

Causes of accidents essay

[Environment](#), [Disaster](#)



\n[[toc title="Table of Contents"](#)]\n

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1. [Causes of Accidents](#) \n \t
2. [Human factors](#) \n \t
3. [Systems approach](#) \n \t
4. [Organizational influences](#) \n \t
5. [Epidemiological theory](#) \n \t
6. [Conclusion](#) \n \t
7. [Bibliography](#) \n

\n[/toc]\n \n

Causes of Accidents

Introduction

An accident is an occurrence that can interrupt the completion of an activity. This process may result in injuries and damages. In the modern world, accidents can be caused by a magnitude of factors such as human behavior, systems and organization failure. There has been debate why there is advancement in technology, but accidents have continued to rise. In fact, some have argued that technology has contributed more to these accidents since the rate at which they are occurring is more than the way they were before. Experts have tried to connect the number of accidents that occur to what causes them. For instance, it has been noted that inexperienced drivers often underestimate the magnitude of an accident before it happens in their lives. They only realize it after it has happened. Accidents are commonly taken as different from what causes or lead to diseases. As a result, accident

remains the only major cause of deaths which has made atheists to claim that accidents are an act of God. Accidents should only be analyzed by scientists and theologians since they are unique, and it is hard to understand their cause. Moreover, these studies should be subjected to more rigorous and sophisticated scientific methodology. In fact, research in accidents is something that has taken place without clear concepts hence should be studied keenly. This paper looks at some of the reasons why accidents have continued to take place even after 100 years of technological development (Shappell et al., 2007, p. 228).

Human factors

These are the major causes of accidents at the workplace, on the road or at home. Estimates of these occurrences still vary depending on the state and the nature of accidents, but studies indicate that these factors cause close to 90% of all accidents. While some might not take this seriously, it is very crucial to analyze the role that these factors play in causing accidents. Recent evidence has pointed that human factors do not just occur in the immediate role of causing accidents but rather starts earlier. For instance, there are several things that take place which eventually lead to an accident. Some of these include work practice and individual's behavior in and out of work. A driver who is driving a car while talking on the phone is more likely to cause an accident than one who is keen on driving. This is an indication that paying proper attention to what is you are doing has an effect of preventing an accident from occurring. The model indicates that there is a contributing factor that is followed by a sequence of events and errors. This shows that once humans have understood the nature and the causes of

accidents, they might be prevented. In any new or old behaviors, making an error is a constant occurrence hence it is very important to know the way accidents are likely to take place so that proper measures can be put in place to prevent this. Despite errors occurring without proper causes, some errors have been attributed to lack of proper training of an individual. For example, any skilled driver is much less likely to cause an accident than one who does not have any experience in driving a car.

According to Shappell et al. (2007, p. 228), the other factor that can be attributed to human behavior is how somebody was born. This model assumes that there are features in a human being that permanently makes them prone to accidents however much they try to prevent it from occurring. This is also supported by the fact that when human population is considered, only a small percentage of this population typically experience accidents with rather a small percentage that having multiple accidents each time which should not be the case in case human factor were not the way they used to be. Finally, living in unsafe conditions has also played a significant role in causing accidents either at the workplace or outside workplace.

Moreover, an inexperienced or untrained individual is more likely to cause an accident while operating a machine. Once a person is adequately trained, it will require a lot of efforts for him to trigger any occurrence of accident since he will always be conscious what he is doing, on the other hand, an untrained individual can easily trigger the occurrence of an accident since as much as he tries to control it there are high chances that it might concur. Ideally, errors among skilled persons can only take place due to lapses hence are different from errors that occur due to unskilled personnel that can be

more fatal. The nature of human error thus varies as to the type of error and the accidents that take place. When combined with other factors such as lapses and being unskilled there are high chances that an accident can occur (Naquin & Kurtzberg, 2004, p. 130).

Systems approach

A system is a combined form of related components that unite to form a unified mode of operations. The likelihood of an accident occurring depends on how these systems work in an environment or at home. In case they work poorly, chances are very high that an accident may occur but if they work well chances of an accident occurring are reduced by a huge percentage. The other theory that explains that accidents occur is an interaction between human and machines. This often involves more complex types of actions that take place to ignite these activities. Under normal circumstances, it is very rare to get involved in an accident but this may change depending on where the system is. Ideally, any system often assumes a harmony at the workplace or the normal interactions but this is not the reason as there is no state of harmony. For instance, somebody climbing the top of an unstable object is likely to fall due to the instability of the object he is climbing. Apparently, road accidents occur due to a failure of the whole traffic system and not as a result of the errors that have been brought about the driver. This indicates that the driver is simply a victim. For instance, what the system has put for the driver are too complex for him to understand therefore leading to the occurrence of an accident. This means that his system must be designed so that it can be less complex to prevent this occurrence from taking place. The system must further limit all the negative

consequences from taking place so that this can be avoided and prevented. Safety systems should be put in place such that the driver can make an error without the final effect of hurting himself (Gibson & Crooks. 1938, p. 555). For this to happen, the primary components are the person, a machine and the environments that must all work in tandem. The model indicates that when a person interacts with a machine and in a suitable environment, there are high chances that an accident might take place. Even though every task must be performed, there are great chances that every action has risks that might take place, and this requires individuals to be extra vigilant while undertaking these tasks. It is the person who should weigh the risks and determines whether they are ready to perform the task or not. For instance, if a particular machine is not functioning as required, the operator has to make a decision either to take it away or interrupt the work. Stopping it or continuing to work with a faulty machine has the likelihood of causing an accident. Hence, this must be taken into account. On the other hand, removing it for a repair will interrupt the work but will also prevent the accident from happening.

Organizational influences

According to Gibson & Crooks (1938, p. 453) wrong decisions by the organizations managers have also thought to be contributors to accidents. Apparently, these often go unnoticed in most cases, and the individual who is directly involved is the one who ends getting the blame. This can even be ignored by the best-trained investigators who cannot understand why a particular accident has been caused by due to organizational failure. These organizational failures revolve around three key aspects that are resource

management and allocation, the climate that individuals operate in and operational processes taking place. The resources one involves the allocation management and the usage of the resource that has been put in place. The corporate resource meant techniques should focus on proper usage and avoidance of any accident from occurring, but this is often hardly the case as many such accidents have occurred in the past due to lack of putting these things in place. For instance, road accidents may occur due to the failure on the part of the road department to put measures that can curb speeding by drivers. If this could have been put in place, such accidents could not have taken place. The climate where people work is also another contributing factor that can lead to accidents that were not planned. One such thing that tells about climate is the structure of the organization. This often involves the chain of command that has been put in place. A proper chain of command may lead to the prevention of accidents while a poor chain of command may lead to an accident and a lot of people losing their lives. All these, when combined with the operational process, may lead to a situation where an accident just occurs.

Organizations have also failed by not establishing proper rules and regulation to govern people who drink while operating machines. All over the world, it has been established that enforcing some rules has been one of the key things can reduce the number of accidents taking place by a very percentage. For instance, there should be speed limiting devices in the vehicle and gadgets that can monitor the level of alcohol in an individual's blood. Finally, there should also be mandatory seat belt use to

Epidemiological theory

In the past; safety approach has focused on accident causation, for instance, it has been viewed that the safer a place of work is the less likely it can cause an accident. The current trend has varied perspectives that cover aspects such as industrial hygiene at the workplace to ensure that there is no situation that can lead to causing an accident. These are related to environmental factors that can cause sickness and bad health among others. Iskran (1960, p. 162) explains that, this hypothetical system is extremely general in describing the causal relationship between diseases or other biological courses of actions and particular ecological encounters. In medicine and the study of disease transmission, ideas relating to Heinrich's initial three dominoes would be human, Agent and, Environment. A wide range of sicknesses including harm is considered as result of interaction between these three classifications. The study of disease transmission was produced from the viewpoint of infectious diseases, which is additionally reflected in its vocabulary. Diseases were by and large seen as consequences of effects from external agents, for example, microorganisms or infection, influencing the human and natural conditions could either transport or control this procedure. From the viewpoint of epidemiological model an accident is characterized as the unexpected, unavoidable act coming about because of the cooperation of a host, agent, and environmental variables inside circumstances which include danger taking and view of risk.

In this model, two important components namely predisposition characteristics and situational characteristics, plays a role in the accident

conditions and its effects impacts. Accident results are the damages inflicted upon the people or their property. These impacts are the measurable indices of the accidents. Conditions under which accident happens are sudden, unavoidable and unexpected act coming about because of the predisposition characteristics and situational characteristics. Predisposition attributes incorporate the weaknesses of the individuals, risky environment, harm creating operators and so forth. Situational qualities are assessed by individual, peer pressure, the priority of the supervisor and the prevailing attitude. For example, if an employee is susceptible to pressure from the individuals in higher positions, accidents are likely to occur (Parrish et al. 1959, p. 897).

This model is used to conceptualize etiologic factors for road accidents and to recognize potential preventive strategy for successful security interventions. More extensive utilization of Haddon's Matrix and use of a 10-point countermeasure in avoiding peril in the commercial enterprises will bring into focus people, technology and structure related the organization. Accident causation is very difficult to understand and must be studied adequately in order to improve its prevention. Since safety lacks a developed base, it cannot be assumed as being a science yet. This fact should not discourage individuals who passed through a similarly tentative phase at one time or the other. Accident causation study holds a great promise for those who are interested in developing the pertinent theory. At the moment, theories of what causes accidents are conceptual in nature and are just used to control and prevent. With such myriad ideas, it will not be hard to understand that there is no single thing that can be known to cause an

accident. These theories are however not important but enough for developing a framework that can be referred to get the cause of accidents (Yadav & Nikraz 2014, p. 94).

Conclusion

Ideally, causes of accidents sometimes can be very hard to understand. In fact, it requires more studies that can then come up with the actual causes of accidents. Many analysts have however suggested that each accident should be studied different so as to come up with the actual cause. From previous analysis, it can be noted that some of the accidents that have occurred before could be attributed to human errors that are the mistakes that individuals often make, the systems that are in place, organizational failures, and epidemiology. Although there has not been any single theory that states the actual cause, these can be used to analyze the study of other causes. However, this study calls for further studies that should be done.

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