

Is the manner of suicide predetermined? – Gastric contents can reveal the truth

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Abstract

Suicidal deaths have been reported from across the world in different communities, religion, and socio-economic groups. In the developing countries, irrespective of the reason for such deaths the manners of suicide are usually by means of poisoning, hanging, burn or drowning. Rarely gunshot injuries or fall from height are resorted to. The present study aims to determine the different methods opted for suicide in a rural setting in West Bengal. Out of the 134 cases studied over a period of 2 years, hanging was the most common method among both sexes followed by poisoning. In the majority of the cases of hanging food was detected in the stomach while in cases of poisoning it was found only in 39.1% cases. This indicated the knowledge of the victims that food might interfere with the actions of poison and hence to avoid it before consumption of the toxic substance. The presence or absence of the gastric contents also points out towards the predetermined mindset of the deceased with regards to the choice of the method of suicide.

Keywords: Suicide; manner; gastric contents; predetermined.

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Introduction

Suicidal deaths are a common mode of unnatural death in the present society. Irrespective of age, sex, and socio-economic status, such incidents have been reported throughout the globe. The reasons for suicide may vary depending on the age, sex, and society. Suicidal attempts may be committed in the heat of the moment as an impulsive act resulting from a sudden emotional instability due to an untoward incident (1). Psychological stress due to familial disharmony, failure in love, financial hardship or torture may also lead to such deaths (2),(3),(4). Aliamo et.al. were of the opinion that family food insufficiency and not family income was positively associated with suicides (5). The choice of the manner of suicide e.g. hanging, poisoning, burn

etc. is difficult to predict in such victims. Prolonged depressive episodes affect the appetite of the subjects and usually, they reduce their food intake or remain starved prior to the incident (6). The present study aims to determine the different manners of suicide in a rural population in west Bengal, India and whether the choice of the manner is predetermined by the victims or not.

Methods

The present study was conducted between January 2014 and December 2015. A total of 134 cases of suicidal deaths were included in the study. Only those suicidal cases which were declared brought dead at the hospital or expired within a very short period of admission without any medical

intervention being possible were included in the study. Details regarding the victims were obtained from the family members and inquest report. Standard autopsy procedures were followed for dissection. The stomach contents were carefully examined for the presence of food and any suspicious or poisonous substance. Only those poisoning cases with definitive findings on autopsy were included in the study. The data collected were analyzed using SPSS 16.

Results

A total of 134 suicidal cases were studied during the 2 year period out of which 68 were males and 66 females.

Table 1: The different manners of suicide and its gender distribution

Manner of suicide	Gender		Chi-square at df 2, p-value
	Male	Female	
Hanging (n ₁ =77)	41(53.25%)	36(46.75%)	2.66, 0.265
Poisoning (n ₂ =46)	24(52.17%)	22(47.82%)	
Burn (n ₃ =11)	3(27.27%)	8(72.72%)	
Total (N=134)	68(50.75%)	66(49.25%)	

Table 1. Hanging was the most common manner of suicide (n=77, 57.5%) among both sex (males -53.2%, females-46.7%) followed by poisoning (males52.1%, females47.8%). The manner of suicide was found to have no variations across the gender of the deceased.

Table 2: Stomach contents in cases of suicide

Manner of suicide	Stomach contents		Chi-square at df 2, p-value
	Food particles	Empty	
Hanging (n ₁ =77)	47(61.04%)	30(38.9%)	5.56, 0.062
Poisoning (n ₂ =46)	18(39.13%)	28(60.9%)	
Burn (n ₃ =11)	6(54.55%)	5(45.5%)	
Total (N=134)	71(52.99%)	63(47.1%)	

Table 2.in nearly 53% cases the food was detected in the stomach of the deceased. In the case of hanging majority (61.1%) of the victims had food in their stomach while in poisoning it was found only in 39.1% cases. In the case of burns also the presence of food was detected in more than half of the victims.

Table 3: Comparison of stomach contents among hanging and poisoning cases

Manner of suicide	Stomach contents		Chi-square at df 1, p-value	OR (95% CI)
	Food particles	Empty		
Hanging (n ₁ =77)	47 (61.04%)	30(38.9%)	5.55, 0.0185	2.44 (1.08-5.53)
Poisoning (n ₂ =46)	18(39.13%)	28(60.9%)		
Total (N=123)	65(52.85%)	58(47.1%)		

Table 3. Considering the suicidal cases of poisoning and hanging which consisted majority of the cases in our study, it can be said that higher number of deceased of hanging were found to contain food particles in their stomach compared to that of poisoning group and the difference was statistically significant.

The weight of the stomach contents in those cases where it was detected varied between 120 grams to 480 grams.

Discussion

A number of studies throughout the world have shown that under consumption of fruits, vegetables and meat (7), low level of cholesterol (8) and low

antioxidant vitamins (9) are associated with increased risk of a suicidal attempt.

In our study, there was no variation in the manner of suicide among both sexes. Hanging was the preferred manner than poisoning or burns. Though the study population in the present study was from a rural background yet hanging was the preferred

mode than poisoning. This may be due to the fact hanging causes early death and is less painful compared to poisoning. It also shows that the victims were determined to terminate their life and did not want to take any chances as the possibility of survival following medical intervention in poisoning might not fulfill their purpose. Soman et al. in a community-based study in Kerala also reported hanging (64%) to be the commonest mode of suicide followed by poisoning (10%), drowning (9.3%) and burns (6.4%) (10).

In the majority of the cases of hanging (61.1%) and burns (54.5%), the food was detected in the stomach on autopsy whereas in poisoning only 39.1% cases had food. This shows that most of the victims who committed suicide by poisoning avoided food before the attempt as they might be having the knowledge that the presence of food in the stomach would make the poison less effective.

When the two common groups in our study – hanging and poisoning were compared regarding the presence of food in the stomach, the difference was found to be significant. Thus those individuals who opted for hanging as the mode of suicide can be said to be having a predetermined idea regarding the choice of manner as they consumed food and knew that it would not affect in the process of hanging. The same holds true also for those who opted for poisoning. As they were predetermined to commit suicide by poisoning hence majority of them avoided food prior to the attempt. The time of incidence among the two groups was also studied but did not show any significant variation. Kibayashi (11) in their study reported that food was detected in the stomach in 41.1% cases of suicidal drowning.

Hence the present study shows that even in the rural areas with poor educational level people have the knowledge that food might interfere with the poison and so it was mostly consumed in empty stomach or mixed with some liquid. It can also be opined that the choice of the method for committing suicide is predetermined to some extent. Those who opt for poisoning usually avoid food before the attempt while those who opt for other methods like hanging or burn do not. Thus contrary to the common belief that most of the suicides are committed suddenly at the heat of the moment in a sudden outburst of emotional stress, it can be said beyond any doubt that most such incidents are predetermined with regards to their choice of the manner of suicide.

Conclusion

Hanging was the most common manner of suicide among both sexes in spite of the victims being from rural areas. The earlier and less painful death in hanging made it the preferred choice. On examination of the stomach contents and the method of suicide, it was evident that the individuals had the knowledge that food might interfere with the effects of the poison. Presence or absence of food in the stomach on autopsy proved that the manner of suicide was predetermined in most cases regarding whether it would be by poisoning or by other means.

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Conflict of Interest

None.

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