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Objective to publish this Journal is to share information, knowledge among researcher, Professional and organization. Such Journal helps to grow their professional carrier, used for research purpose. Safety, Health & Environment related Journal is very helpful for professional, Institutional, organizational to learn and implement effective system to Prevent Accident, Protect environment and minimize losses during Disaster.

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Institution of Safety Engineers (India)

“Aim to prevent Accident, Protect Environment & Minimises Losses during disaster”

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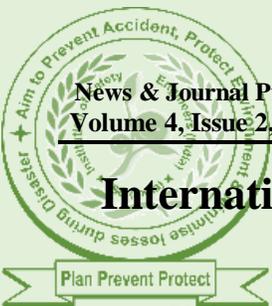


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This Issue Journal Include:

- IJISEI-V4, I2 ¹ SAFETY AT HOME IS A VERY IMPORTANT CONCERN FOR EVERYONE
- IJISEI-V4, I2 ² MENTAL STRESS - A SILENT LOSS TO ORGANISATION DUE TO COVID-19
- IJISEI-V4, I2 ³ CASE STUDY REGARDING MATERIAL HANDLING
- IJISEI-V4, I2 ⁴ PLAN-DO-CHECK-ACT (PDCA) CYCLE: THE GOAL TOWARDS CONTINUITY
- IJISEI-V4, I2 ⁵ IoT FOR SAFE HANDLING LIQUID METALS
- ⁶CORONA CASE UPDATES WORLD WIDE



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SAFETY AT HOME IS A VERY IMPORTANT CONCERN FOR EVERYONE

Adil Naseer, HSEQ Professional - B.Tech (Mech Engg), SMISE,
Tech IOSH, Level 7 IDip OHSM.
Email id: hsefmm@gmail.com

ABSTRACT:

Being protected for your home is much like a full-time job. All of your belongings & often the people (& pets) you love to reside in your home, so why wouldn't you want to protect them at all costs? Here it shows the importance of Safety at home & gives you tips on how to prevent tragic accidents from occurring. For example, in the bathroom be sure to have no slip strips on the bottom of the tub to help prevent slips & falls. To make it even safer, you can also install a handrail for holding on to. If you have children at home, ensure to keep night lights away from any types of fabrics. If a light occurs to overheat, this can be a reason for a fire. You should also opt for a low voltage night light, such as one with LED lights.

KEYWORD: Home Safety, Risk minimization, Dangerous sources at home, Safety Measure at Home, Protect to Family Member

OBJECTIVE:

Objective to Carry out study and Publish this paper is to identify Potential sources of Accident in Home and controlling to such Risk. Children are vulnerable and they can expose from Potential sources of harm in home, if adequate precautionary measure will be not taken. So This Paper is very helpful to control home related accident.

Here the list of possible dangers is apparently endless.

1. Introduction:

SPREAD OF VIRUSES & ILLNESS: The global population is increasing at an exponential rate & outbreaks of epidemics are inevitable in the current climate. Swine/bird flu & Ebola are recent examples of devastating widespread problems in Africa & abroad & they threaten your safety at home. To a minor level, flu affects us all. The presence of children makes nits & lice a reality. Be vigilant by placing disinfectant soap at your basins & regularly wash your hand & encourage your children to do the same. Additional proactive solution is to get your house inspected for pests every few months - pest infestations will likely spread disease.



MORE PRODUCTS ARE ELECTRICAL: Many of our modern products & appliances are automated & in many cases digital. In the winter months, gas heaters increase this risk even more &

old houses are even more vulnerable. Ensure that your house has an electrical clearance certificate when you procure it. This will surely provide you the peace of mind that your safety at home is not at the risk.

ALLERGIC REACTIONS bites in children & pets – what you need to know, the movement towards the usage of natural & eco-friendly products might have, (in theory at least), reduced the occurrence of allergic reactions. However, many people are actually allergic to plant products that are used in cleaning materials & may develop a rash if their skin is exposed to them. Dust & dust mites in carpets, upholstery & curtains also spur on allergic reactions & compromise your safety at home. An efficient way of eliminating dust & dust mites is to get these items thoroughly cleaned or upholstered every six months.

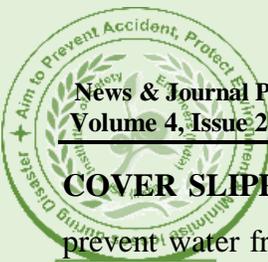
POOLS Access to pools should always be restricted by fences or lockable gates & also covered by nets when not in use. This is in a superlative world at least. In the advanced world pools are trendy & if the budget allows it, they have rim-flow structures. This allows them to be accessed directly from living areas & this is a genuine concern when it comes to safety at home. The risk of children drowning rises dramatically because of this. Use common sense & be extremely vigilant when it comes to your pool. Always Keep it clean at all times so that you're able to see anyone in distress in the water.

THE WARNING SIGNS OF A BUDDING FLY INFESTATION: The importance of safety at home is becoming increasingly important & should always be prioritized. Your health & safety can be compromised by a variety of factors in all parts of your home. It is therefore vital that you are always aware of these factors & proactively guard against them.

FALLS : Injuries because of falls, are one of the most common household hazards. In fact, one out of five older adults who falls sustains a broken bone or a head injury. Wet floors, slippery stairs, & scattered toys all create the potential for falls.

STABILIZE STAIRCASES : Make sure all staircases have solid handrails, securely affixed flooring, adequate lighting, & safety gates if there are small children in the home. confirm to keep the stairs clear of any tripping hazards. It's enticing to put the things laundry near the stairs to put away on your next trip up or down, but those can also be easy to pass up & trip over when you are in

Plan Prevent Protect
a rush



COVER SLIPPERY SURFACES IN BATHROOMS : Secure your rugs to avoid slipping & to prevent water from pooling on slick surfaces. Non-slip stickers like SlipX Solutions Safety Treads

are a mainly good way to keep everyone safe in your home from slipping in the shower.

INSTALL SUPPORTS SHOWERS & BATHTUBS : Install safety rails like the Medline Bathtub Grab Bar to help family members old & young safely get in & out of the shower. Or use a Changing Lifestyles Safe-er-Grip Balance Assist Bar which is small enough to fit in any shower. You can add more than one to provide extra support to older family members & others who need additional help.

CORRAL TOY Even a small toy can be a tripping & fall hazard. Give the kids an easy way to stow toys & make sure every playdate ends without injury. Secure skateboards, bikes, & other mobile toys in a safe area where family members & visitors won't trip on them.

FIRES In 2018, there were more than 362,000 fires cases in US homes, initiating everything from mild smoke damage to total destruction, including the loss of 3,655 lives. Even candles or an unattended iron can lead to unplanned fires in your home. precautions can be taken accordingly to avoid such incidents.

KEEP A FIRE EXTINGUISHER: Keep at least one fire extinguisher in your home & check it annually to make sure it's in good working order. place a multi-purpose fire extinguisher, such as Kidde FA110 (handy in the kitchen or near the place where fire may catch. and

CANDLES: Never ever leave unattended candles or use them near loose cloth like curtains or blankets. always remember that this a potential fire hazard & it should stays out of reach of children & that pets can't knock them over.

UNPLUG UNUSED APPLIANCES : Avoid electrical fires by making sure that all appliances are in good working order & no wires are frayed. Don't overload electrical outlets, either. however, it's a smart electrical safety practice to unplug small appliances like toasters when they are not in use.

KEEP UP WITH HOME MAINTENANCE : Prevent carbon monoxide leaks by having a professional service your HVAC system, water heater, & other appliances that use gas, oil, or coal at least once a year. If you are buying an older home, have a professional inspect these systems before purchase so you can fix problems before moving in.

CUT UP FOOD : For kids under the age of four, always cut up hard foods that can block the airways. The same applies to softer foods like grapes, cherry tomatoes, & hot dogs. The Farberware



Slicer is a hand tool that ensures & makes harmless snacking easier for you & your infant.

DEEP CUTS: This one seems like a no-brainer, but unfortunately there are a number of common items with sharp edges inside & outside your home.

CLOSE THE TRASH CAN: use a locking garbage can to protect small fingers & pets from finding sharp edges on open food cans & lids.

STORE TO KITCHEN TOOLS SAFELY AND ROPERLY: Blender, Juicer, Knives, graters & peelers are common items that can lead to nasty cuts. Properly store all sharp kitchen tools & lock them up if you have small children in the home.

LOCK UP BATHROOM SHARPS : If you use a shaver, keep it on a high shelf or lock it in a cabinet. keep extra blades in drawers with safety guards & safely stow other grooming tools like cuticle scissors as well. Child safety locks are easy & required to install & keep little fingers away from unintentional injury risk.

POINT KNIVES & FORKS DOWN IN THE DISHWASHER : Keep little ones safe from sharp points by pointing knives & forks downward in the utensil basket of the dishwasher. remove the basket away from the front of the dishwasher to avoid any sharp objects even less reachable.

PUT AWAY YARD TOOLS : Lawn tools, including rakes, saws, & lawnmowers, can cause harm if not used & stored properly. Always Stay alert while using power operating tools, & never rush while mowing the lawn or using the weed whacker. Never leave tools lying around. Make sure to keep them locked all the times in a shed or garage where children can't access them.

POISONING : There were over two million poisoning incidents reported to poison control centers nationwide in 2018. Several household items present poisoning hazards, including cleaning & home maintenance supplies.

STORE MEDICATIONS PROPERLY : Both over-the-counter & prescription medications can prove extremely hazardous to children & teens. Dispose of all unused medicines, & never leave them out on a counter or anywhere in the house. Some Solutions like the locking Medication Cabinet are a convenient way to keep medications hand without making them susceptible to accidental discovery.





KEEP PAINT OUT OF REACH : Even paint that is not lead based needs appropriate storage area to stay out of reach of kids. Do not put paint in a container other than the one it came in. Or else,

your kid may do mistake it for a drink or something else.

SECURE ALL CHEMICALS: Protect both children & pets from accidental poisoning by securing your cleaning supplies. Keep all household cleaning items in a high cupboard with a adequate safety lock to ensure it keep kids & animals from accidentally finding them. be sure to Lock up pesticides & items like turpentine in a storeroom or lockbox in the garage or shed.



PUT AWAY PERSONAL CARE PRODUCTS: Keep all makeup, hair products, soaps, & other personal products out of the reach of children & pets. Use safety latches on all doors & drawers to help keep even the most determined youngsters out.

LOCK UP DETERGENT: with all household Chemical cleaners, lock laundry & dishwasher detergents out of reach of pets & kids. If you use detergent pods, ensure children don't mistake them for candy. Never fill the soap dispenser until you're ready to start a load & always check your dishwasher for leftover residue after each cycle.



Hot drinks can hurt – keep them out of reach from your kids at home.



SAFEGUARD KIDS: Kids should be kept away from burning stove, lighters, matches and candles. At all times, ensure that your kids are not alone in a room / area where a candle is burning.



Plan Prevent Protect

CHOKING : Choking is the fourth-largest cause of unplanned death in the US, claiming approx. 5,000 sufferers in 2015 From a bite of dinner going down the wrong way to a kids accidentally

swallowing a small item, as choking is scary. Educate yourself & others with these safety tips about

choking hazards & take precautionary measures to keep your family safe.

INSPECT TOYS : Frequently inspect the toys of your kids for any loose parts. Clean floors for small toys or items where little hands might easily find them.

KEEP OUT ANY CHOKING HAZARDS OF CHILDRENS REACH : ensure to keep small, hard foods like nuts or candies out of reach of your kids. Please Pay special attention at adult get-togethers where kids can more easily sneak something unnoticed.

MONITOR PLAYTIME : despite the fact, if your child is no longer an infant, a baby monitor can still come in handy. Use this gadget to listen in for signs of choking when kids are playing in another room.

TRIM OR TAKE AWAY WINDOW CORDS: ensure to keep children from tangling themselves up, trim cords to a length that's only reachable to the adults in the home. If you wish the planning of blinds, build your windows engaging & safe with Achim Home Furnishings cordless pleated Shades..

PUT AWAY CORDS : Keep window & electrical cords out of reach of very little ones. don't place a crib or bed below a window with hanging cords. If you use an cord, ensure to place it away once it's not needed..

WRAP UP THE BLIND CORDS : If you are not ready to redecorate, you can make your home safe by installing blind cord wraps to your current window coverings. baby Blind Cord Wraps are reasonable, easy to install, & transparent, so they won't clash with your design.

DROWNING : Drowning is not only a threat when swimming or playing in water outside, it can also present a hazard in the home. On average, 2/3rd of childhood drownings incident occur in a bathtub, so do your part to avoid drowning incident with these tips: Put away buckets: If you use



buckets for cleaning, keep them empty & away from water sources. Attend to bathing childrens, It only takes a few inches of water for a child or infant to drown, so never leave a child alone in the bathtub, & always close the toilet lid.



BURNS : Burns might not look like a common house hazard, however they're a risk whenever you use dishwashers & stoves. Thankfully, there are a couple of ways in which you'll help ensure nobody in your family feels the searing heat of a fresh burn.

LATCH THE DISHWASHER : confirm your dishwasher latches firmly at all times to stop curious fingers from opening the door, notably at the tip of a cycle once burns from steam are possibly to occur. Add the safety first Appliance Lock as an additional measure to keep stop accidental dishwasher access.

USE THE BACK BURNERS : Most burns occur in the home & workplace, where, children & women are most likely to suffer a burn in the kitchen. To avoid burns, use the back burners on your stove whenever possible. Its more difficult for the kids to accidentally touch a hot rangetop. Do not keep tempting items like eatable items or toys on the stovetop, even when it's not used.

ADD STOVE KNOB COVERS Stoves, especially gas ones are the perfect place for something to accidentally catch on fire. safeguard your home from a potential fire by adding stove knob protections, like these for safety they keep small hand from turning on burners or grownups from accidentally bashing burners to the "on" position.



CONCLUSION :

There is Nothing can be more significant than by ensuring and keeping your family members safe from hazards identified at home.. Knowing that precautions to require makes your job as family protector a little easier, however nobody is on duty all the time. As a safety professional, I

personally do risk assessment for my home and always advise my family and friends to take preventive measures

all the times. You may wish to urge some facilitate

protective your loved ones with a monitored security system. Most current systems offer home automation &

remote access therefore you'll confirm everything is okay as often as you would like. Home related accident can be

prevented to take adequate precautionary measure and to increase awareness level among family member. Ensure suitable housekeeping and keep home tools properly to avoid any future accident.

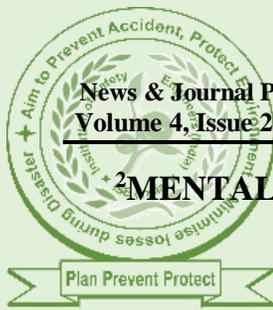
Therefore Safety at home is important concern for every one.



REFERENCE:

- Wikipedia
- Google
- IJSEI Journal , www.ijournal.iseindia.in





MENTAL STRESS - A SILENT LOSS TO ORGANISATION DUE TO COVID-19

Sahil Bhutani

HSE Engineer - Afcons Infrastructure Limited

Email id: sahilbhutani92@gmail.com

Abstract

Since the COVID-19 deep-rooted in an individual life, it has created a great impact on human life which has engraved insecurity, life threats, uneasiness, etc. These experiences yet understandable of significant challenges. As Lockdowns were announced globally, the entire globe seems to be in a mourning state. But as lockdown extended, it was very easy to adapt to the NEW NORMAL but to survive NEW NORMAL was very challenging and difficult.

To survive, new norms were implemented like social distancing, virtual meetings, work from home but still, it created mental stress as a deadline to be meet or fulfill challenging obligation. Employees have to work from home or travel risking their and their families lives. Mental stress along with emotional stress was built due to pandemic situation which needs to tackle with care and support.

KEYWORD : COVID-19, Lockdown, Work-life stress, Silent Loss, Balanced life

1. INTRODUCTION

Work-related stress

When people are overburdened with work demands and work pressures do not match their knowledge and abilities due to which employees have to work extremely hard to cope with it with little or no help and support from supervisors and colleagues which results in work stress. Work-related stress is often caused by the way the jobs have been designed and the working system of an organization, poor management, lack of support within the organization which badly affects the personal life of an individual and directly or indirectly also affects our families and friends.



Figure 1: Workplace Stressors

| Workplace Stressors | |
|---|--|
| Common Workplace Stressors | Stressors Developed Due To Pandemic Situation-COVID-19 |
| <ul style="list-style-type: none"> ▪ Underpaid. ▪ Extreme workloads. ▪ Few opportunities for growth ▪ Work that isn't engaging or challenging. ▪ Lack of social support. ▪ Lack of discussion making power ▪ Conflicting requirements or demands | <ul style="list-style-type: none"> ▪ Additional expenses incurred because of pandemic state of affairs. ▪ Feeling stressed or overpowered ▪ Worry, Anxiety, or worry of losing support ▪ Reduction in salaries ▪ Appraisals/promotions were discontinued ▪ Sadness, loss of interest in usual gratifying activities ▪ Physical symptoms, like redoubled pulse rate, dyspepsia, or different uncomfortable sensations ▪ Restlessness or agitation ▪ Feeling helpless ▪ Difficulty in sleeping ▪ Feeling disconnected from others ▪ Apprehension concerning attending to public areas ▪ Trouble quiet |

2. METHODOLOGY

To analyse the work-life balance before and during the pandemic situation, a google survey was conducted (Please find the survey questionnaires in annexure).

The following points were concluded from the survey:

102 Respondents from various age groups who are working in different sectors took the survey and data was analysed to figure out the work-life balance.

62.7% (i.e. 64 Numbers) of respondents were from age group 25-35 out of which 55 respondents are working in the private sector.

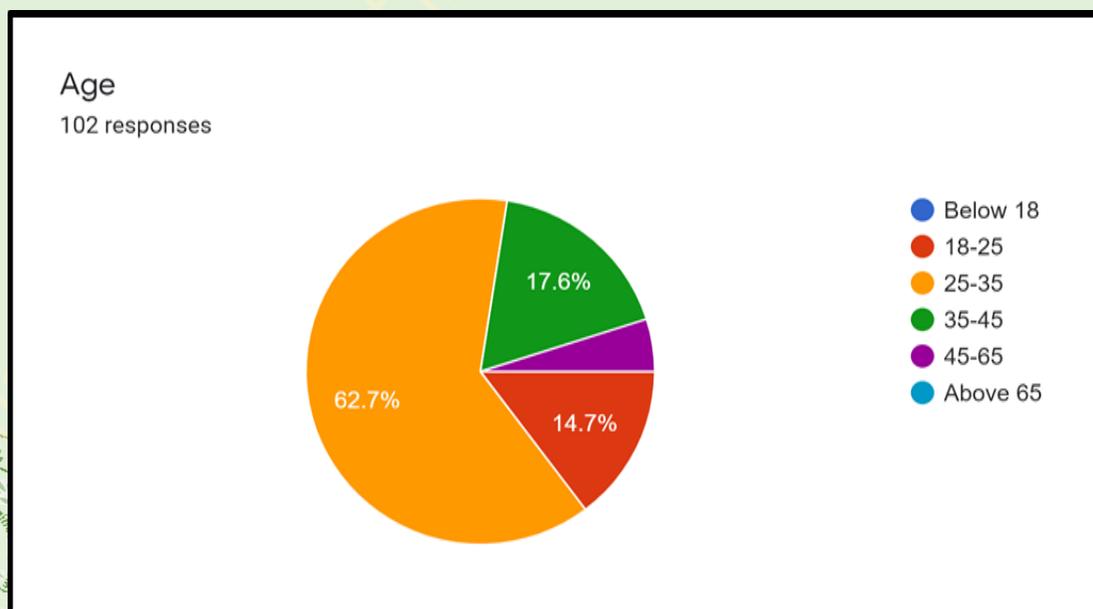
Normal working hours (8 to 10 hours) due to pandemic respondent count increase from 35 to

51 for the age group of 25-35 years.

Out of 102, 20 respondents have never taken out on vacation.

- ❖ 20.59% of respondents never attend the social gathering in the family and 17.64% never attend the social gathering of office colleagues during pre-lockdown.
- ❖ 7.83% of respondents got decreased who used to work at home once in week post lockdown.
- ❖ The respondents who never overstay in the office to finish work got increased by 16.67% and respondents who overstay sometimes also got decreased by 13.72%.
- ❖ The respondents who feel like their work-life got out of balance due to lockdown increased by 11.96%.
- ❖ 14% increase in spending time for leisure activities during/after lockdown.
- ❖ 90% of respondent feels that long working hours affect their efficiency.
- ❖ 16% reduction in binge eating, drinking, and smoking post lockdown.
- ❖ 51.96% of respondents of age group 18-25 & 25-35 feel like their health is suffering because of their work. •
- ❖ 60.78% of respondents has given highest priorities to family followed by health by 57.83% and least priorities to wealth by 6.86% and hobbies by 8.82%.

Figure 2: Age Categorization



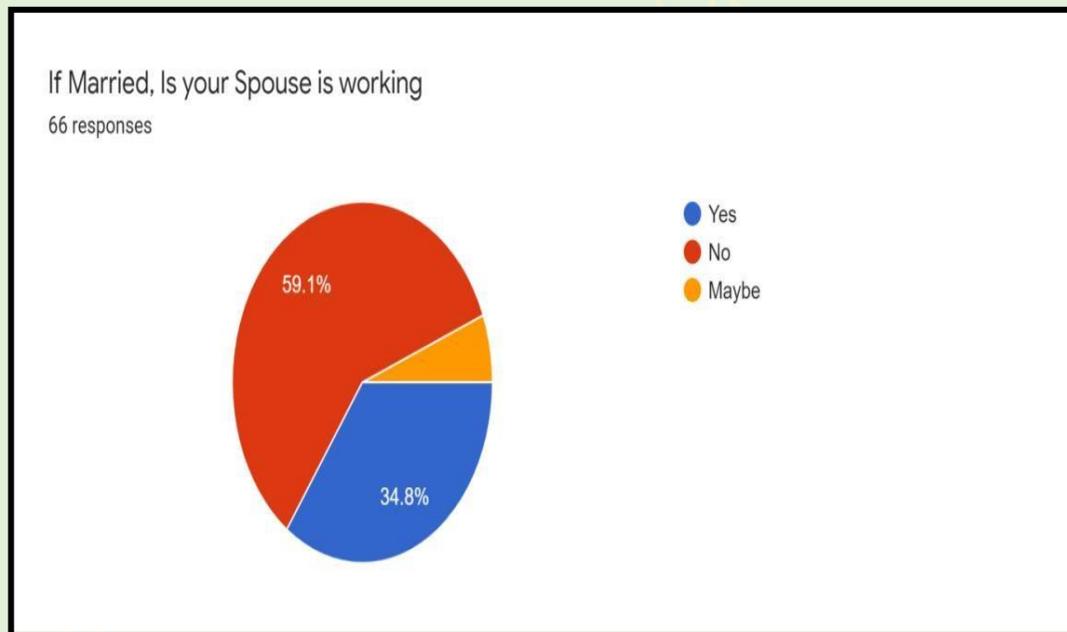
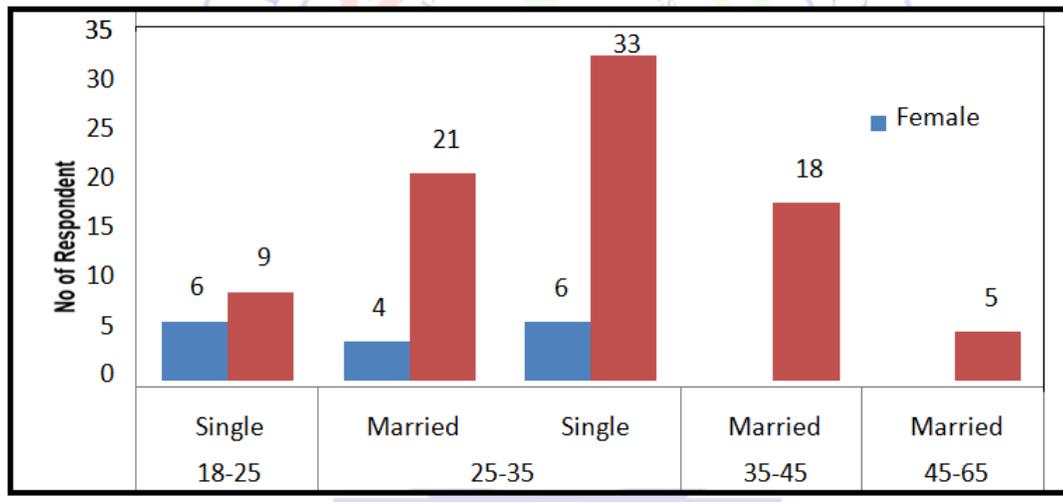




Figure 3: Organization Details (Concerning Type, Working Hours)

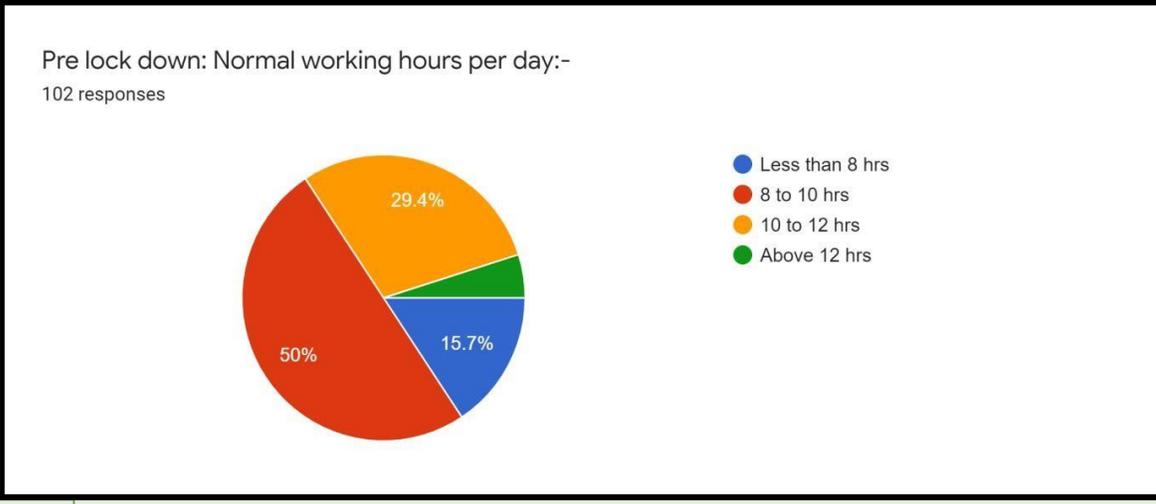
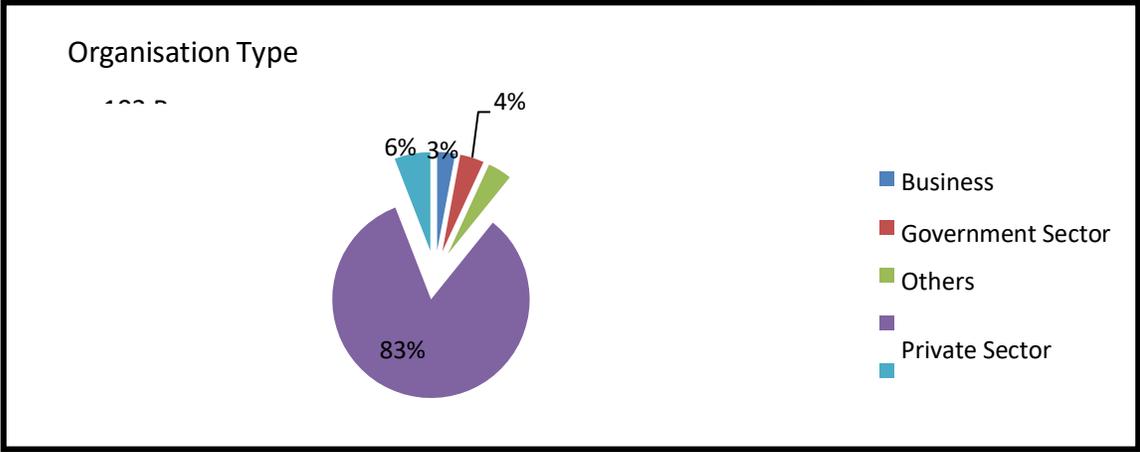
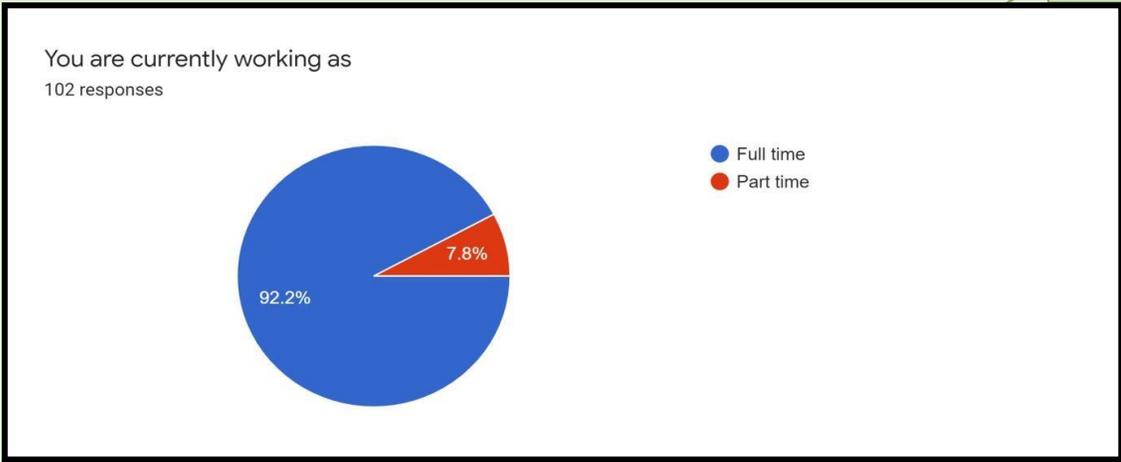
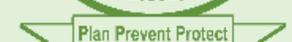
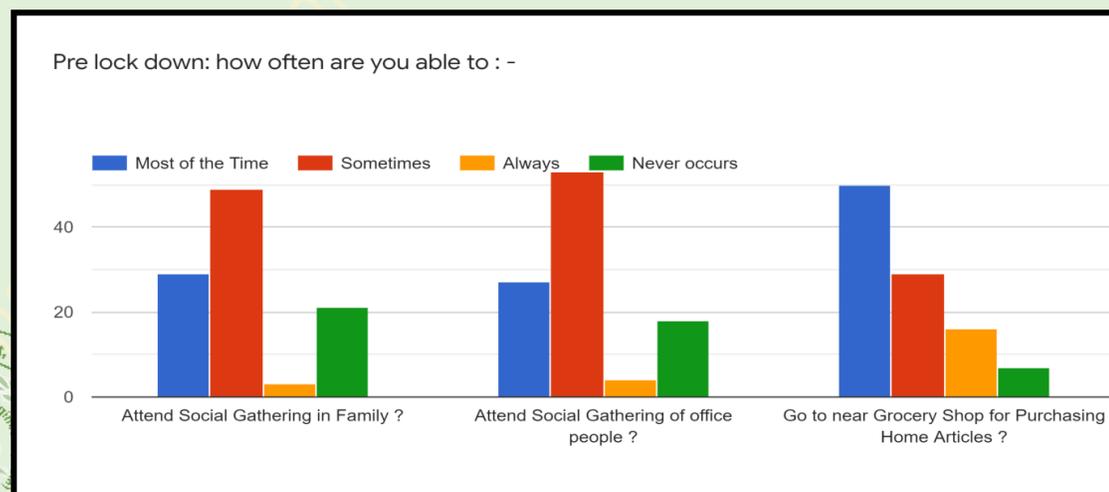
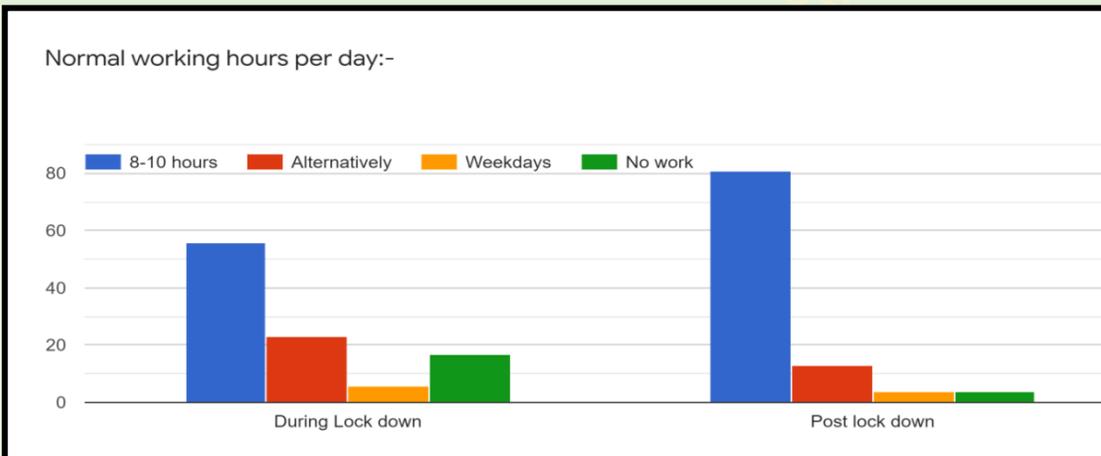
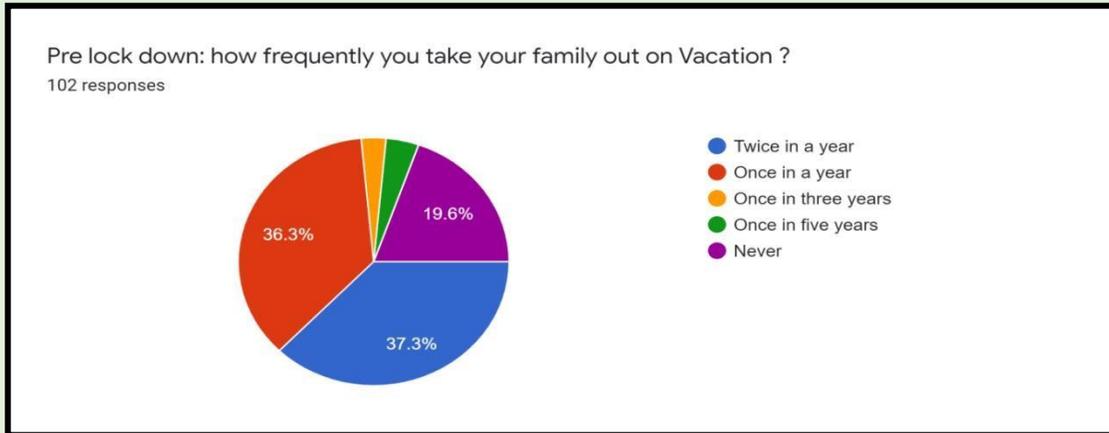


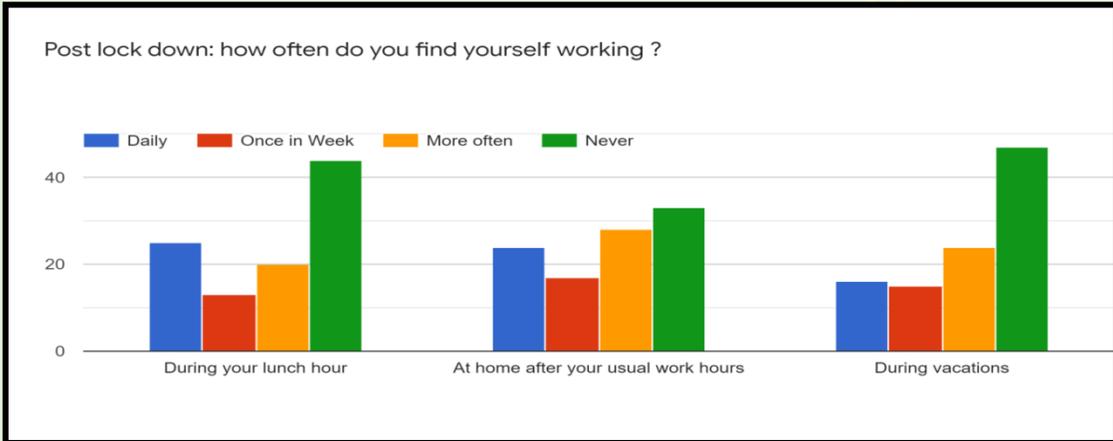
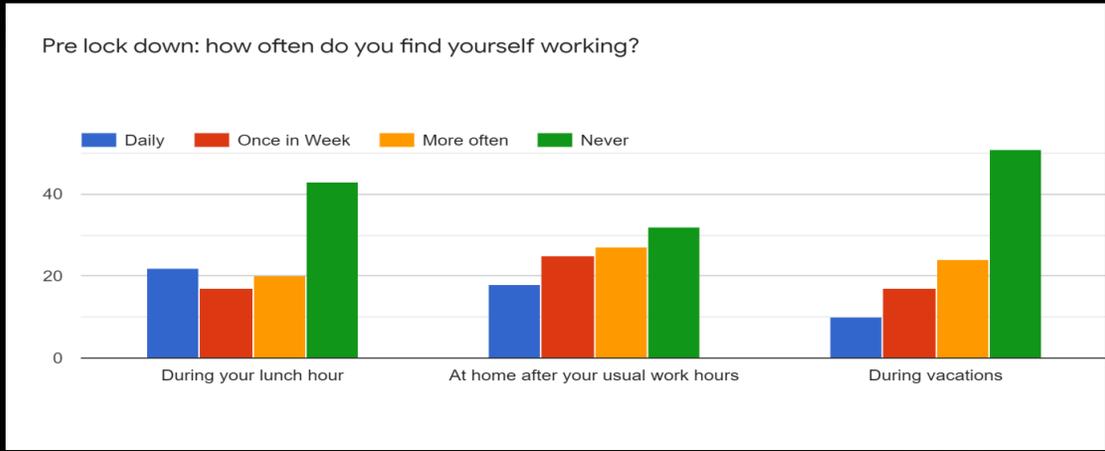
Figure 4: Work-Life Scenarios





Plan Prevent

Protect



Plan Prevent Protect

Figure 5: Work-Life Impact

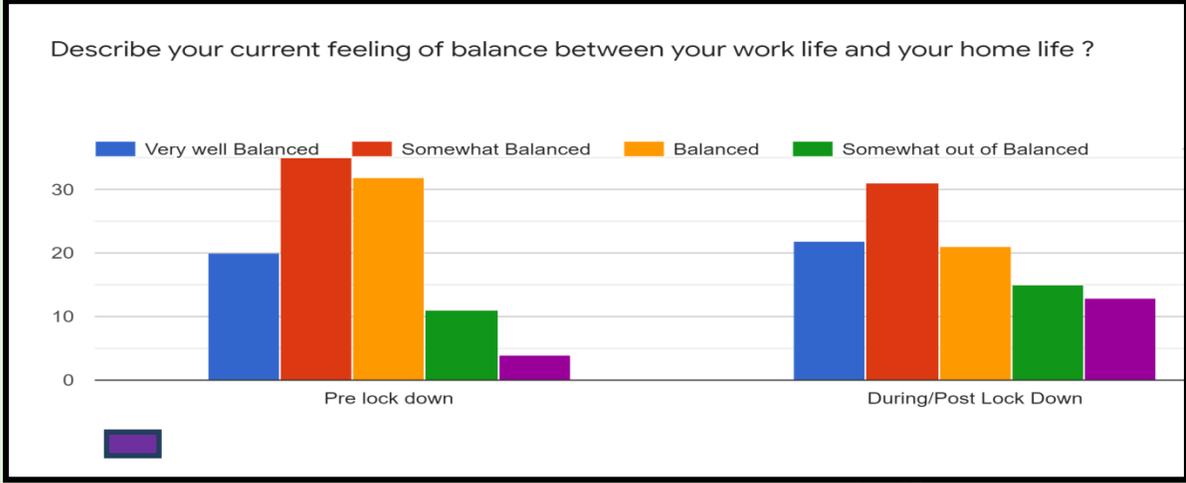


Figure 6: De-stress Measures

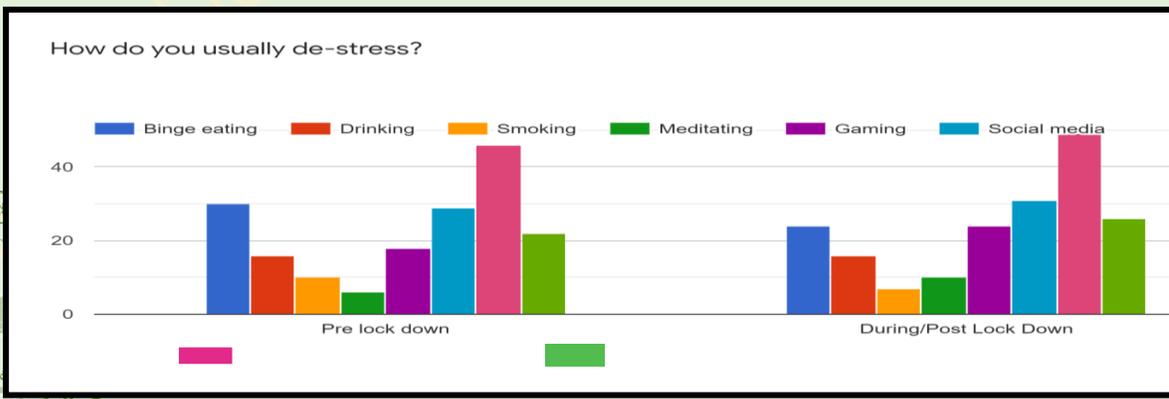
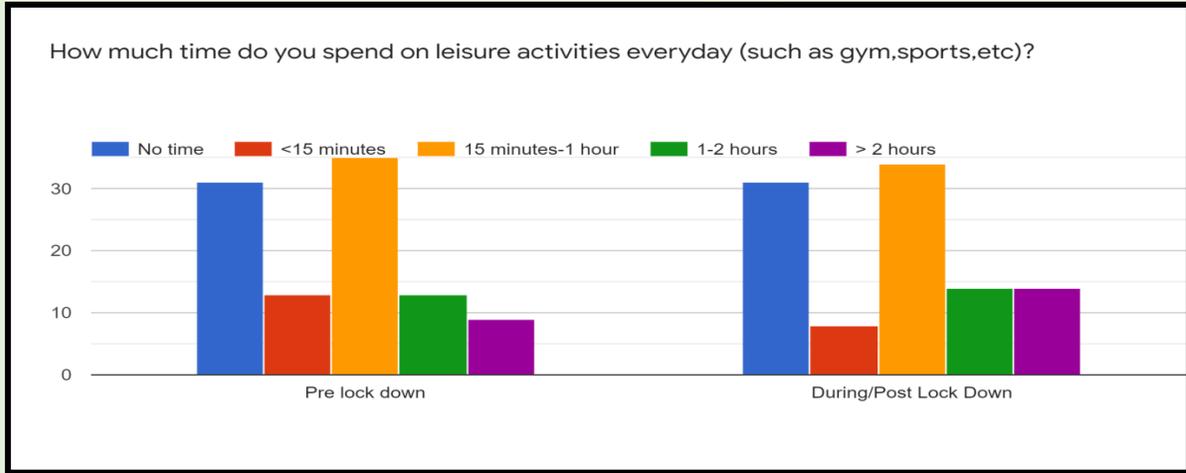




Figure 7: Work-life Efficiency

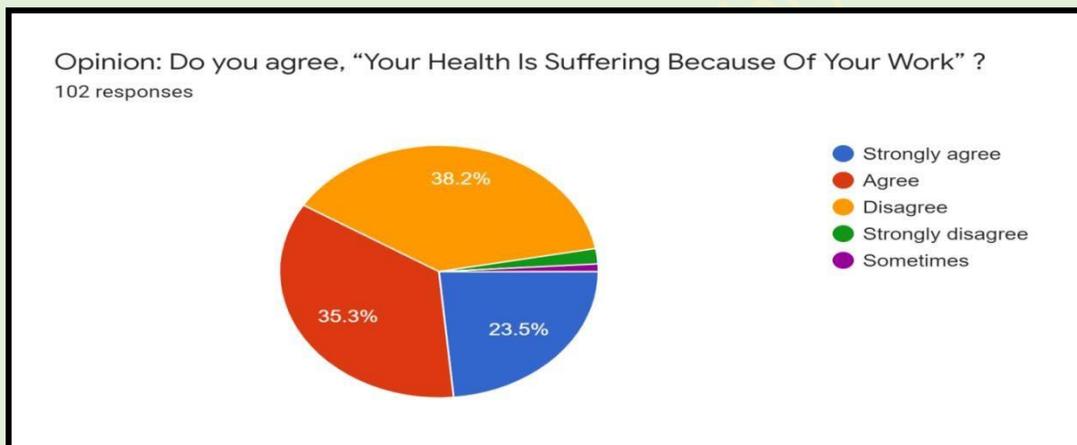
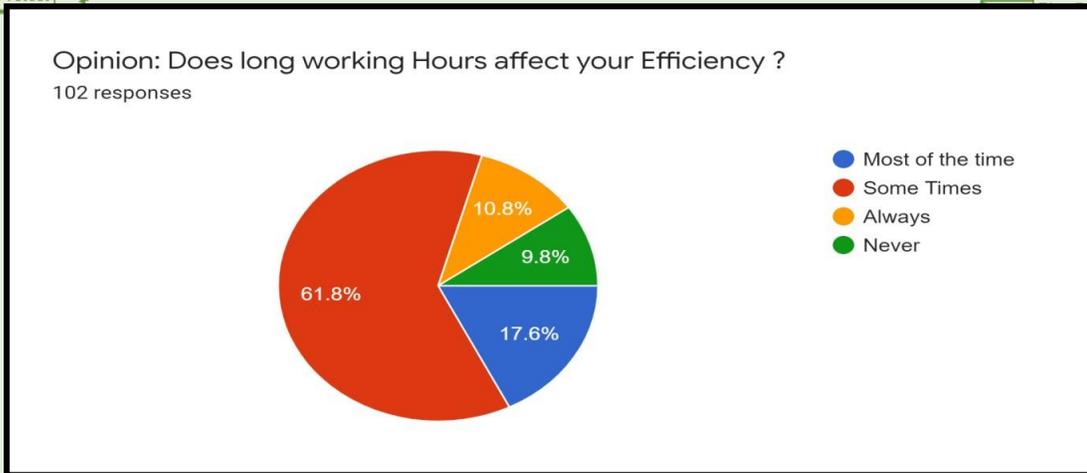
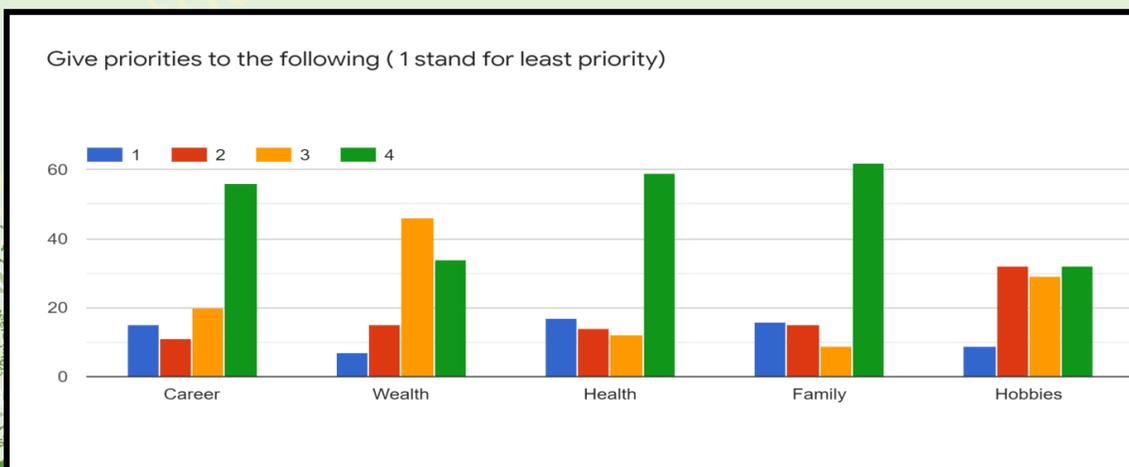


Figure 8: Priorities of Individual





3. CONCLUSION

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For employees within the company world, the journey of operating skilled looks like a roller coaster rides to associate extent that they lose their self-control and simply work with the flow, neglecting the impact that it'll wear them. Emotions area unit very contagious and stress directly or indirectly have an effect on the spirit of a private besides the physical aspects. Following measures ought to be taken to balance work and lifetime of worker.

- a) Reduce job stress by taking care of yourself
- b) Correct rest
- c) reference to your inner-self
- d) Reducing job stress by organizing and prioritizing
- e) Avoid over-commit
- f) Delegation of responsibility
- g) Role of Managers and Employers In serving to workers trot out Job Stress
 - Improve communication with workers
 - Encourage worker participation
 - Distribution of work primarily based upon capabilities and avoiding overburden on everyworker.
- h)Role of Human Resources

It is necessary to adopt to the new tradition and continue the add such a way that the chain of Corona unfold is eliminated. Thus, the hour will facilitate the organization in making a culture that respects people's personal lives and their obligations outside work.

- Utilizing the in-between break/mealtime or dedicate every day or few hours to arrange a happening. workers ought to be concerned, and suggestions ought to be appreciated so work stress is often minimized.
- Arranging lunch meet outside the geographical point boundaries, organizing a get along to own some check chat session or vice session once at a geographical point.
- Wellness programs may improve overall worker health and decreases tress and sick-day losses.
- Events like Yoga sessions, aerobic sessions, ought to be inspired to spice up the immunity of the workers. Interactions with dieticians or specialists ought to be controlled often to talk



Plan Prevent Protect



with workers. Sports leagues may be organized for team building and morale boost.

▪ Family-friendly policies are often incorporated by hospitable families into worker events.

Families get a platform for interaction and facilitate in understanding the collaborative life and acquire on the point of the organization.

- Strengthening the Inter-personal relationships at work may be inspired among workers members by developing a rewards system to figure higher with a positive perspective.
- Turning work into play by incorporating screaming activities, anecdotes, role plays, or fun coaching materials into coaching sessions, conferences. and activities as and once attainable.

REFERENCE:

No Reference



3 CASE STUDY REGARDING MATERIAL HANDLING

Sourav Chakraborty, B.Tech (Elec. Engineering), SMISE

Email id: souravc618@gmail.com

ABSTRACT

Case Study is important analysis to identify cause of accident and ensure safety control measure of such accident to prevent future accident. Case study also shares during training or meeting or other program among employees to aware them. This Study is carried out to know material handling related risk and their safety measure. In This study one Incident investigation report is included to know the cause and how to prevent such accident.

KEYWORD: Case study regarding material handling, Safety Measure during Material handling, Potential causes of accident related to material handling, Risk control.

OBJECTIVE

- To plan and identify safe method of material handling
- Identify potential source of harm that associates with material handling activities
- Identify causes of accident & Ensuring adequate safety Control measure to Prevent such accident
- To create more awareness among employees
- To control work place risk

1. Introduction

Material handling is major job that run in majority of industries. Several types of risk such potential of personnel injury or other harm are associated with material handling job. Safety or health safety Environment (HSE) term is very much famous with industrial instruments or equipment's which are used in daily basis to measure or to maintain every parameter that are directly linked with SAFETY. Material handling plays an important role in various industries to maintain safety standards in all aspects as well to ensure comfort of operator or worker who is directly connected with the job. Material handling is the positioning and placing of any materials in an industry for business purpose or too some extent. Now -a-days manual handling has been reduced by uses of several machines. Automation is playing major role for reducing of manual handling.

Manual handling is generally of two types; manual handling and mechanical handling. To prevent material loss, time loss, accident due to manual handling, mechanical handling is the best preference. We will discuss here regarding common issues of material handling and its impact in

safety and their respective reports. By defining case study, we will try to understand the difference of mechanical handling. Corrective measures will also be discussed and their sequence of work to mitigate the accident as discussed in the case study in the most possible way.

2. Need of material handling

- Movement of materials from one place to another
- To increase the production rate by using of mechanical handling.
- Material handling process is used to load and unload of vehicle.
- For storage purpose we prefer material handling.
- Now-a -days mechanical handling more increased as in manual handling may some physiological problem occurs due to not maintaining proper SOP.
- Lifting process easier than previous.

3. Hazards during material handling

- Carrying of excessive load
- Improper lifting process
- Defective or non-standard material handling equipment
- Doing work by non-maintaining of proper safe operating procedure (SOP)
- Not wearing of proper PPE
- Slip and trip
- Improper housekeeping

4. Method of Lifting or Material Handling

Material Lifting method may be manually or Mechanical means

4.1 Method of manual lifting

- One foot ahead of the other in the direction of movement
- Pick the load from the palm
- Keep the back side straight
- Keep the load close to body
- Head must be in correct position
- Vision should be clear

4.2 Method of mechanical lifting

- Proper equipment to use
- Proper rated equipment to use to lift the load



- Safe working Load (SWL) to be check
- Pre inspection checking to do
- Proper identification mark to use

- Regular preventive maintenance to do
- Parts to be changed as per OEM guideline
- Speed of equipment to be monitored and to be controlled
- Properly trained professional to be engaged
- Training schedule to be maintained for operators properly
- Operator knowledge to be clear about related hazards

5. Advantage & Disadvantage of Mechanical handling equipment

5.1 Mechanical handling advantage:

- Physical stress on human will be less
- Productivity will be increased
- Efficiency will be increased
- Easy and fast handling of product
- Reduce rate of accident
- Better and time to time customer service
- Better marketing

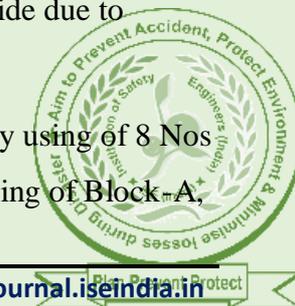
5.2 Mechanical handling disadvantage:

- Initial cost will be more
- Restricted flexibility of changes
- Chances of machine failure
- Productivity may get affected for long time
- Maintenance cost is very high
- Totally depends on machine

6. CASE STUDIES

A case study included here of a company where accident happened during material handling operation. In this case study, Name of Company & Injured person name has been hide due to company data policy.

Company Name-ABC, Location- Najafgarh, Delhi handling warehouse operation by using of 8 Nos of forklifts for material management, loading and unloading operation. During loading of Block-A,



Forklift no-4 when carrying pallets of 20T (Load with 12 blocks), the pallet got break and due to the heavy load of materials two of operators were seriously injured and almost 10T product damaged.

6.1 REPORTING PROFORMA

COMPANY NAME- ABC INFRASTRUCTRE & ENERGY SERVICES LTD, DELHI

Accident investigator details

| | |
|-----------------------------------|-------------------------------------|
| Name: - Sourav Chakraborty | Reporting date: - 12.04.2021 |
| Designation: - Manager | Reporting time: - 16:00 hrs. |
| Department: - Maintenance | Place: - Najafgarh, Delhi |

Accident / Incident details

Brief description: - During loading of Block A (South side of warehouse), Fork-lift No-4 carrying the pallet with 12 individual blocks got break and due to the heavy load of the materials two of operators got injured. Out of 12, 6 Nos of block directly hit the operators. Site-in-charge Immediately stop the loading procedure and rescued the respective persons for the further treatment. Total of 10T approx. products damaged due to this. Loading remains stopped for 3 hrs.

Time of Accident/Incident: - 15:10 hrs.

Location: - Block-A front side section 232A

Injured Person details: - Mr. Sanjeev & Mr. Praveen from M/s. Infotech Pvt Ltd (Vendor ID-0027729)

Work permit Number/ Type: - NA

PPEs being used: - Yes

Any specific damage: - 10T approx. product damaged.

Type of Injury: - Material bags & pallet pressure directly to the whole part of the body. Bone (Right hand of Mr. Sanjeev and Right leg of Mr. Praveen) damage

Sequence of events

■ Loading operation continuing at block-A (South side)

- Infront of loading operation block 232A was there for material storage.
- Forklift No-4 going to take the full pallet load of 20T.
- That time the pallet got break.
- Out of 12 blocks, 6 blocks directly hit two operators assisting the loading operation.
- Operators got seriously injured, immediately rescued them and sent to nearest hospital.
- 10T approx. products damaged.
- Later area cleaned and normal the operation.

Possible root causes

- Pallet inspection was not done.
- No identification mark was there.
- Pallet condition was not good.
- Excessive load was there as per pallet condition.

Corrective Measures

- Provide training related to inspection and checking.
- Provide refresher training to all operators.
- Review inspection program.
- Review work procedure.
- Identification marking to be proper.
- As much as low load to carry.
- Operators should maintain adequate distance from forklift as well during loading operation.

6.2 ANALYSIS

In above case-study we have seen that during forklift (mechanical handling) accident takes place for the several mistakes. Possible root-cause analysis also taken into account and their mitigation technique for safer operation. Brief analysis of this as below mentioned:

- Proper inspection was not done for pallet.
- Pallet condition was not good.



- Immediate first-aid was required before sending the injured persons to Hospital.
- Site in charge daily safety-walk was missing.
- Distance from Loading block to material management block must be adequate.

- Lack of awareness observed related to this type of accidents.
- In a hurry word to be removed from this type critical area.

6.3 RECOMMENDATIONS

Following recommendations are below mentioned:

- Site in-charge to take site inspection and cross verify the critical location before starting of any job.
- Safety talk to be given to all operator on daily basis.
- Related topics to be covered in Daily TBT.
- Job safety analysis to maintain.
- Operator must be well trained and fit.
- Forklift related training to be provided to all operators.
- Work related video-graphic training also recommended.
- Being aware of work-related Hazards.

7. CONCLUSION

Case study is depth analysis of Accident, their causes and safety measure that can help to prevent similar accident. In simple, we can say that case study is a method of key learning & preventing similar future incident. Case study help to identify below parameter

- Investigation to do by considering most possible root causes.
- Possible mitigation technique to discuss regarding the accident prevention.
- Proper address to be there in investigation format.
- Material handling regarding training to be provided.
- Awareness to be build up amongst every worker.
- Maintaining of work area safe and healthy from each and every aspect.
- Necessary standards and compliance to follow.
- Job safety analysis to be done related each and every critical work.
- Video-graphic training to be conducted regarding condition monitoring.
- In daily TBT and safety talk, these topics to be covered.

REFERENCE:

Study on Site Accident





4 Plan-Do-Check-Act (PDCA) Cycle: The Goal towards continuity

Sougata Chakraborty

Fire & Safety student, Durgapur Institute for Fire Safety and Management (DIFSM), Durgapur

Email id : sougatachakraborty17@gmail.com

Abstract: On account of the day to day rapid increase in competition for consumer markets has led many companies to re-evaluate their operations. In the search for the identification of more adequate methods to elaborate products or services, those now needs to map processes and to determine their management tools as also a company needs to transform raw materials into products that meet it's consumer market requirements and here comes the need of following PDCA (Plan-Do-Check-Act) cycle to reach the new changing demands of consumer-market and for the control and continual improvement of process and products. The PDCA (Plan-Do-Check-Act) model is a proven framework for implementing continuous quality improvement. These four steps provide the framework for continual improvement. The PDCA cycle basically starts with a Plan and ends with an Action in accordance to the information learned during the process. The aim of writing this article is to implement Plan-Do-Check-act (PDCA) cycle as a method for the continuous quality improvement in the various companies and industries. This method is used to identify and analyze the critical problems that occur in the pre-analytical stage of manufacturing, servicing, improving, producing and developing, to find the root causes of their occurrence and proffer solutions. Thus PDCA methodology can be successfully applied in the respective zones and fields to reduce the occurrence of errors and increase the process capability to enhance the efficiency and effectiveness of the work.

Keyword : PDCA cycle, it's origin, why and when to use PDCA cycle, PDCA cycle procedures, PDCA application in field of Safety, Case study.

Objective: Objective to write this Article is to know and use PDCA Cycle in Safety Management system to control risk and ensure safe healthy work environment.

- 1. Introduction:** “Necessity is the mother of invention”—With the conception and explanation of the 4Rs of the psychology of human brain associated with- Reading/Learning, Retention, Recalling and Recognition, there developed an iterative four step management method used in various purpose of business and in several organization for the control and continuous improvement of process and products which emerged as PDCA (Plan-Do-Check-Act or Plan-Do-Check-Adjust) cycle. It is also known as the Deming cycle/wheel/circle or Shewhart cycle, the control cycle or PDSA (Plan-Do-Study-Act) cycle. PDCA cycle has another version named



“OPDCA” The ‘O’ symbolizes for observation or as the same version say: “ We need to observe the current condition”. This emphasize on observation and current condition. Walter Shewhart emerged as the father of PDSA (Plan-Do-Study-Act) who is a renowned American Statistician

and physicist. He was passionate about statistical analysis and quality improvement and he proposed the PDSA cycle in the year of 1930. Years later, inspired by Shewhart’s ideas , William Edward Deming actually developed the model into a learning and improvement cycle in the year of 1951 which became popular as PDCA (Plan-Do-Check-Act) cycle. Thenceforth we know this model as Shewhart cycle or Deming cycle. PDCA cycle involves systematically testing possible solutions, assessing the results and implementing the ones that have shown to work. It investigates and puzzles out problems by systematic and scientific approach. PDCA cycle enables a qualitative and quantitative approach for solving problems and managing change in each step. It helps businesses to develop certain plans about what needs to change , test these plans in a continuous feedback loop and gain valuable learning and knowledge. It enhances testing improvements on a small scale before updating company-wide procedures and work methods or statements.

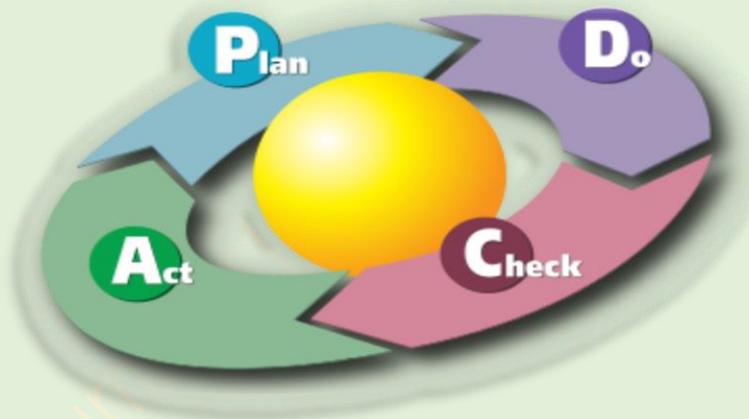


Figure:1, The PDCA cycle

2. Why to use PDCA Cycle??

PDCA (Plan-Do-Check-Act) cycle is a useful tool that can help the team solve problems much more efficiently. It is a continuous loop of planning, doing, checking (or studying) and acting which provides a simple and effective approach for solving problems and managing change and it is very much essential for carrying out improvement measures on a small scale before updating procedures and working methods. It works towards the Leadership goals and functions for the development of the organization in the Safe Operation Procedure (SOP), it works for the steady improvement in production and also minimizes the potential accident or incident. Moreover PDCA (Plan-Do-Check-Act) cycle stimulates continuous improvement of people and process, it lets the

team test possible solutions on a small and in a controlled environment. It thus prevents the work from recurring mistakes.

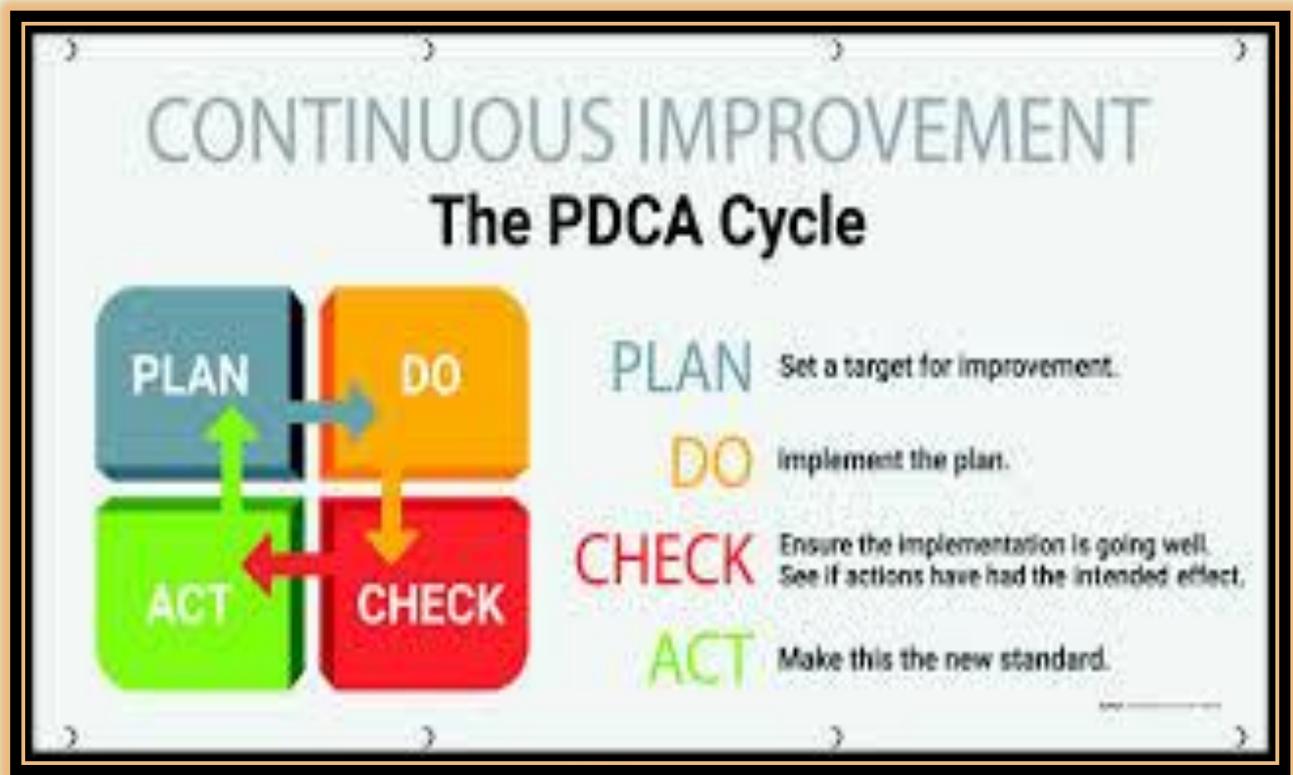
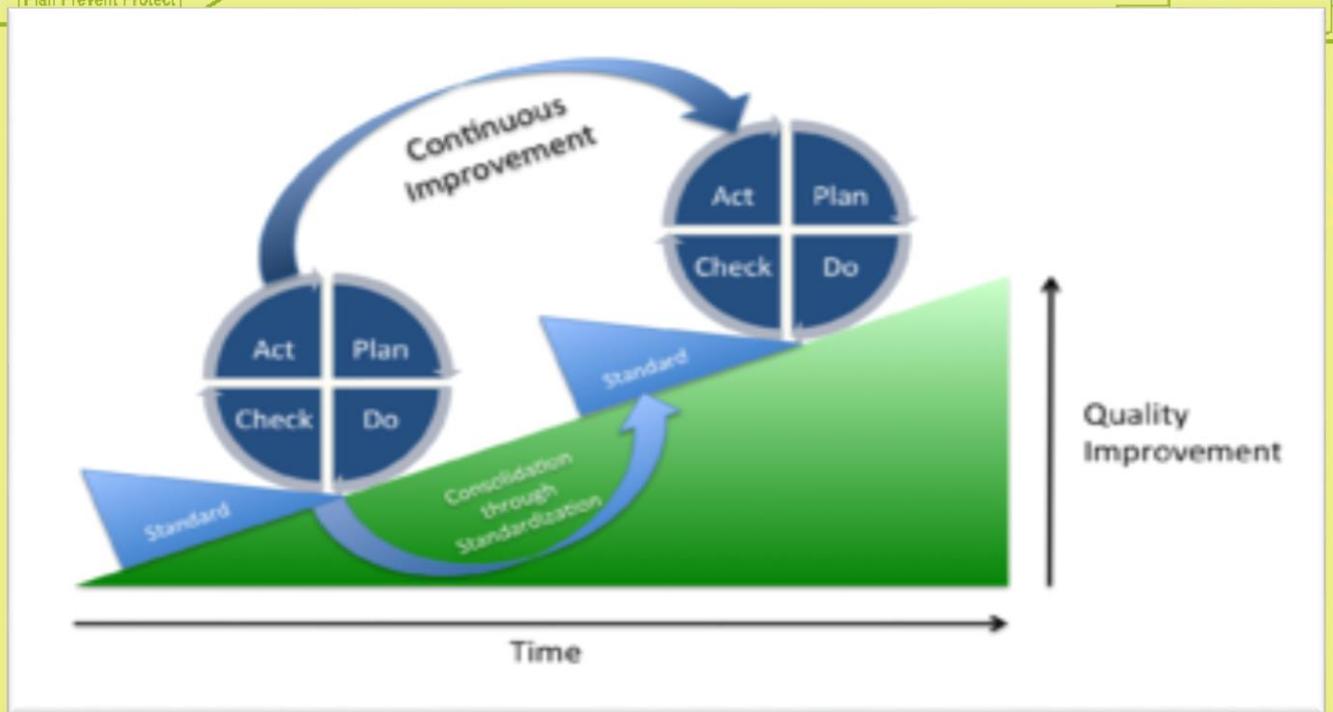


Figure: 2, showing continuous improvement of PDCA cycle

3. When to use PDCA Cycle??

As a circle moves in a clockwise direction with a never ending rounds, the PDCA (Plan-Do-Check-Act) cycle is a never ending continuous improvement process which involves Plan, Perform, Monitor and Improve. There are some specific situations and places where this cycle can be implemented towards the mode of achieving the specific number of goals. The following measures are to be considered as the appropriate time for using PDCA Cycle:

- When starting a new improvement project
- While developing a new or improvement design of a process, product or service.
- When defining a repetitive work process.
- While planning data collection and analysis in order to verify and prioritize problems or root causes.
- While implementing any change
- When working towards continuous improvement.



4. Plan-Do-Check-Act (PDCA) Procedures

On evaluating the acronym of PDCA we get PLAN, DO, CHECK and ACT each of which suggesting various meanings and measures required to fulfill any goal effectively and completely.

4.1 PLAN (P): PLAN suggests PLAN and POLICY. An effective way of planning can only be achieved through coordinate action by all members of the organization. Hence members from various departments with various forms of knowledge and skills form a team named as Cross Function Team (CFT) and set up an Object and Goal according to SMART (Specific Measurable Achievable Relevant Time-bound) theory. After they have successfully completed this goal, before moving on to further development of the work, the problem must be defined according to 5W2H (Why, When, What, Where, Who, How, How many) form questions and should be fact-find, where after thorough discussions, researches and investigations of the problems CFT should suggest suitable measures to it that is, brainstorming the potential cause of the problem and identify and agree the potential root cause.

4.2 DO (D): DO expresses RISK ASSESSMENT and IMPLEMENT PLAN. After identifying the potential hazards and typical problems, the initial step comes with describing the solution of the

problem keeping in mind the Likelihood or probability and consequences or Severity of the steps to be followed while solving the potential cause of the problem and providing a solution to it. After

describing the solution to the problem, team should try and test the solution in the form of try-test

method and it is advisable to carry out a small scale pilot project. The purpose of following these steps are to identify the unsafe practices (unsafe act or unsafe condition) (if any) found while continuing with the cycle. The result should then be measured accurately and recorded for next reference.

4.3 CHECK (C): CHECK evaluates COLLECTION OF DATA and MEASURING

PERFORMANCE. Collection of data is usually carried out by Active monitoring and Reactive monitoring. Active monitoring is specially supervised through proper education and training, a thorough inspection and survey and also by performing Risk Assessment and maintaining other suitable control measures which can be easily followed. Reactive monitoring is maintained and carried out after the incident or accident. It specially indicates for the accident and incident report. For the further development of the cycle, the results after being measured should be studied out vastly by investigating each steps, clues and solutions and the effectiveness of the results must be measured. The team should then communicate to find the improvement and effectiveness of the solutions provided as how this solution is being applied in the practical or relevant field and its merits and demerits affecting in this field. After working on the communication in the relevant field, team should supervise and take necessary action on getting the feedback from the same.

4.4 ACT (A): ACT or ACTION works towards REVIEW, LEARN and LESSON. Action clearly justifies the solution to be reviewed efficiently to determine the safe working or operation procedure that is it checks and ensures for the cycle to be followed regularly and properly. If the PDCA cycle is found to be working successfully then it should be implemented towards the continuous improvement of the project. While if the cycle is turns out unsuccessful, it should be properly taken care about the faulty work habits being followed and the PDCA cycle should be followed again and again to make the project successful.

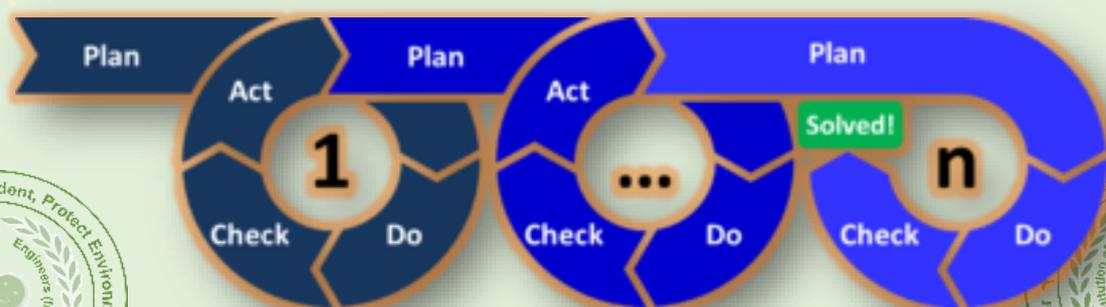


Figure: 4, PDCA procedures

5. PLAN-DO-CHECK-ACT (PDCA) Sensible Example

Here the PDCA cycle is employed as a model version for elaborating the work procedures by ST, PAUL S ACADEMY, BWN District.

The PDCA model is that the easy structure for the district's:

- To actively participate within the effective coming up with and communication
- Develop and recommend varied analysis
- Curriculum planning and delivering directions
- Evaluation of the course of study and workers goal-setting
- Provision of student services and support services
- Classroom instruction over vital topics

Basically it results in a 'Classroom Success.' It could be a continuous cycle of planning Progress reports, course of study and delivering varied schoolroom instruction. we have a tendency to should detain mind that improvement isn't a distinct activity. It ought to be engineered into the work method.

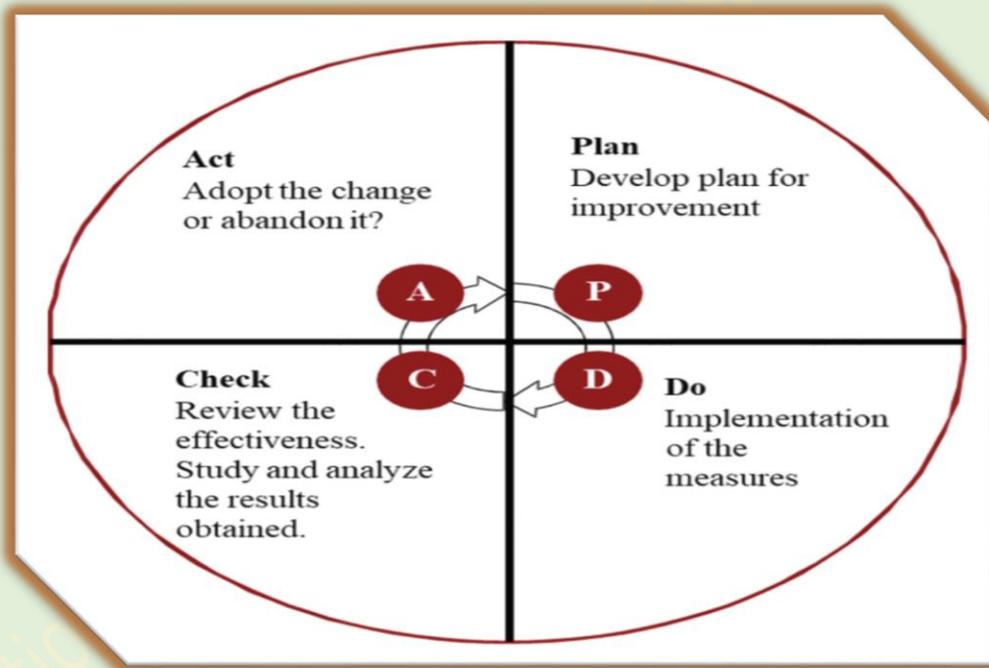


Figure: 5, Plan-do-check-act

5.1 Plan

The First Approach commences with a "plan" step, named "analyze." during this step, students desires area unit analyzed by examining a spread of information out there. the info analyzed includes everything from every grades to overall performance on standardized tests. knowledge is analyzed for individual students by results, gender, or the other subgroup. this can be as a result of

PDCA doesn't specify the thanks to analyze or choose knowledge, a separate knowledge analysis method is employed here furthermore as in alternative processes throughout the organization.

5.2 Do

The Second Approach continues with Two (2) "do" steps:

1. The "align" step asks what the national and state standards need and the way they're going to be assessed. academics set up course of study activities by making certain the topics that area unit instructed earlier and later they grade levels to make sure a transparent continuity of instruction throughout the student's schooling. academics facilitate to develop individual goals to enhance their instruction wherever the "analyze" step showed any gaps.
2. The "act" step is wherever instruction is provided, following the course of study and teaching goals. inside restricted parameters, academics advise and guide the scholars primarily based on every student's learning rates and designs.

5.3 Check

Teachers build formal and informal assessments from daily reviews to six-week progress reports to annual standardized tests. academics may access comparative knowledge on the on-line database to spot trends. poor students area unit monitored by a special kid study team.

Throughout the varsity year, if the assessments and progress reports show that students don't seem to be learning needless to say, mid-course corrections area unit created (such as revision of the topics, re-instruction, dynamical teaching strategies, and a lot of direct teacher mentoring). Assessment knowledge become input for following method within the cycle.

5.4, Act

In this example, the "act" symbolizes "standardization." once the goals area unit achieved, the course of study style and teaching strategies area unit thought-about standardized. academics share their best practices in formal and informal settings. Results from this cycle become input for the "analyze" part of following Approach cycle.

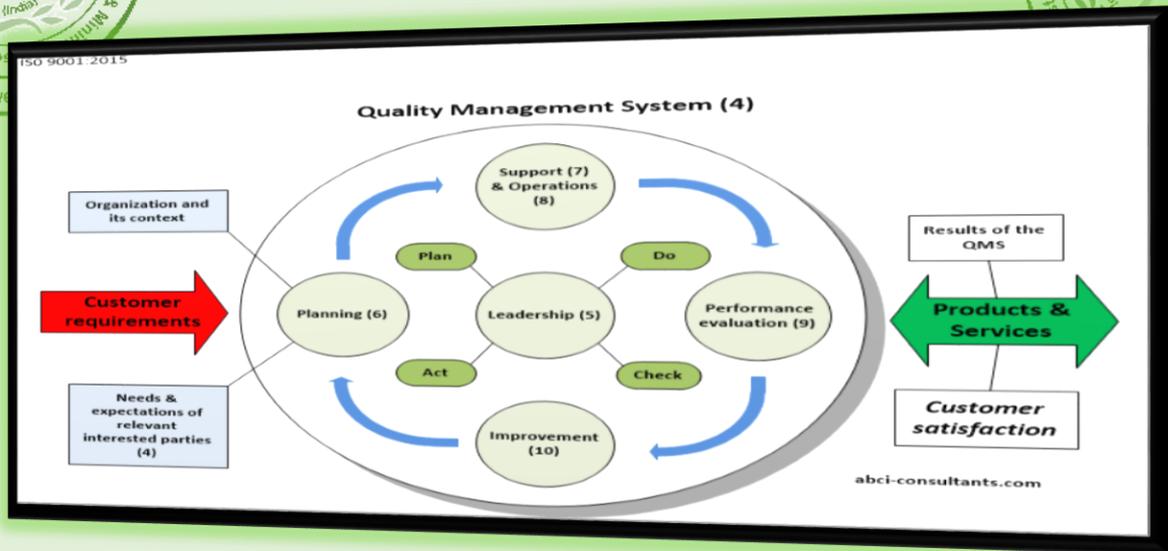


Figure: 6, The PDCA quality management system, Ref. ISO 9001

6. Conclusion

Normally terms, it's over that the PDCA cycle could be a tool that facilitates the detection of improvement opportunities, furthermore because the development and implementation of identical in several company and business producing comes. PDCA cycle could be a technique {methodology} for quality management that has been wide utilized in varied fields and it's advisable to use this scientific well-tried method by following it's applicable steps and procedures towards providing the framework for continuous improvement of method and merchandise.

Reference:

- Industrial safety management, N.K. TARAFDAR, K.J. TARAFDAR
- Industrial safety management, L M DESHMUKH
- Fire Technology and Industrial safety management, GANGULY
- Continuous Improvement PDCA Cycles, SHYAM TALAWADEKAR
- <http://www.pdcacycle.info.in/>
- PDCA Manuals

IoT FOR SAFE HANDLING LIQUID METALS

¹Praveen Sankarasubramanian, Student Member –IEEE, Research Scholar VISTAS Chennai

¹Email id: praveengrb@gmail.com

²Dr. En Ganesh, Dean, School of Engineering, VISTAS Chennai

²Email id: enganesh50@gmail.com

Abstract: Liquid metals are widely used components in chemical industries and nuclear reactors. Handling of liquid metals are crucial. Corrosion, Pressure can deteriorate the structure that handles the liquid metals. Leakage of liquid metals can result ecological disaster. Early warning, Detection of accident and Action taken post the incident are the three important phases of monitoring. Continuous monitoring and timely detection reduces the impact caused by the leakage of liquid metal. At present, industries have sensors based detection. This paper proposes an enhanced version of existing system. Here, the continuous monitoring uses sensors, IoT and Artificial Intelligence based system.

Key word: Liquid metals, IoT, CNN, OPEN CV, Computer Vision

1. INTRODUCTION

Liquid metals are hazardous in nature. For example, Liquid Sodium reacts immediately when exposed to air / water. They can explode, produce caustic fumes. Existing detection systems have sensors to detect and mitigate the hazards. Late detection and false alarms are common in traditional approach. Physical observations of chambers/structure, transportation systems might be tougher.

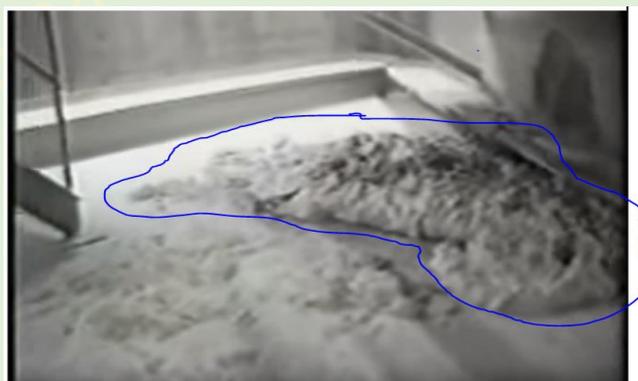


Fig. 1. Leakage of liquid sodium

For example, in the year 1995 at Monju Nuclear Power Plant a Thermowell inside the pipe carrying sodium coolant broke due to the intense vibration. The root cause of the incident was a defective weld point. Several kilograms of sodium leaked.



When it contacted with air, liquid sodium reacted with air and moisture. It produced enormous amount of heat and the room was filled with caustic fumes. This made the reactor to stop their functioning. In the year 2010 they resumed. But, this time the condition was even more threatening.

It occurred through a series of failures

- A. 2010 In-Vessel Transfer Machine Failure
- B. 2012 Sodium heater failure, Malfunctioning of sodium detectors
- C. 2013 failure to assess thickness of degrading sodium coolant pipes, generator failure, data transfer failure.
- D. 2015-2016 deteriorated water quality in nuclear fuel rod pool.

2. Proposed System

Behavior of the data collected at a given place changes time to time. If we keep a camcorder that captures 30 FPS at an open place (like garden or any outdoor places). It captures 18,144,000 frames. The probability of occurrence of same event twice is negligible (will be the result of $P(A) * P(B|A)$). Hence integrating multiple input sources might give better result.

The proposed system has a fixed and moving sensing unit, Image Capturing System, Sensor Management Module, Structured and Unstructured Data Analysis Module.

A. Fixed Sensing Unit

This Fixed sensing unit consists of Sensors, Radars, and Transducers. Electromagnetic, light, infra-red, vapor, impedance, pressure, reflection, fiber optic, temperature, acoustic are some of the widely used sensors. Ground penetration radars, LIDARS and piezo electric transducers are the other possible components of sensing unit.

B. Moving Unit and Image Capturing Unit

CCTV units, Audio Capturing devices, cameras, drones, tiny robots are the components of this unit.

They detect and send the sensed information to the API Gateway.

Rest of the unit is critical, in order to keep the system safer, I plan to make this as a Cloud Based SAAS solution. I have a future scope to make this idea as a “SAAS” application.

C. API Gateway

This system collects data from different input sources. This system is highly critical module. It should handle lakhs or millions of request at a time. It should be resilient and it should not go down by any chance. Hence, the architecture of this API Gateway is important. Multi cloud (Google App Engine, Azure, and Amazon Web Services) would be a better option.





D. Sensor Management Module

This module is a sensor dictionary. It contains the sensors and its specifications. It helps the structured-data analysis module to detect the trigger threshold point.

E. Structured Data Analytics Module

Structured (Data from DB through feedback system) and Semi-Structured (JSON or other signals triggered from sensors) are analyzed. This module compares the current data, sensor operational specification and historical data to identify the behavior of the signal.

F. Processing module

Data received might have junks. Data collected from video camera can contain smoke or fire-like objects. Hence it is important to reduce the noise, clear the outliers. Preprocessing unit removes reduces the noise and improves the data quality.

Data cleansing, data segregation, classification, clustering are done in the Preprocessing Unit. Open CV, Classification algorithms, Neural Networks, Clustering Algorithms play a vital role in the processing unit.

This module is self-learning and it always tries to ensure the accuracy of the data.

3. Conclusion

This suggested paper suggested an approach provides an outline of sensors like acoustic sensors, visual monitoring, impedance sensors, fiber optic sensors, and infrared thermal camera are listed. Context-Based Data preprocessing block grouped the collected results based on a context. Adaptive analytics has been completed with the help of the final framework. This proposed approach looks efficient and reliable. It suggests a way to handle and mitigate the hazards created due to the Fluids and Liquid Metals. In addition, previous detection of leakages is achievable and detection of potential sources of harms monitored in a timely manner.



REFERENCES

- Praveen Sankarasubramanian, "Real Time AI, Computer Vision Based Framework To Detect And Prevent Liquid Metal Fire Hazards," *International Journal of Advanced Science and Technology*. vol. 29, no. 8, pp. 3796-3806, July. 2020.
- Gracie, J.D. and Droher, J.J., "A Study of Sodium Fire," NAA-SR-4383 (1960).
 - Dunnings and Breckon, In Proc. International Conference on Image Processing IEEE, 2018
 - X. Lang, P. Li, Z. Hu, H. Ren and Y. Li, "Leak Detection and Location of Pipelines Based on LMD and Least Squares Twin Support Vector Machine," in IEEE Access, vol. 5, pp. 8659-8668, 2017.

Author Profile:



Praveen Sankarasubramanian, Praveen Sankarasubramanian D.ECE, M.Tech, PGDBA, AMIE(India), CEng(India), MICSES, SMISE(India) is a Research Scholar, Vels Institute of Science, Technology and Advanced Studies,(VISTAS), Chennai.

He as a tech-savvy software developer who has an IOSH certification. He got state first in 10th Tamil Language and He received a Gold Medalist with 600/600 mark in Diploma. He completed BE in Government College of Engineering, Tirunelveli and finished his M.Tech (Software Systems - Data Analytics) from Birla Institute of Technology and Science, Pilani, Rajasthan.



Dr. E. N. Ganesh Dean School of Engineering, Vels Institute of Science, Technology and Advanced Studies, (VISTAS), Chennai. He is a Professor in the field of Electronics for the past 20 years, Specialized in Nano electronics and Microelectronics. His research work in Quantum electronics adjudged the best thesis and received a Gold medal in Ph.D. He has finished M.Tech from IIT Madras in Microelectronics. He has 54 Conferences and Journal Publications. Mail id: enganesh50@gmail.com



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Health, Safety & Environment (HSE) Policy

RNSN SERIATE (P) LIMITED is committed to ensure Safe healthy work environment to protect human being as well as Environment. In Order to achieve Health Safety & environment related objective, Policy is:

- Ensure compliance on based on relevant National, International Rules, Regulation, Norms & Codes
- To main high Safety Standard at workplace, we adopt best Safety Practices & Conduct Safety Program regularly.
- To Plan & effective implementation of Safety Health, Environment management system
- Being new organisation, always seek opportunities and Continual improvements in products, process, Services and Peoples to ensure compliance & standards.

RNSN Seriate (P) Limited takes all necessary steps to achieve zero harm & increase stakeholders satisfaction.

Date: 30/11/2018



Director



RNSN Seriate
RNSN SERIATE (P) LIMITED

Quality Policy

RNSN SERIATE (P) LIMITED is committed to Manufacture, Supply products, Provide Engineering & Consultancy Services conforming to customer's quality standards and meet their requirements on time through effective planned activity and continual improvements of products, process, Services & Peoples to ensure compliance as per relevant national and International Norms, Codes & Standard.

RNSN Seriate (P) Limited take all necessary step adopt standard practices to maintain quality of Products, services & increase stakeholders satisfaction

Date: 03/12/2018



Director

For any information/ query call +91-7509487141

Or mail Info@rnsnseriate.com

For more details visit www.rnsnseriate.com





TRAINING CALENDER

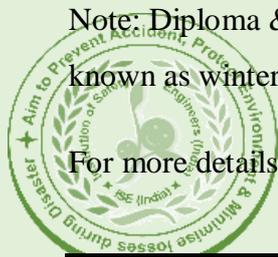
Training Calendar (July-Sept. 2021)

| Training Title/ Course | Duration | Schedule | Location | Remarks |
|--|--------------------------------|--------------------------------------|----------|---|
| Safety In Process Industries | 2 day | 02/07/2021 to 03/07/2021 | ----- | Virtual/ Regular Mode |
| Lead Auditor ISO 45001:2018 | 5 day | 06/07/2021 to 10/07/2021 | ----- | Virtual/ Regular Mode |
| ISE-SM (Safety Management at work place) | 3 day or Min.24 hours Training | 13/07/2021 to 15/07/2021 | ----- | Virtual/ Regular Mode |
| ISE- ICCOHSEM (International Certificate course in Occupational Health Safety & Env. Mgt.) | Min. 96 hours Training | 22/07/2021 to 31/07/2021 | ----- | E-Learning/ Regular mode Exam date 01/08/2021 |
| Integrated Lead Auditor (ISO 45001:2018, ISO 9001:2015, ISO 14001:2015) | 6 Days | 02/08/2021 to 07/08/2021 | ----- | Virtual/ Regular Mode |
| First Aid & CPR | 1 days | 09/08/2021 | ----- | Regular mode |
| ISE-TQM (Total Quality Mgt.) | 3 day or Min.24 hours Training | 12/08/2021 to 14/08/2021 | ----- | Virtual/ Regular Mode |
| Lead Auditor ISO 14001:2015 | 5 day | 16/08/2021 to 20/08/2021 | ----- | Virtual/ Regular Mode |
| ISE- ICCOHSEM (International Certificate course in Occupational Health Safety & Env. Mgt.) | Min. 96 hours Training | 21/08/2021 to 31/08/2021 | ----- | E-Learning/ Regular mode Exam date 01/09/2021 |
| ISE-SM (Safety Management at work place) | 3 day or Min.24 hours Training | 02/09/2021 to 04/09/2021 | ----- | Virtual/ Regular Mode |
| Lead Auditor ISO 9001:2015 | 5 day | 07/09/2021 to 11/09/2021 | ----- | Virtual/ Regular Mode |
| ISE-EM (Environmental Management) | 3 day or Min.24 hours Training | 13/09/2021 to 15/09/2021 | ----- | Virtual/ Regular Mode |
| ISE-SM (Safety Management at work place) | 3 day or Min.24 hours Training | 16/09/2021 to 18/09/2021 | ----- | Virtual/ Regular Mode |
| ISE- ICCOHSEM (International Certificate course in Occupational Health Safety & Env. Mgt.) | Min. 96 hours Training | 20/09/2021 to 29/09/2021 | ----- | E-Learning/ Regular mode Exam date 30/09/2021 |
| ISE- IDOHSEM (International Diploma in Occupational Health Safety & Env. Mgt.) | One year | Last Date of Registration 16/08/2021 | ----- | E-Learning/ Regular mode Exam Date June 2022 (Proposed) |
| Diploma/ Post Diploma in industrial Safety/Fire/Env. | One year | June-July (2021-22) | ----- | Regular |

Risk assessment & Control, Behaviour based safety, chemical safety in industries, Safety in construction industries, Scaffolding safety, Petroleum & Gas industries safety, Ergonomics, Mock Drill, HAZOP study, Emergency planning, Disaster Mgt., Fire Safety, Environmental Mgt., EIA Like Training also conduct as per Need.

Note: Diploma & ISE-IDOHSEM Courses conducted twice in a year. December-January session known as winter session and June-July session is known as summer session.

For more details visit www.iseindia.in or mail info@iseindia.in Call +91-8720831773



6 Corona Case updates World wide

6.1 Corona case Update

| | |
|--------------------|--------------------|
| Total Cases | 183,056,434 |
| Death | 3,964,509 |
| Recovered | 167,614,667 |

Table 1, Sources: Worldometer - www.worldometers.info, July 01, 2021, 10:39 GMT

6.2 Cumulative Number of deaths, by Number of days since 100 death

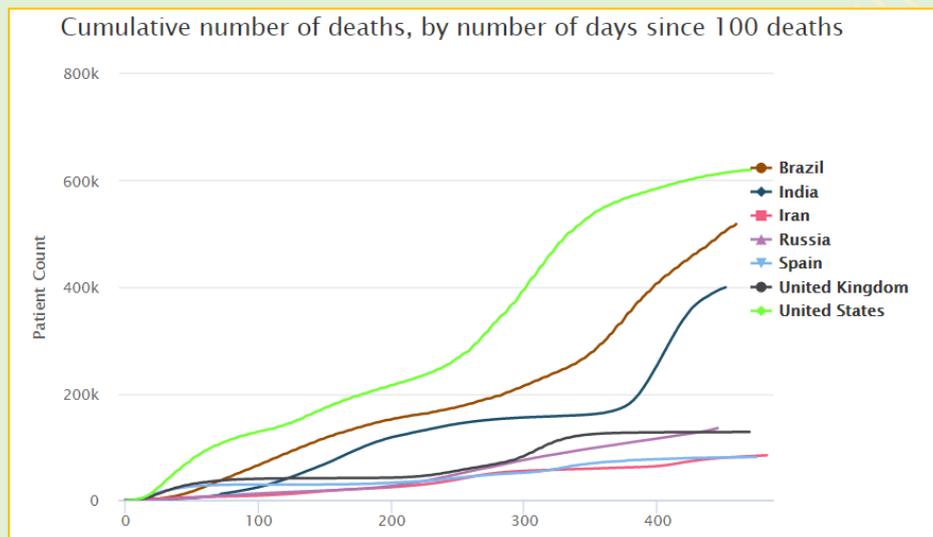


Fig. 1, Source: Worldometer - www.worldometers.info, July 01, 2021, 11:04 GMT

6.3 Countries Cases distribution

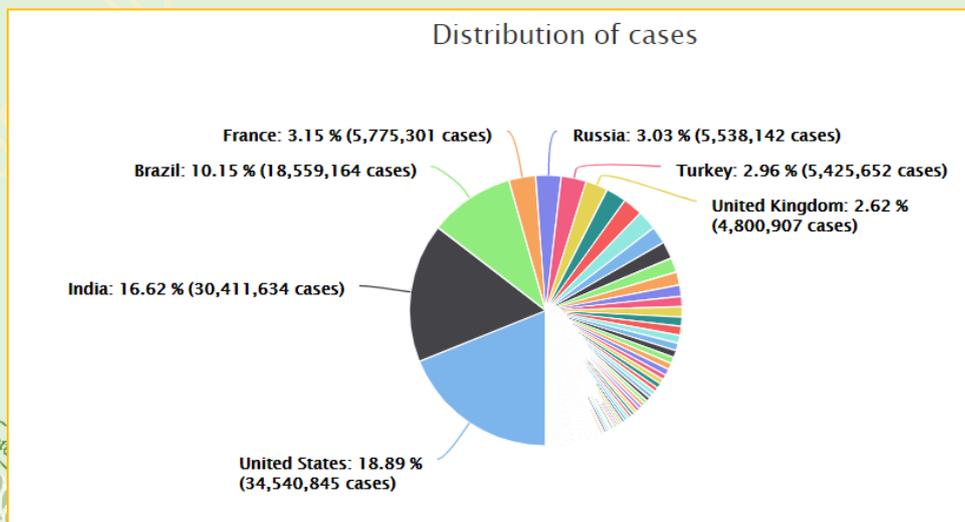


Fig. 2, Source: Worldometer - www.worldometers.info, July 01, 2021, 11:04 GMT



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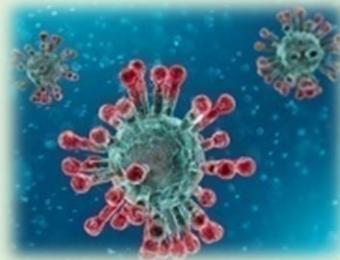
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“Protect yourself and your family From Novel Corona Virus infection to take adequate precautionary measure”



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