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ORIGINAL ARTICLE

Self-Inflicted Injuries Among Young Age Group in Lahore, Pakistan

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ABSTRACT

Introduction: Self-inflicted injuries have always attracted medicolegal experts. These injuries are produced by a person on his own body for ulterior motives. Majority of such cases are observed among adults dominated by male gender. Such cases when observed among young age group are alarming and need to be explored. Excessive use of social media, unresolved social issues, large family size, lack of education, family conflict are among the leading causes of rise in such cases. Parental guidance in all such cases need to stressed as such children who has some psychiatric problems are already highlighted and known to the parents, close supervision of such adolescents could help them to prevent such grave incidences. The emotional bond between children and parents at this age is quite strong any emotional disturbance if properly handled at this stage could lead to a healthy state of mind rather than to be a stigma resulting in self-inflicted injuries which shall leave a long lasting effect on the emotional status of the child.

Material and Method: Data from three major hospitals from Lahore catering paediatric cases was collected from January 2000 to December 2010. This data was analyzed for further study.

Inclusion criteria: Those cases which were declared self-inflicted case by the examining medical officer were included in the study.

Results: Results showed that males were more involved in self-infliction and the dominant weapon used sharp edged weapon followed by blunt weapon. Most common site of such injuries is wrist. Females were involved to a lesser extent in such cases, however, the weapon most commonly used among females was also sharp edged and wrist was the most common site of such injuries.

Conclusion: Large family size, loose association between parents and children, low socioeconomic condition, family headed by single parent usually shows higher incidence of such injuries among young age group.

Keywords: Self-inflicted injuries, Medico-legal issues, Age group.

INTRODUCTION

Self-inflicted injuries are among the most notorious medicolegal issues to diagnose precisely around the world (Doshi et al., 2005). These are the injuries which are produced by a person himself on his own body to achieve his objectives.

In majority of the cases such injuries are noted in adult males and the causative agent is usually a sharp edged weapon. The things which literature has highlighted is that all such injuries are rarely observed among adolescents and very young age group. If such injuries are observed among young age group, it is an alarming sign which need to be explored (Linehan et al., 2006) .

This study is conducted to explore self-inflicted injuries among age group between 10 to 15 years. Literature review has shown that studies related to this topic is quite scarce (Selby et al., 2012). Over a span of ten years' data collected from three major hospitals of Lahore was collected, the percentage of self-inflicted injuries among this age group is quite variable, the ratio of such injuries was below expectation (McLoughlin 1999).

Data shows that self-inflicted injuries among young age group is quite low as compared to adults but in the recent past, such cases has been observed which raises an alarm and creates a room to investigate into this serious matter. Among the major leading causes for this rise in the self-inflicted injuries is increase in the social pressure, excessive use of social services such as internet etc. which have created a gap among children and their parents, due to this gap which is widening the youngster is not able to cope with the circumstances which results in seeking escape for solutions through internet. The outcome is quite variable, self-infliction is one of the solutions which satisfies the youngster (Engstrom et al., 2002).

Other aspect of the study is the injuries which children can produce themselves on their bodies to gain benefits. This again is a matter not observed commonly in our society. Even when such cases are reported sporadically, it is an alarming signal for any society which indicates unrest in the community. Such matters need to be explored so that the root cause could be treated.

The data for this is collected from the pediatric emergency department of children hospital, mayo hospital and services hospital Lahore over a span of seven years.

Due to scarcity of the data associated with self-inflicted injuries among young age group a comprehensive and effective strategy to prevent such incidences cannot be developed.

Using data from multiple sources i.e. children hospital, mayo hospital and services hospital Lahore this study focuses the demographic, outcome and circumstantial factors among children under the age of 15 years. Circumstances leading to such incidence need to be explored so that effective preventive measures could be taken.

The major reasons compelling an adolescent to take such ultimate steps is mental upset due to family conflicts among parents, unresolved social pressures, psychiatric problems and other related issues. Other facilitating factors with these children face are tense family environment, easy access to such instrument or weapons which could help the adolescent to commit such an offence. Studies have suggested that a large number of such events could be prevented by taking appropriate preventive measures once such children are pointed out earlier who could take such disastrous steps.

Parental guidance in all such cases need to stressed as such children who has some psychiatric problems are already highlighted and known to the parents, close supervision of such adolescents could help them to prevent such grave incidences. The emotional bond between children and parents at this age is quite strong any emotional disturbance if properly handled at this stage could lead to a healthy state of mind rather than to be a stigma resulting in self-inflicted injuries which shall leave a long lasting effect on the emotional status of the child.

MATERIAL AND METHODS

Data was collected from three major hospitals of Lahore i.e. Children Hospital Lahore, Mayo Hospital Lahore and Services Hospital Lahore. Prior permission was taken from the concerned

authorities of the hospitals for collection of the data from the hospital record.

Data for ten years from January 2000 till December 2010 was taken.

Inclusion criteria: Data retrieved for ten years from January 2000 to December 2010 was scrutinized and those cases which were declared self-inflicted by the concerned doctor during his examination were included in the study, those cases where some doubt was prevailing, whether the case was self-inflicted or not were not included in the study.

RESULTS

During the period from January 2000 to December 2010, cases from three centers were taken, only those cases which were declared self-inflicted by the examining doctor were included. During this period 75 cases below the age of 15 were reported. 55 cases were male, 40 were 15 years of age, and 15 were between 10-14 years of age.

Out of these 75 cases 20 were females, 14 were of 15 years' age, and 6 were between the age of 10-14 years.

Table-1: Age wise distribution (n=75) of cases

			Age of infliction	Total cases	%age
Gender	Male	55	15 years	40	72.72%
			10-14 years	15	27.27%
	Female	20	15 years	14	25.25%
			10-14 years	6	10.9%

Table-2: Distribution of injuries (n=75)

Site of injury						
Site of injury			Age	Most common site of injury	Total cases	%age
	Male	55	15 years	Wrist	30	54.54%
				Front of chest	20	36.36%
			10-14 years	Thighs	5	9.09%
	Females	20	15 years	Wrist	15	75%
				Front of chest	1	5%
			10-14 years	Thighs	4	20%

Table-2 represents out of 55 male victim adolescents of 15 years 54.54% had wrist injuries and 36.36% had injuries on the front of the chest. Whereas males between age group 10-14 years 9.09% had injuries on the thighs.

Among the female victims who were of 15 years 75% had wrist injuries whereas 5% had injuries on the front of chest. Females between age 10-14 years had injuries on the thighs.

Table-3: Offending weapon (n=75)

Weapon used						
	Gender	Age	Age	Offending weapon	Total cases	%age
Weapon use to induce injury	Male	55	15 years	Sharp edged weapon	20	36.36%
				Blunt weapon	14	25.45%
				Firearms	1	1.8%
			10-14 years	Sharp edged weapon	10	18.18%
				Blunt weapon	5	9.09%
				Firearms	0	0%
	Females	20	15 years	Sharp edged weapon	11	55%
				Blunt weapon	4	20%
				Firearms	0	0%
			10-14 years	Sharp edged weapon	4	20%
				Blunt weapon	1	5%
				Firearms	0	0%

The site chosen by these adolescents for infliction was the most accessible parts of the body which were not on the vital parts of the body i.e. wrist, front of chest and thighs.

Males of 15 years, 36.36% developed injuries due to sharp edged weapons, 25.45% used blunt weapons for infliction of injuries whereas 1.8% used firearm for this purpose.

Among male group between 10-14 years of age 18.18% used sharp edged weapons, 9.09% used blunt weapon and none of them used firearm for self-infliction of injuries.

Out of 20 females of 15 years of age 55% used sharp edged weapon to produce self-inflicted injuries, 20% used blunt weapon whereas no one used firearm for this purpose.

Among age group 10-14 years out of 20 females 20% used sharp edged weapon, 5%used blunt weapon whereas none of them used firearm for self-infliction of injuries.

Table-4: (n=75) Family status of the victims

	Earning capacity of parents	No.	%age
Socioeconomic condition ofparents	Less than rupees 10,000/month	21	28%
	Between 10,000-20,000 rupees/month	29	38.6%
	20,000-30,000/month	12	16%
	30,000 and above	13	17.3%
	Literacy status of parents		
Educational status of parents	Uneducated	5	6.6%
	Under matric	38	50.6%
	Graduate	32	42.6%
	Number of family members		
Family size	Less than 5 children	30	40%
	More than 5 children	45	60%
	Living status of parents		
Parental status (single parent /combined family)	Single parent	50	66.6%
	Combined family	25	33.3%

It is observed during this study that children of families with low socioeconomic status, lack of education, large family size and family headed by a single parent were vulnerable to more selfinflicted injuries as compared to other families with better socioeconomic conditions, small family size, awareness due to education and family headed by both parents.

66.6% of the children whose family monthly income less than 20,000 rupees/month were inclined to self-inflicted injuries. 16% of children whose family's monthly income was between 20,000 – 30,000 rupees/month were inclined toward self-inflicted injuries. Family whose monthly income was above 30,000 rupees/month, 17.3% of their children were inclined toward self-inflicted injuries.

Educational status of parents showed some significant results. Parents with no education, 6.6% of their children were inclined toward self-inflicted injuries. Parents who attended the school but could not pass matriculation, 50.6% of children of such parents were inclined toward self-inflicted injuries. Those parents who were graduates, 42.6% of such children were inclined toward selfinflicted injuries. These figures represent that educated families had less time to spare for their children which leaves the children unattended and vulnerable to activities which urge them to selfinflicted injuries.

60% of families with more than 5 children were targets of self-inflicted injuries, whereas families with less than 5 children were less inclined toward self-inflicted injuries although the difference is not significant, 40% of families with less than 5 children were inclined toward self-inflicted injuries.

Significant difference was observed among families who were headed by single parent or both parents. 66.6% of children who were subject to self-inflicted injuries were headed by single parent whereas 33.3% of children with self-inflicted injuries were headed by families with both parents.

DISCUSSION

Injuries which are produced by a person on his own body or by someone who is supporting such a person are categorized as self-inflicted injuries (Linehan et al., 2006, Selby et al., 2012). The self-inflicted injuries are commonly observed during medicolegal

examination of injuries (Greydanus and Shek 2009) (Limeres et al., 2013). A significant proportion of such injuries are easily recognized whereas some injuries require opinion of an expert (Linehan et al., 2006, Limeres et al., 2013).

Studies previously conducted are in support of self-inflicted injuries among those people who have criminal intent and have a strong urge to take revenge, such people are usually at the extreme of emotions (Grossman et al., 1999, McLoughlin 1999). Factors motivating such injuries, nature and pattern of the injuries have been explored by researchers in depth. A barren area which was left unintentionally by researchers was age related to these injuries particularly juvenile age group. Self-inflicted injuries are produced intentionally with specific objectives (Doshi et al., 2005). These injuries are not commonly observed among people of young age group. This leaves a gap in self-inflicted injuries which need to be explored. The lack of literature at this topic slowed the pace of the research but at the same time produced strong motivation to explore the topic deeply.

Although self-inflicted injuries are not too common among young age group when compared to adult where huge cases of such injuries are encountered in routine among adult age group, majority of the cases are dominated by males, who appear to have more inclination toward such injuries (Logan J 2007, Klonsky and Olino 2008). Among the offending weapon sharp edged weapon is the dominating weapon in young age group which is quite comparable to similar injuries among adults, followed by blunt weapon, this pattern is followed by both genders, whereas firearm is the least preferred mode of inflicting such injuries (Schmidt and Pollak 2006, D.S. 2007, Klonsky and Olino 2008).

The most common site of such injuries is wrist followed by front of the chest in both genders.

Self-infliction of injuries at other sites also have been observed but are not common, such finding are also similar to different studies among adult age group.The effect of economics on self-inflicted injuries have been studied. Those adolescent who suffered from self-inflicted injuries regardless to the gender and site selected by them to produce injury belonged to families with low socioeconomic status (Engstrom et al., 2002). A study previously conducted contradicts the present study. The parents of such children were not highly educated, however, significant (42.6%) parents of such children were educated which shows the lack of interest of parents and loose association of parents with their children due to multiple reasons (Huisman and Oldehinkel 2009).

A study conducted in 2003 is in support of the present study, that the size of family also had influence on such injuries, children who belonged to large families are presumed to be neglected and disturbed emotionally and are more prone toward such injuries (Pham et al., 2003). Moreover, a study conducted in 2016 supports our finding that those families who were headed by single parent suffered from such injuries far more commonly than families who were run by both parents. Such finding also exhibits the lack of time given by parent to their children (Rostila et al., 2016).

CONCLUSION

The present study focuses on the infliction of injuries on the body of oneself, my multiple means in either sex. The study is important in highlighting some important issues which were not taken into consideration previously.

Large family size, loose association between parents and children, low socioeconomic condition, family headed by single parent usually shows higher incidence of such injuries among young age group. However, education level of the parents in particular educated parents shows higher incidence of self-inflicted injuries.

REFERENCES

1. D.S., B.D.S.a.B., 2007. Medico legal diagnosis & pattern of injuries with sharp weapons. Medico legal diagnosis & pattern of injuries with sharp weapons.
2. Doshi, A., Boudreaux, E.D., Wang, N., Pelletier, A.J., Camargo, C.A., Jr., 2005. National study of us emergency department visits for attempted suicide and self-inflicted injury, 1997-2001. Ann Emerg Med. https://doi.org/10.1016/j.annemergmed.2005.04.018
3. Engstrom, K., Diderichsen, F., Laflamme, L., 2002. Socioeconomic differences in injury risks in childhood and adolescence: A nation-wide study of intentional and unintentional injuries in sweden. Inj Prev. https://doi.org/10.1136/ip.8.2.137
4. Greydanus, D.E., Shek, D., 2009. Deliberate self-harm and suicide in adolescents. Keio J Med. https://doi.org/10.2302/kjm.58.144
5. Grossman, D.C., Reay, D.T., Baker, S.A., 1999. Self-inflicted and unintentional firearm injuries among children and adolescents: The source of the firearm. Arch Pediatr Adolesc Med. https://doi.org/10.1001/archpedi.153.8.875
6. Huisman, M., Oldehinkel, A.J., 2009. Income inequality, social capital and self-inflicted injury and violence-related mortality. J Epidemiol Community Health. https://doi.org/10.1136/jech.2007.069377
7. Klonsky, E.D., Olino, T.M., 2008. Identifying clinically distinct subgroups of self-injurers among young adults: A latent class analysis. J Consult Clin Psychol. https://doi.org/10.1037/0022-006X.76.1.22
8. Limeres, J., Feijoo, J.F., Baluja, F., Seoane, J.M., Diniz, M., Diz, P., 2013. Oral self-injury: An update. Dent Traumatol. https://doi.org/10.1111/j.1600-9657.2012.01121.x
9. Linehan, M.M., Comtois, K.A., Brown, M.Z., Heard, H.L., Wagner, A., 2006. Suicide attempt self-injury interview (sasii): Development, reliability, and validity of a scale to assess suicide attempts and intentional self-injury. Psychol Assess. https://doi.org/10.1037/1040-3590.18.3.303
10. Logan J, C.A., Ryan G, 2007. Nonfatal self-inflicted injuries among adults aged > or = 65 years--united states, 2005. MMWR Morb Mortal Wkly Rep.
11. McLoughlin, M.D.O.a.E., 1999. Did that injury happen on purpose? Does intent really matter? Injury Prevention.
12. Pham, T.N., King, J.R., Palmieri, T.L., Greenhalgh, D.G., 2003. Predisposing factors for self-inflicted burns. J Burn Care Rehabil. https://doi.org/10.1097/01.BCR.0000075970.36430.7F
13. Rostila, M., Berg, L., Arat, A., Vinnerljung, B., Hjern, A., 2016. Parental death in childhood and self-inflicted injuries in young adults-a national cohort study from sweden. Eur Child Adolesc Psychiatry. https://doi.org/10.1007/s00787-016-0833-6
14. Schmidt, U., Pollak, S., 2006. Sharp force injuries in clinical forensic medicine--findings in victims and perpetrators. Forensic Sci Int. https://doi.org/10.1016/j.forsciint.2005.07.003
15. Selby, E.A., Bender, T.W., Gordon, K.H., Nock, M.K., Joiner, T.E., Jr., 2012. Non-suicidal self-injury (nssi) disorder: A preliminary study. Personal Disord. https://doi.org/10.1037/a0024405.