

Human Failure at Work Errors and Violations

Accidents can occur through people's involvement with their work, it is estimated that up to 80% of accidents may be attributed, at least in part, to the actions or omissions of people (Health and Safety Guidance 48, 2003). The arrangements which are currently in place to prevent these errors and violations can be looked into and how effective the current strategies for minimising risks are. This article will look at how these could occur and the basic methods used by RB Health and Safety Solutions Ltd in carrying out a study of an organisations Failures, taking into account the relevant legal requirements and HSE guidelines. If this were a study carried out for a client I would conclude with an action plan to ensure that the recommendations put forward can be implemented effectively.

Errors and Violation have been classified by the HSE Guidance HSG 48 as:

Errors

- Skill based.
 - Slips of action
 - Lapse of memory
- Mistakes
 - Rule based
 - Knowledge based

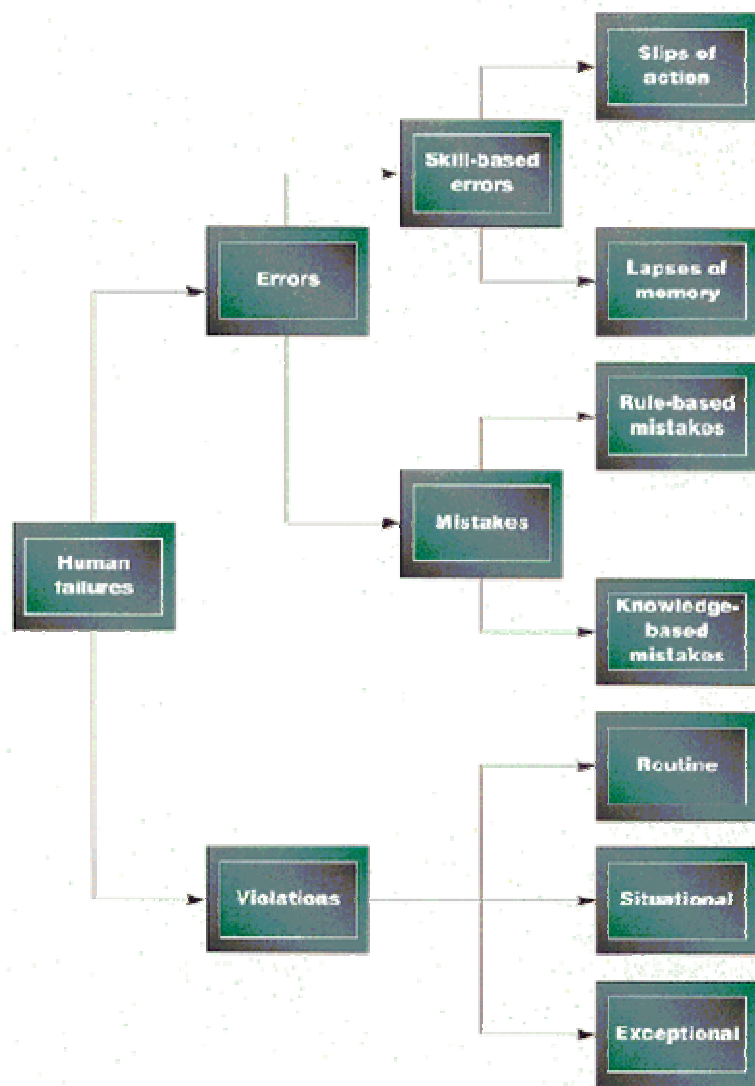
Violations

- Routine.
- Situational.
- Exceptional.

Errors and Violations

“A human error is an action or decision which was not intended, that involved a deviation from an accepted standard, which leads to an undesirable outcome.” (HSG 48, 2003) The document looks into reducing errors within the workplace and continues by explaining that violations are a deliberate deviation from a rule or procedure. The table below identifies how these failures can be categorised.

Types of Human Failure, as identified in HSG 48



Errors

Errors will undoubtedly have a number of contributory factors and the types of errors will differ depending on the organisation and goal of any study of human error carried out; often it is useful to divide these into sub headings such as task, environmental, organisational and individual factors. The table below shows how these contributory factors could be caused in an organisation.

Task factors	Environmental factors	Equipment factors / Organisational	Individual factors
Work pressure, social pressure.	Noise. Caused by the various equipment being operated in the working area.	Staffing levels could be below the standard level to operate efficiently. Ie task analyses	Training/experience. Once initial training has been undertaken, the operator could go for long periods without using equipment
Interruptions	Lighting/Temperature. Weather conditions	Design of Equipment. Equipment does not have signage.	
Stress. The primary causes of this would be the pressure the put on the staff to operate at speed.	Workspace.	Staff training. Not carried out regularly	

Suggested methods of controlling such errors could include: (remember that these should always be specific to the organisation being studied and relate to any findings identified when carrying out a study of human failure)

- Placing signage on equipment. I.e locations of controls. It should also be noted that this is a legal requirement stated within the PUWER Regulations (1998). In regulation 17 (1) it expresses that controls for work equipment must be clearly visible and identifiable, including appropriate markings. Also within these regulations it states that there should be appropriate signs to show where the control is and what it does.
- Ensuring that regular training is carried out in the use of the equipment, including refresher training. Initial training should include the use of the specific equipment type to be used and ongoing training should be documented regularly according to the results of a training needs analysis, this would ensure that competence is maintained. Adequate training is identified in the guidance to the PUWER regulations (1998) detailing that training needs to be appropriate and sufficient to deliver competence in the safe use of the equipment. “Competence is the ability to do the work required to the necessary standard” (Management of Health and Safety at Work, 1999)

Violations

An example of violation is Failing to wear correct Personal Protective Equipment (PPE) when working at height. If staff are required to work at height a risk assessment for this task should be carried out in accordance with Regulation 6 of the Management of Health and Safety at Work Regulations 1999 and the Work at Height Regulations. This risk assessment will often identify the need for fall arrest equipment (PPE) to be used when working in certain areas. A number of organisation I have carried out studies for a number of organisations and it is a common violation I find where staff will not wear such PPE and fall arrest equipment. Identified in the table below are possible reasons for this violation:

Task factors	Environmental factors	Equipment factors / Organisational	Individual factors
Job requires the operator to carry out complex tasks, the use of a harness and fall arrest makes the tasks more difficult.	Operators are required to work in a restricted space, carrying out exhausting tasks which require a lot of movement. The PPE required for this could make the work harder.	The harness is difficult to don, and therefore takes a substantial amount of time. The pressure of the task can result in the PPE not being worn to save this time.	Individuals have a large amount of pressure placed upon them to carry out the task at speed (usually in emergency services; this is largely due to the nature of the task, and the consequences of using excessive time.
Due to the nature of the task, it is often a requirement that the operator works at speed. Wearing the correct PPE takes time, and the pressure to work at speed is great		The culture of the organisation is such that the staff are reluctant to wear the harness, as it is not common practice, and a certain amount of peer pressure is applied to new operators to follow this practice.	

HSG 48 (2005) suggests that to improve situational violations the employer needs to:

- Improve the working environment
- Provide appropriate supervision
- Improve job design and planning
- Establish a positive health and safety culture

“Ergonomics has taught us that we should never expect to eliminate human error completely” (Ridley and Channing, 2004) Using the findings of Human Failure studies a table detailing an action plan will often follow to ensure that recommendations are carried out. It should be noted that a detailed cost benefit

analysis should have involvement from the purchasing department to ensure materials and services are sourced from approved suppliers.