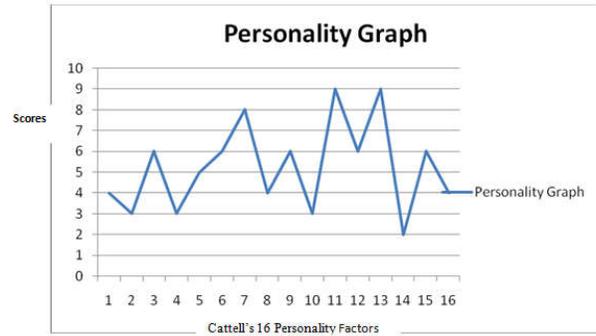
Subject D (21years) is a diploma holder in information technology and had been motor stunt-biking for the last two years. Like previous three subjects, he too admitted his friends to be his inspiration. He had not encountered any crash or injuries while performing motor stunt-biking and agreed that motor stunt-biking is not an unlawful act and is safe to do. On questioning about his own self-perception as a rider, he too believed himself to be a calm, safe and cautious rider. He also strongly agreed that stunt-riding is his passion. This subject was found to be high on traits of radicalism and guilt-proneness. The other traits that described his personality were social boldness, impulsive, group dependence, suspiciousness and reserved nature. Radicalism as a personality trait implies openness to change, experimentation and liberal attitude. At the same time, guilt-proneness points out to the tendency on the part of this individual to be apprehensive, worried, insecure and in self-doubt. He was also found to be high on impulsiveness together with being suspicious, skeptical and socially bold i.e. thick skinned, venturesome and uninhibited. On one hand, where his personality revealed the trait of him being impersonal and reserved, tendency of group-orientation and dependency where he relates to his group very well, were also observed.

Case Study V



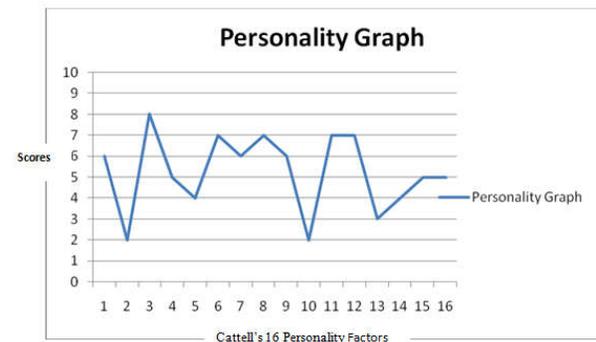
Subject E is a B.Tech student of 18 years and had been stunt-biking for over one year. He has also been performing for various stunt shows in the region. At the same time he also likes to flaunt his skill at public places on public demand. On questioning as to who inspired him for this kind of activity, he says "me, myself". He was at the age of eight years when he started performing stunts on bicycles, later graduated to motorbike stunts. Nothing unlawful or unsafe about motor stunt biking, he said. He further added that it is safe to do stunts on motorbikes, "you can ride a bike on its two wheels or on one, it's just that some skill and practice is required." On his own self-perception as a rider, he believed himself to be calm, cautious and a safe rider with a passion for stunt riding. The personality traits that emerged were that of a person who is easy-going, team player, assertive, impulsive, venturesome yet suspicious, shrewd or calculating and undisciplined, self-conflict and also tense and frustrated. An easy going person, he feels comfortable with others and liveliness helps one to be expressive and enthusiastic in trying new things. The assertive nature may take one to be uninhibited and venturesome with a self-conflicting and undisciplined nature revealing least care for rules.

Case Study VI



Subject F is an 18-year individual who had completed his senior secondary school and had been for over an year performing for various stunt shows on motorbikes. The TV Shows exclusively catering to motorstunt biking is what inspired him to take up this activity. Nothing illegal about motor stunt-biking which he considers safe. This subject reiterated that "while doing stunts one should wear full safety gear," he further added that doing stunts is a passion that depends and varies from individual to individual. On his own self-perception as a rider, he believed himself to be a calm, cautious and a safe rider, and strongly endorsed as his passion. This subject was found to be high on shrewdness, radicalism and group dependency. The other personality traits described him as a person who was venturesome, submissive, reserved and having low scholastic mental capabilities. Shrewdness reflects non-disclosing, private and diplomatic attitude whereas radicalism implies, experimentation and openness to change. Group dependency makes one affiliative, a team player and a follower who is dependent which again justifies his trait of being high on submissiveness and cooperative within the group. Social boldness reflects one to be thick-skinned, uninhibited, venturesome and a lower scholastic mental capacity or a low intelligence quotient.

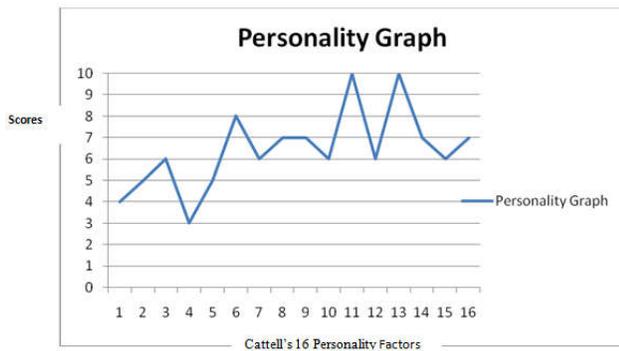
Case Study VII



Subject G is a 22 year old individual pursuing his bachelor's in humanities and also engaged in some business. For over two years he has been performing motorstunt biking. Even though after encountering crash and injuries while performing stunts, he confesses that, it was his passion solely that led him to take up this activity. On self-perception as a rider, he puts himself on an average on calm-angry dimension but says that he is cautious and a safe rider. He too considered stunt-riding

as his passion. This subject was found to be low on his scholastic mental capacity i.e. having low IQ level. The other personality traits revealed a personality which was conservative, shrewd, guilt-prone and group dependent. Conservatism implies opposition to change and being attached to familiar set of ideas or surroundings. Shrewdness reflects preference towards remaining non-disclosing, and being diplomatic. While guilt-proneness is a tendency to worry, group dependence is an adherence to one's group.

Case Study VIII



Subject H is an 18 years old student in senior secondary class. It has been close to an year since he started motorstunt biking and also suffered crashes and injuries while doing so. For him too, there is nothing illegal about getting indulged in motor stunt-biking. The TV shows served as an inspiration for him and he also added that it is safe to do motor stunt-biking provided one does it with all the safety gears. On self-perception as a rider, he views himself as a very calm, cautious and a safe rider. He also strongly agreed that stunt riding is his passion. This subject was found to be high on personality traits of shrewdness and radicalism. The other traits assessed that described him as a person were submissiveness, remaining detached or reserved, suspiciousness, preference to making one's own decisions and also at the same time being tense and frustrated. Tense and frustrated reflects a tendency towards being impatient, driven and frustrated.

DISCUSSION

The aim of this study was to explore the personality dimensions of certain youngsters who do stunts on motorbikes. In this regard, Cattell's 16 PF Questionnaire together with interview and demographic information was administered to a group of street stunt-bikers. Motor stunt-biking is much in vogue these days with it gaining attractiveness and popularity worldwide though also being banned at the same time in various countries especially United States where one can be put behind bars for doing motorbike stunts on roads (Cherry, 2010). The reason for it being banned is the nuisance created by the riders on the roads sometimes resulting in collisions and deaths. It is not considered as a sensible form of riding and is more associated with an act of hooliganism ("Motorcycle Stunting", 2010). Cities in India have too witnessed the same scenario (Shekhar, 2011). A recent death of an 8-year old kid who was hit by a speeding stunt biker attempting to do a "wheelie" on road (a form of stunt in motor stunt biking) has set an outrage in Bangalore,

India where the incident took place. The traffic police acknowledged that biker's stunts have become a nuisance for road users and pedestrians and in some cases, resulted in a tragedy (Khan, 2011). The familiarity drawn from the various incidents draws one's attention to the fact that majority of these stunt bikers are youngsters, non-professionals who usually lack training and skill and most often try to emulate this kind of activity inspired by various TV shows, games and advertisements that promote stunt motorbiking and develop fascination among youngsters. In India, with many stunt based reality shows being aired, the trend of stunt biking is gaining popularity (ANI, 2011). The question arises is there any similarity or an emerging pattern of personality traits that attempts to define them? This investigation is an attempt to answer this question.

Much of the research on motorcycle riders has primarily focused on the criminal aspect of outlaw biker gangs (Finlay and Matthews, 1996). There is a paucity of work on the attempts to examine motorbiking culture (Watson, 1982, Eyerman and Lofgren, 1995; Schouten and Mc Alexander, 1995; Packer and Coffey, 2004; Halnon and Cohen, 2006) and most of the research done on motorcycling risks bank upon statistics to document accidents or hospital records (Auman, Kufera, Ballesteros, Smialek, and Dischinger, 2002; Teoh, 2010). Attempts were made to understand behavior of motorcyclists in order to identify the motives that characterize riders. Walters in 1982 (as cited in Sexton et al., 2004) conducted 100 in-depth interviews with riders in Wales and tried classifying them into three categories: riders who ride for practical reasons (cost and convenience), others who are riding enthusiasts (pleasure), and rest who enjoy the excitement and freedom of motorcycling. It was further found that riders who were motivated by practical reasons comprised 35%, riding enthusiasts were 48% of the lot, tended to be younger, rode for work and pleasure, whereas the smallest group (10%) were the ones who were motivated by excitement or to gain attention tended to be young, overconfident in their skills and perceived themselves as "invincible.". They were the ones primarily who engaged in irresponsible riding behavior. The remaining 7% could not be easily classified. In this research, however, we are trying to decipher the 'invincible group of 10 percent'.

Certain theoretical explanations attempt to understand this kind of behavior, one such concept is "edgework" which is voluntary risk taking. Lyng (1990, p.855) defines "edgework," as an action that places individuals at the "edge" of "life versus death, consciousness versus unconsciousness, sanity versus insanity, an ordered sense of self and environment versus a disordered self and environment". Therefore, it is the sociological and social psychological approach in order to understand voluntary high-risk leisure that dictates negotiating the boundary between chaos and order (Lyng, 1990). Edgework theory tries to explain various outdoor leisure activities such as scuba diving (Hunt, 1995), ropes courses (Holyfield and Fine, 1997), motorcycling (Lyng, 1998), surfing (Stranger, 1999), white water boating (Holyfield, 1999; Jonas, 1999; Holyfield and Jonas, 2003), BASE jumping (Ferrell, Milovanovic, and Lyng, 2001), climbing (Kiewa, 2002; Simon, 2005), adventure racing (Schneider, Butryn, Furst, and Masucci, 2007) and bike messaging (Fincham, 2006). Therefore, edgework reflects a "clearly observable threat to one's physical or mental wellbeing or

one's sense of an ordered existence" (Lyng, 1990). It is also said that if an edgeworker fails to meet his/her challenge then the repercussions involved could be quite serious ranging from serious injury to even death. While Lyng (1998) has discussed both motorcycle riding and skydiving in his methodological confession of research at the edge, surprisingly motorcycling remains an underexplored topic in edgework literature. Other explanation for this kind of behavior can be a relative indifference to risk and painful stimuli. In order to explain the behavior of psychopaths and daredevils a hypothesis was framed by Hare (1978) and Lykken (1957) that there might be relative insensitivity to aversive stimuli generally, and relative insensitivity of anxiety response for the people who indulged in it. Another explanation might be the rewarding effects in the aftereffects of the activity. According to Berlyne (1960, 1971), an "arousal jag" is generated in the danger-safety sequence: Arousal rises to a high pitch, and falls off thereafter steeply. The decrease after high arousal experienced, anxiety included, is supposedly rewarding. Solomon's "opponent process theory" (1980) also tends to explain this. As per this theory, any hedonic process initiates an opponent process that moderates the former, outlasts it, and in contrast to the former, does not habituate whereas habituation of direct affective outcome of some stimulus event heightens the opponent process both in intensity and in duration. Therefore, confrontations with danger that earlier elicited anxiety gradually fail to do so with repetition and the "kick" that follows the event gradually becomes more intense and long-lasting. The opponent process induced kick might be a probable reason as to why dangerous and risk taking events are desired.

This study provided an insight into the unexplored dimension of urban North Indian youth engaged in motor stunt biking. The research not only provided an insight into their personality but also helped assess key personality dimensions that could help to predict a 'risk-taking or a deviant personality'. Overall, these stunt bikers displayed certain distinct personality traits. They were largely low on IQ and mental scholastic abilities, and displayed a certain degree of tension, suspiciousness, and apprehensiveness in their behaviour, though, perhaps to shield it, they sported an assertive, astute and adventure-seeking behaviour. Winning a certain degree of social acceptance amongst their peer group is also indicated. The study also revealed that many youngsters take to stunt-biking in open public places even before becoming eligible for holding a valid driving license. Even though majority of these stunt bikers in this study confessed themselves to be safe, calm and cautious riders claiming to use safety gears while performing though, the facts proved otherwise. In most of such street stunts majority of them performed without any safety gear and even without the minimum basic use of helmet, especially to garner recognition from the people through public display of their dangerous acts. There are numerous cases reported from various parts of India, especially New Delhi, Kanpur and other cities where at night, these bikers would hit the streets and perform stunts amidst traffic. Recently, three such stunt-bikers in Delhi (India) were booked for riding rashly, posing danger to other road users, and creating chaos in the traffic under Section 184 of the Motor Vehicle Act (Shekhar, 2011). Celebration of motor stunt-biking on television and in films has resulted in more and more youngsters pursuing this as a "hobby", with certain

specific categories of youth adopting it as self-adulation and sensation-seeking outlet that also brings with it a degree of commendation from their peer group.

To conclude, certain personality traits discussed were distinct amongst all motor stunt-bikers interviewed for this study, though there was a limitation of the number of such subjects who could volunteer to come forward to participate in this research. Stunt-riding is definitely an expression of personality of youngsters who seek recognition and peer acceptance in the society though in a limited way by indulging in life-threatening activities knowing fully well that stunt-biking not only could endanger their own but also the lives of other road users. For future research, further probe into the personality that correlates with dangerous driving, and also the motives that incite them to indulge in it, would be quite useful for road safety research.

REFERENCES

1. ANI. (2011, September 17). *Daredevils perform bike stunts in Bangalore*. Retrieved from <http://www.sify.com/sports/daredevils-perform-bike-stunts-in-bangalore-news-news-ljrrouhbghec.html>
2. Auman, K. M., Kufera, J. A., Ballesteros, M. F., Smialek, J. E., and Dischinger, P. C. (2002). Autopsy study of motorcycle fatalities: The effect of the 1992 Maryland motorcycle helmet use law. *American Journal of Public Health, 92*(8), 1352-1355. doi:10.2105/AJPH.92.8.1352
3. Berlyne, D. E. (1960). *Conflict, arousal and curiosity*. New York: McGraw-Hill. doi:10.1037/11164-000
4. Berlyne, D. E. (1971). *Aesthetics and psychobiology*. New York: Appleton-Century-Crofts.
5. Cherry, M., (2010). *About motorcycle stunt riding*. Retrieved from <http://www.abcarticledirectory.com/Article/About-Motorcycle-Stunt-Riding/1275141>
6. Eyerman, R. and Lofgren, O. (1995). Romancing the road: Road movies and images of mobility. *Theory, Culture, and Society, 12*, 53-79. doi:10.1177/026327695012001003
7. Ferrell, J., Milovanovic, D., and Lyng, S. (2001). Edgework, media practices, and the elongation of meaning: A theoretical ethnography of the Bridge Day event. *Theoretical Criminology, 5*(2), 177-202. doi:10.1177/1362480601005002003
8. Fincham, B. (2006). Back to the 'old school': Bicycle messengers, employment and ethnography. *Qualitative Research, 6*(2), 187-205. doi:10.1177/1468794106062709.
9. Finlay, T., and Matthews, C. J. (1996). *Motorcycle gangs: A literature search of law enforcement, academic and popular sources with a chronology of Canadian print news coverage*. Toronto; University of Toronto Centre of Criminology.
10. Halnon, K. B., and Cohen, S. (2006). Muscles, motorcycles and tattoos. *Journal of Consumer Culture, 6*(1), 33-56. doi:10.1177/1469540506062721
11. Hare, R. D. (1978). Electrodermal and cardiovascular correlates of psychopathy. In R. D. Hare and D. Schalling (Eds.), *Psychopathic behavior: Approaches to research*. Chichester: Wiley.

12. Holyfield, L., and Fine, G. A. (1997). Adventure as character work: The collective taming of fear. *Symbolic Interaction*, 20(4), 343-363. doi:10.1525/si.1997.20.4.343
13. Holyfield, L. (1999). Manufacturing adventure: The buying and selling of emotions. *Journal of Contemporary Ethnography*, 28(1), 3-32. doi:10.1177/089124199129023352
14. Holyfield, L., and Jonas, L. (2003). From river god to research grunt: Identity, emotions, and the river guide. *Symbolic Interaction* 26(2), 285-306. doi:10.1525/si.2003.26.2.285
15. Hunt, J. C. (1995). Divers' accounts of normal risk. *Symbolic Interaction*, 18(4), 439-462. "50CC Quest Rules." (2007). Retrieved from <http://www.ironbutt.com/ridecerts/getdocument.cfm?DocID=4>
16. Jonas, L. M. (1999). Making and facing danger: Constructing strong character on the river. *Symbolic Interaction*, 22(3), 247-267. doi:10.1016/S0195-6086(99)80090-3
17. Khan, A. (2011, March 21). Traffic Police to hunt down stunt bikers following kid's death. *Daily Bhaskar*. Retrieved from <http://daily.bhaskar.com/article/BAN-traffic-police-to-hunt-down-stunt-bikers-following-kids-death-2461587.html>
18. Kiewa, J. (2002). Traditional climbing: Metaphor or resistance or metanarrative of oppression? *Leisure Studies*, 21, 145-161. doi:10.1080/02614360210158605
19. Lykken, D. T. (1957). A study of anxiety in the sociopathic personality. *Journal of Abnormal and Social Psychology*, 55, 6-10. doi:10.1037/h0047232
20. Lyng, S. (1990). Edgework: A social psychological analysis of voluntary risk taking. *The American Journal of Sociology*, 95(4), 851-886. doi:10.1086/229379
21. Lyng, S. (1998). Dangerous methods: Risk taking and the research process. In J. Ferrell & M.S. Hamm (Eds.), *Ethnography at the edge*, pp. 221-251. Boston, MA: Northeastern University Press.
22. Man dies performing stunt on bike (2010). *The Tribune*. Retrieved from <http://www.tribuneindia.com/2010/20100920/cth2.htm>
23. Ministry of Road Transport and Highways (2003). *Handbook on Transport Statistics in India* (Delhi: Transport Research Office, Ministry of Road Transport and Highways).
24. Motorcycle, (n.d.). In *Wikipedia*. Retrieved 14 December, 2011, from http://en.wikipedia.org/wiki/Motorcycle#cite_note-Worldmapper31-6
25. Motorcycle Stunting, (2010). *Motorcycle Stunting: The Dangerous Art*. Retrieved from <http://riderzsyndicate.com/forum/index.php?topic=201.0>
26. Packer, J. and Coffey, M. K. (2004). Hogging the road: Cultural governance and the citizen cyclist. *Cultural Studies*, 18(5), 641-674. Retrieved from <http://hdl.handle.net/1842/4065>
27. Rowdy bikers create chaos on delhi roads (2011, July18). *Headlines Today*. Retrieved from <http://indiatoday.intoday.in/story/bikers-create-chaos-on-delhi-roads/1/145313.html?cp>
28. Schechter, D. (2010). *Stunt bike riders terrorize drivers, avoid prosecution*. Retrieved from <http://www.wfaa.com/news/crime/Stunt-Bike-Riders-Terrorize-Divers-Avoid-Prosecution-106645129.html>
29. Schouten, J. W., and McAlexander, J. H. (1995). Subcultures of consumption: An ethnography of the new bikers. *Journal of Consumer Research*, 22, 43-61. doi:10.1086/209434
30. Schneider, T., Butryn, T. M., Furst, D. M., & Masucci, M. A. (2007). A qualitative investigation of risk among world-class adventure racers. *Journal of Sport Behavior*, 30, 330-356.
31. Seate, 2009. *History of Stunt-biking-The Streets*. Retrieved from http://www.superstreetbike.com/streets/0703_sbkp_history_of_stunting/index.html
32. Sexton B, Baughan C, Elliott M and Maycock G (2004). *The Accident Risk of Motorcyclists*. TRL Report TRL607. Crowthorne: Transport Research Laboratory.
33. Shekhar, R. (2011). Stunt bikers hold India Gate to ransom. *Times of India*. Retrieved from <http://timesofindia.indiatimes.com/city/delhi/Stunt-bikers-hold-India-Gate-to-ransom/articleshow/9176596.cms>
34. Simon, J. (2005). Edgework and insurance in risk societies: Some notes on Victorian lawyers and mountaineers. In S. Lyng (Ed.), *Edgework: The Sociology of Risk-Taking* (203-226). New York: Routledge, 2005.
35. Solomon, R. L. (1980). The opponent-process theory of acquired motivation. *American Psychologist*, 35, 691-712. doi:10.1037//0003-066X.35.8.691
36. Stranger, M. (1999). The aesthetics of risk: A study of surfing. *International Review for the Sociology of Sport*, 34(3), 265-276. doi:10.1177/101269099034003003
37. Sun, V. (2011). *Motorcycle stunt riders dealing with roadblocks*. Retrieved from <http://www.canada.com/vancouver/news/westcoastnews/story.html?id=4bc0d887-e15a-44c1-9c8e-0809113699a6&dk=38562>
38. Teoh, E. R. (2010). *Effectiveness of antilock braking systems in reducing motorcycle fatal crash rates*. Retrieved from Insurance Institute for Highway Safety website www.iihs.org
39. Watson, J. M. (1982). Righteousness on two wheels: Bikers as a secular sect. *Sociological Spectrum*, 2, 333-349. doi:10.1080/02732173.1982.9981672
