

## Identification of Hazards on Road Access in The Area of Universitas Negeri Semarang: Study to Determine Safety Transportation in The Campus Area

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**Abstract:** Occupational safety and health are all activities to guarantee and protect the safety and health of workers through efforts to prevent work accidents and work-related diseases. Occupational safety is inseparable from the factors that can lead to work accidents. One of the factors causing work accidents is danger. Therefore, hazard identification needs to be carried out within the scope of a work area. This paper discusses hazards on road access in the area of the Faculty of Sports Science (FIK). The point taken is regarding vehicle lanes and pedestrian paths in the FIK area because there are still several points that are still classified as hazard-prone areas. Road users in the area in their daily activities have the potential to be exposed to hazards in every aspect of the road access in the area. There is an equally wide range of hazards in the workplace namely, physical, biological, psychosocial, chemical and ergonomic hazards. After that, accidents, illness, and even death are likely to occur in the Area.

**Keywords:** *access, road users, safety, campus*

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## INTRODUCTION

At Universitas Negeri Semarang, especially at the Faculty of Sports Science, there are access routes to several points such as bus stops, Sports Hall, Swimming Pool, Building F2, Building F3, Building F5, and so on. Entrance and exit routes are distinguished by road boundaries. In addition, there is a pedestrian path as an easy access for pedestrians.

Several aspects of this access route are the subject of research because of the safety and danger to road users. These aspects include roads for various transportation, roads for pedestrians, available facilities.

Roads that are used for transportation at certain hours experience congestion and congestion, road conditions and their surroundings cause congestion and its own dangers for road users.

## METHODS

The method used in this research is qualitative research with natural observations. In collecting data and assessing research subjects using HIRARC (Hazard Identification, Risk Assessment, and Risk Control). The first stage is to identify the various hazards that exist around the research object, then the second stage is to assess the risks that might occur. The final stage is to carry out risk control to reduce the danger to each object of research.

## RESULT AND DISCUSSION

The research object we chose is the access point for road users, both pedestrians and transportation users, in the Area of the Faculty of Sports Science, Universitas Negeri Semarang State.

Table 1. Results of Hazard Analysis

Location	Physique	Biology	Chemistry	Ergonomics	Psychosocial
Road for transportation	Falls, slips, noise, uneven roads, small potholes	Leaves falling from trees, dust	dust from motor vehicles,	Less smooth roads, lack of road signs	Traffic jams, fast vehicle users
Street for pedestrians	Poor road contours, slips, falls, trips, noise	Leaves scattered on the road	Dust from passing motor vehicles	Lack of facilities to rest	Hasty vehicle
Roadside seating	Fell, slipped	Mosquitoes, bad smell from the gutters	Dust from motor vehicles	The chairs are not comfortable because some are slightly damaged, the lighting is inadequate	When something is noisy and disturbs comfort
Bus stop	Fell, slipped	Mosquito	Dust	Lack of seating	When crowded

In the observations that have been made, the researchers used the hazard identification research method. Hazard identification is carried out starting from field observations by noting the focus area, type of hazard, and how high the level of risk is. The main focus of hazard identification is on vehicle roads, pedestrian roads, roadside seats, and bus stops. There are many hazards with the types of hazards that exist, there are five types of hazards with their types, namely physical, biological, chemical, ergonomic, and psychosocial. Danger factors with physical types in the form of falling, slipping because the road is potholes, uneven, and lots of obstacles. on the road for pedestrians there are many potholes and scattered stones which make the road dangerous and can cause falls and slips. The level of emergence of potential hazards is in the type of physical hazard by falling, slipping, for example on a road that is not good because the road is not smooth, lots of potholes, and gravel due to road damage. Then there is dust and noise caused by motorized vehicles. Inadequate road signs are also a potential hazard which is quite worrying.

## CONCLUSION

Hazard is something that needs to be identified and then followed up. Identification of hazards on access roads The area of the Faculty of Sports Science at Universitas Negeri Semarang is identified as a hazard because of the high activity every day. Therefore, hazard identification is carried out to assess the potential hazard from the highest to the lowest. From the results of hazard identification that has been carried out, it is necessary to immediately follow up on risk control. As for the dangers for motorized vehicle users, the uneven road structure is very influential in driving. Therefore, immediate repairs are needed to minimize accidents and reduce potential hazards.

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