**Summer Training at**
**National Health Mission, Rajasthan**

# Identify the Severity of PTSD (Post Traumatic Stress Disorder) in 108

**By**
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*Institute of Health Management Research*
**The IIHMR University, Jaipur**
**2018**

INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

# CERTIFICATE

This is to certify that **Ms.Akanksha Yadav** has undergone summer training at NHM, Rajasthan from 12th April to 2nd June'2018.

The candidate herself completed the project assigned to her during summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health management.

I wish her success in all her future endeavors.

**Sunita Nigam**
**Assistant Professor**
**IIHMR University, Jaipur**

for **Col.(Dr.)Ashok Kaushik** 25.6.18.
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No. F 2 (153) NHM/SPM/2017/ 398 Dated: – 04/06/18

# CERTIFICATE

This is to certify that **Ms. Akanksha Yadav**, student of MBA Institute of Health Management Research (IIHMR, Jaipur) has successfully completed her Summer Training Program at NHM, Rajasthan from **12th April, 2018 to 2nd June, 2018**. She has worked on the project– **Severity of PTSD in 108- Ambulance workers.**

Her performance was found satisfactory. We extend her good wishes for a bright and successful career ahead.

**Director-RCH**

## ACKNOWLEDGEMENT

The successful completion of my project could not have been possible without the guidance and assistance of many people, therefore I would like to use this opportunity to express my gratitude to all those who supported me through the project.

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I would like to express my thanks to Consultant (IAP), NHM Mrs.Shikha Sharma, my mentor at NHM for her invaluable support, encouragement and guidance throughout the summer training duration.

I am grateful to my mentor Ms.Sunita Nigam for her support, advice and motivation during the tenure of this project.

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# NATIONAL HEALTH MISSION

The National Health Mission (NHM) encompasses of two sub-missions, the National Rural Health Mission (NRHM launched in year 2005) and National Urban Health Mission (NUHM launched in year 2013).

The main programmatic components include health system strengthening in rural and urban areas – reproductive-maternal-neonatal child and adolescent health (RMNCH+A), and communicable and non-communicable diseases. The NHM envisages achievement of universal access to equitable, affordable and quality health care services that are accountable and responsive to people's needs.

## VISION

Attainment of universal access to equitable, affordable and quality health care services, accountable and responsive to people's needs, with effective inter-sectoral convergent action to address the wider social determinants of health.

## CORE VALUES

- Safeguard the health of the poor, vulnerable and disadvantaged, and move towards a right based approach to health through entitlements and service guarantees.
- Strengthen public health systems as a basis for universal access and social protection against the rising costs of health care.
- Build environment of trust between people and providers of health services.
- Empower community to become active participants in the process of attainment of highest possible levels of health
- Institutionalize transparency and accountability in all processes and mechanisms.
- Improve efficiency to optimize use of available resources.

**OBJECTIVES OF NHM:**

- Reduction in infant mortality rate (IMR) and maternal mortality rate(MMR)
- Universal access to public health services such as women's health, child health, water, sanitation and hygiene, immunization and nutrition.
- Prevention and control of communicable and non-communicable diseases, including locally endemic diseases.
- Population stabilization, gender and demographic balance.
- Mainstreaming of AYUSH.
- Promotion of healthy life styles.

## INTEGRATED AMBULANCE PROGRAM (IAP)

Among the major attributes contributing to high number of deaths in emergencies, the delay in reaching to an appropriate health facility is one of the prime factors. It also results in high NMR and MMR if the pregnant women or sick new born doesn't get a prompt referral transport within specified time. This usually occurs either due to lack of readily available and affordable transport facility or inaccessibility / distance for which people fail to access institutional health services.

"Terms like 'The Golden Hour' and the 'Platinum Ten Minutes' indicate the importance of Emergency Medical Services (EMS) all over the world. It is a well-accepted fact that the patients who receive basic care from trained professionals and are transported to the nearest healthcare facility within 15-20 minutes of an emergency have the greatest chances of survival. Other than these; there is always a segment of people who need medical transport, but these are not medical emergencies. This segment can be catered by providing a choice of medical transport through user paid ambulances.

In view of all above mentioned factors, the Government of Rajasthan took a decision to integrate the existing separate four services (Medical Advice Service (104), Emergency Ambulance Service (108), 104 Janani Express and Base Ambulance paid service) and operate them through centralized call center and the two toll-free numbers i.e. 108/104 to expand overall operational efficiency and cost effectiveness of these schemes.
The IAP program was launched on 15th August 2016.

**Integrated Ambulance Service Concept: -**

Single number can be rung by the Caller from anywhere in Rajasthan in case he/she needs

- Services of emergency/referral transport either through 108 or 104
- Services of 104 Janani Express
- Medical Advice
- Wants to lodge complaint, requires counseling or information
- Needs an ambulance for non-emergency medical transport.

Police and fire related emergencies can also be reported on the same number. Police and Fire emergencies can be referred to nearby police station/fire station. The Integrated Ambulance Project is monitored on the basis that all valid call cases must not be left unattended

**Objective of the program:**

“To offer comprehensive Emergency Response Services to the people of Rajasthan. Improve the access to Medical and Health care, police and fire services, particularly attending emergency situations relating to pregnant women, neonates, parents of neonates, infant and children in situations of serious ill health and all other emergencies in the general population: and thus assist the state to achieve the critical Millennium Development goals in the health sector, i.e. reduction of infant mortality rate, and maternal mortality rate, and in general reduce the vulnerability of the people by providing access to Emergency Response Services.To provide round the clock pre-hospital emergency transportation care (ambulance) services across the state.”

VEHICLES

| 108 | 104-JE | BASE | TOTAL |
|---|---|---|---|
| 723 | 587 | 189 | 1499 |

To provide 24 x 7 Emergency Services by 108 ambulances

- Accidental cases
- Medical emergency,
- Emergency referral,
- Mass causalities
- Emergencies like Police, Fire

It includes running of Base ambulances on payment basis for non-emergency cases for general public.

- Maximum Rs. 20 per kilometer up to 10 KMS.
- No halt charges for first one hour
- An amount of Rs.200 is charged from Second hour onwards,.

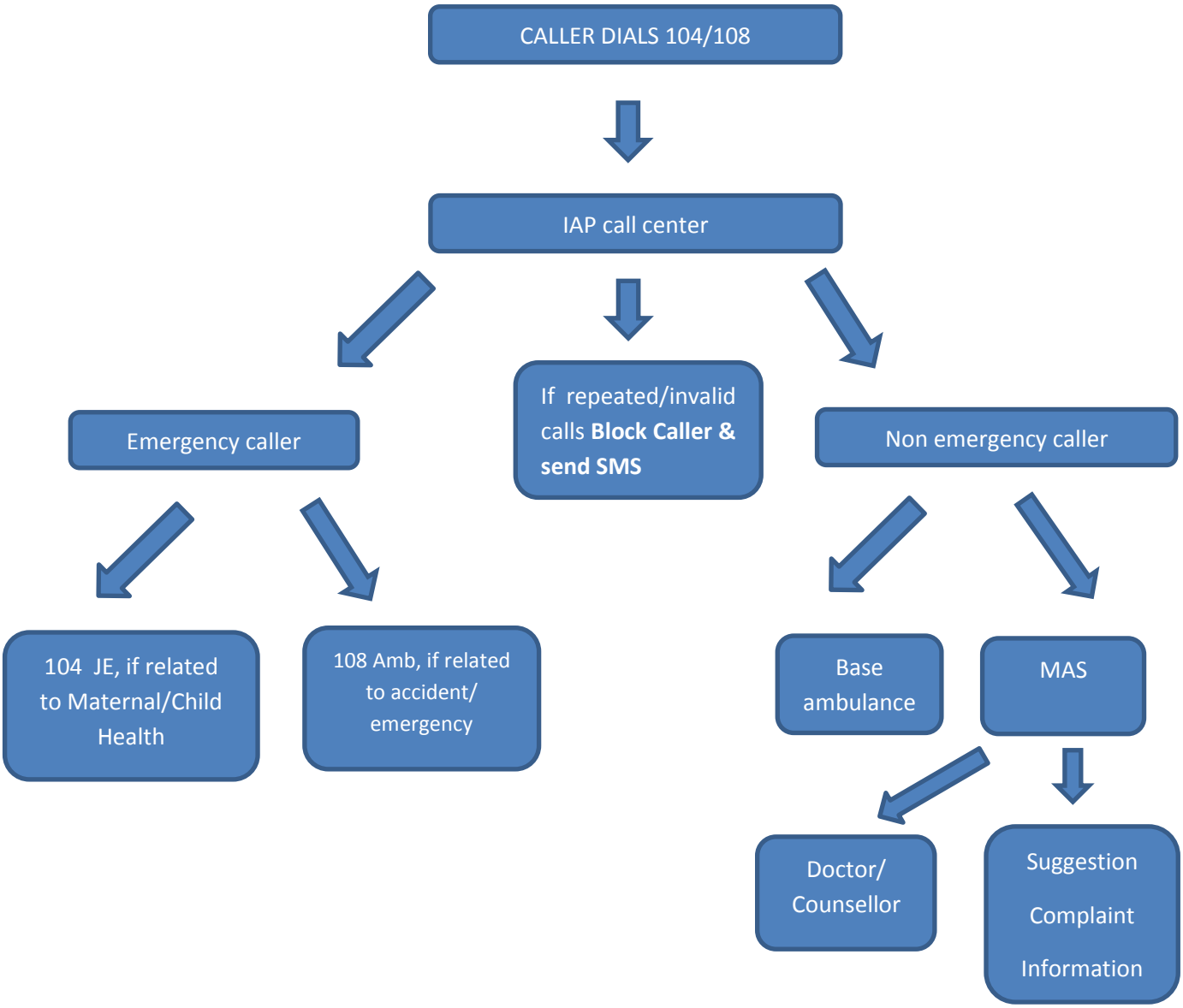

To provide facility of Medical Advice, information directory complaint registration, counseling services over 108/104 toll-free number.

- Medical Advice
- Medication including home remedies, First Aid advice.
- Counseling
- Information Directory

For transportation of pregnant women and sick children

- From Home to hospital
- From Hospital to home.
- Referral cases under RBSK
- Drop back home facilities
- Sterilization cases.

**Departmental Observation - PROCESS FLOW**




All type of ambulances can be dispatched in case of Mass CASUALTY Incident

**NHM Control Room -** Sample Verification of calls

**Mode of Operation:**

The Jeevan Vahini service functions on the unique paradigm of Sense – Reach – Care supported by an efficiently trained team and state-of-the-art equipment & software with GPS tracking systems

SENSE


REACH

CARE

**Sense**

- Any person in need of emergency help can dial a toll-free number 108/104 from any landline or mobile set. This call is attended within three rings by specially trained communications officers, who after understanding the nature of emergency; connect the caller to the dispatch division.

**Reach**

- The dispatch officer immediately identifies the ambulance nearest to the site and contacts the driver and guides him to the mishap site.
- Before the ambulance reaches the person in emergency, a virtual hand holding is also carried out, by putting the caller on a conference call with the Emergency Medical Technician (EMT) and/or the physician available 24/7 in the Emergency Response Centre.

**Care**

- The ambulance reaches the site and rushes the victim to the nearest hospital During the trip, EMT provides the victim pre-hospital care.

**Establishing Control Room for timely response and provision of services:**

A victim in emergency would call three-digit phone number 104/108 which is accessible from all the locations where Emergency Response Services are operational. This line has toll free access in local area and accessible on STD with priority routing through all telephone operators operating in Rajasthan and is Category service with unrestricted access from all landlines & mobile phones throughout Rajasthan."

"These calls from all over Rajasthan are routed to a centralized call centre situated in premises of State Institute of Health and Family Welfare at Jhalana Dungri in Jaipur."

"On receipt of call, the EMT collects initial critical information related to place, location, landmark and the type and seriousness of Emergency."
Based on type of emergency he classifies the call into Medical, Police and Fire emergency.

- "In case of Police and Fire emergency the call is transferred to the unit handling Police and Fire emergencies."
- "In case of medical emergency after ascertaining the criticality, an ambulance is dispatched based on need and availability."

On receipt of any call there is provision to capture following automatically using software –

- Date, time of call
  Patient Information (Name, contact details, Sex)
- Automatically generate an ID
- Information related to incident
- Information related to location (District, town, landmark etc.)
- The call centre has information related to all the hospitals in the area of operations along with the facilities available.

"The call center receives considerable number of no response calls, nuisance calls, non-emergency request calls, request for inter facility transfers and other calls which are not of emergency nature and doesn't need attention, furthermore these calls disrupt operations by blocking time of the available resources. Service Provider is permitted to device their own strategy to handle these situations, as per desired impact."

# Severity of PTSD (Post Traumatic Stress Disorder) in 108 Ambulance workers

## BACKGROUND

“Post-Traumatic Stress Disorder (PTSD) is a trauma and stress related disorder that may develop after exposure to an event or ordeal in which death, severe physical harm or violence occurred or was threatened. Traumatic events that may trigger PTSD include violent personal assaults, natural or unnatural disasters, accidents.”

“PTSD makes the person feel stressed and afraid after the danger is over. It affects their life and the people around them. PTSD starts at different times for different people. Signs of PTSD may start soon after a frightening event and then continue. Other people develop new or more severe signs months or even years later. Prior exposure to trauma in the past may increase the risk of PTSD due to re-experience of trauma.”

PTSD can cause problems like

- Flashbacks, or feeling like the event is happening again
- Trouble sleeping or nightmares
- Feeling alone
- Angry outbursts
- Feeling worried, guilty, or sad

## RATIONALE

Ambulance personnel cope with a variety of duty related stressful conditions such as life-threatening illness, physical abuse, traumatic accidents etc. Ambulance workers are high risk occupational group and there is a void in the available information concerning their emotional problems.

The purpose of this study is to investigate the prevalence of Post-Traumatic Stress Disorder in ambulance workers

## OBJECTIVE

1. To assess the awareness of ambulance workers towards their service.
2. To measure the severity of stress among the ambulance workers by using PTSD scale
3. To identify the relationship between PTSD symptom levels with the work experience.
4. To identify the difference in symptom severity between EMTs and Pilots.

## RESEARCH METHODOLOGY

- Study Design – Descriptive cross-sectional study
- Sampling method- Non-probability convenience sampling
- Study population - Pilots and EMTs of 108 ambulances
- Samples 70
- Data collection from 108 base locations of Jaipur, Dausa, Tonk, Ajmer.
- Duration of study – 2 months
- Data collection method- questionnaire tool including the PTSD stress severity scale (Davidson Trauma Scale – universal tool for measuring PTSD)
- Data analysis - Chi squared test

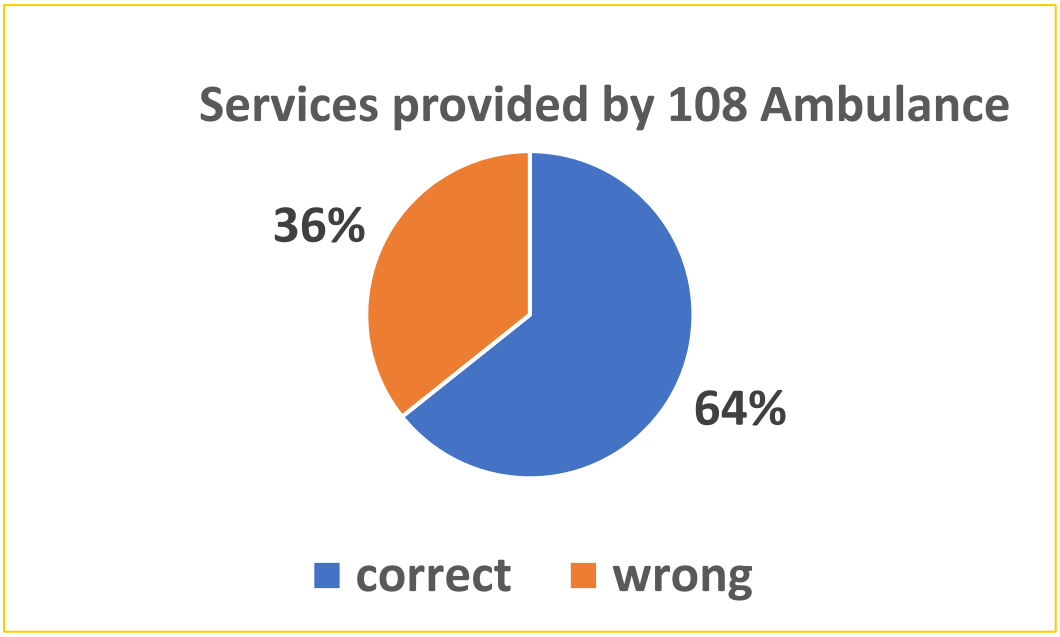
- Data was collected with the help of a questionnaire tool which was adapted and modified by adding few questions about the awareness and general practices specific to the ambulance workers job from universal trauma scale (Davidson Trauma Scale).

- Results were analyzed by computing the cumulative scores obtained in the questionnaire and then segregating them into different stress levels on the basis of standard score range for low, borderline and high stress symptoms.

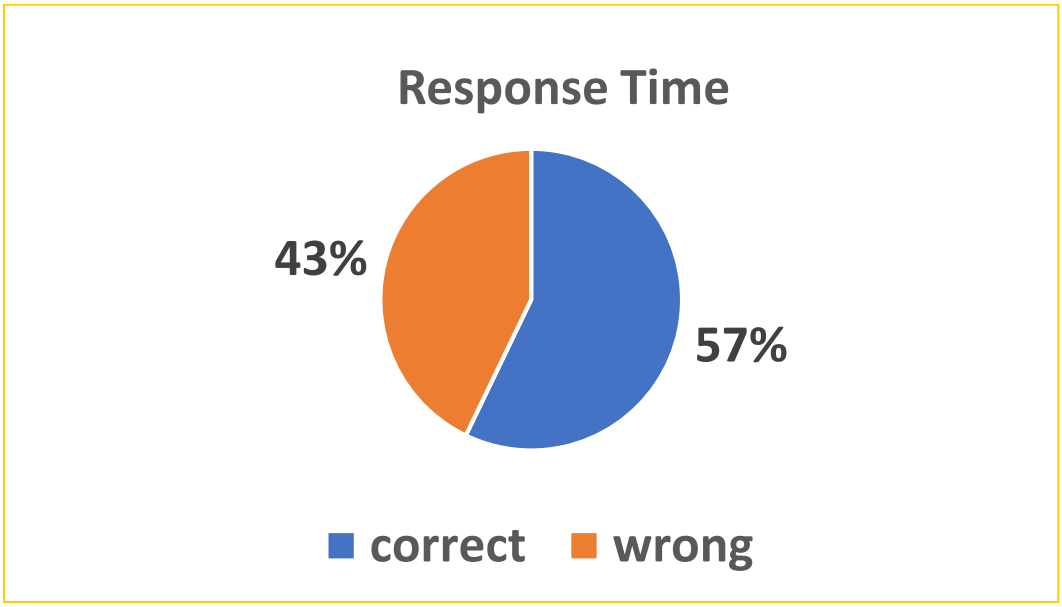
| **Stress Severity** | **Score Range** |
|---|---|
| LOW | 0-27 |
| BORDERLINE | 28-40 |
| HIGH | 41-68 |

STUDY ANALYSIS

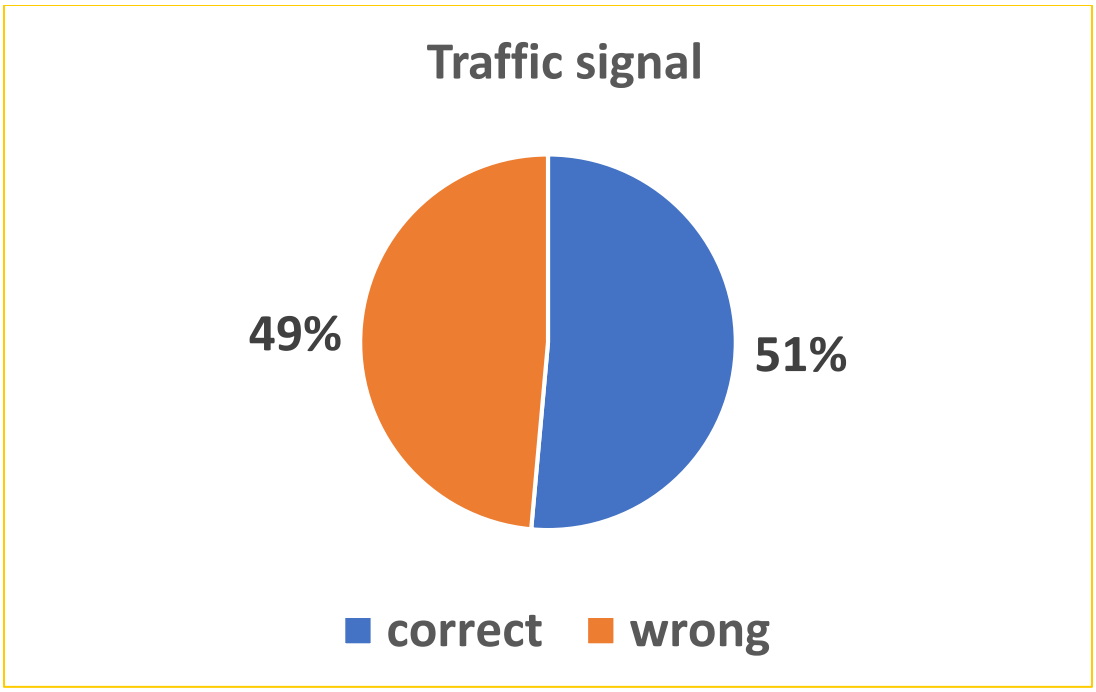
1. Assessment of awareness of ambulance workers towards their service



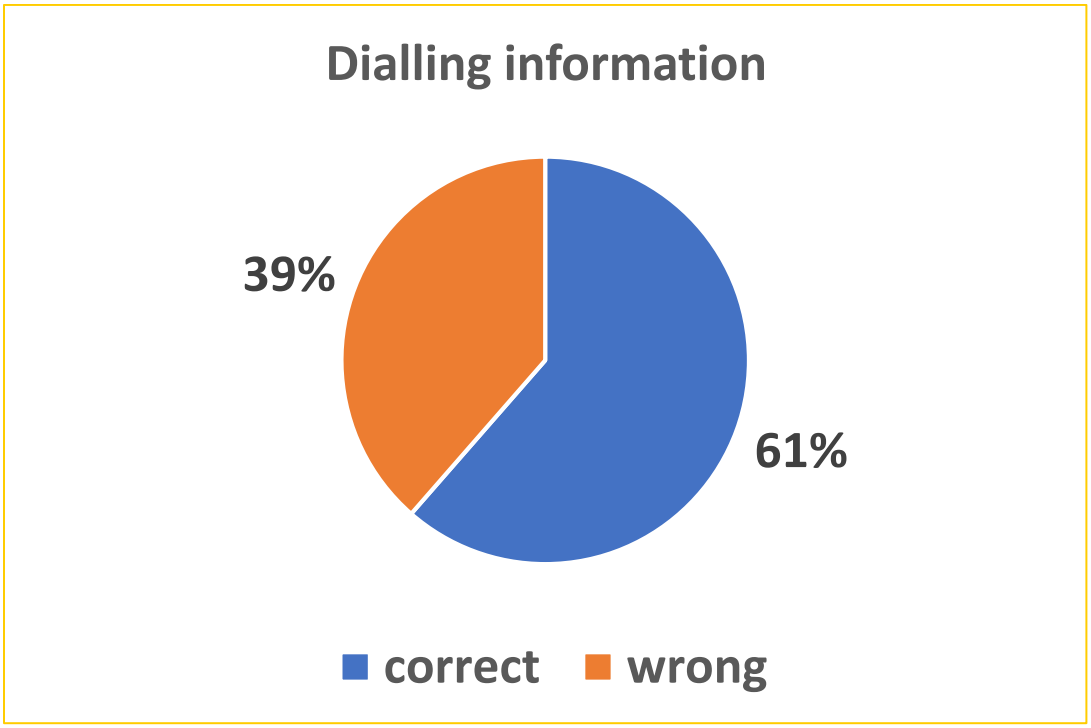

Of all the interviews conducted, only 64% ambulance workers were aware that 108 provides Pre-hospital care.




Only 57% workers were aware about the ideal response time of arrival of ambulance to the site of incident.

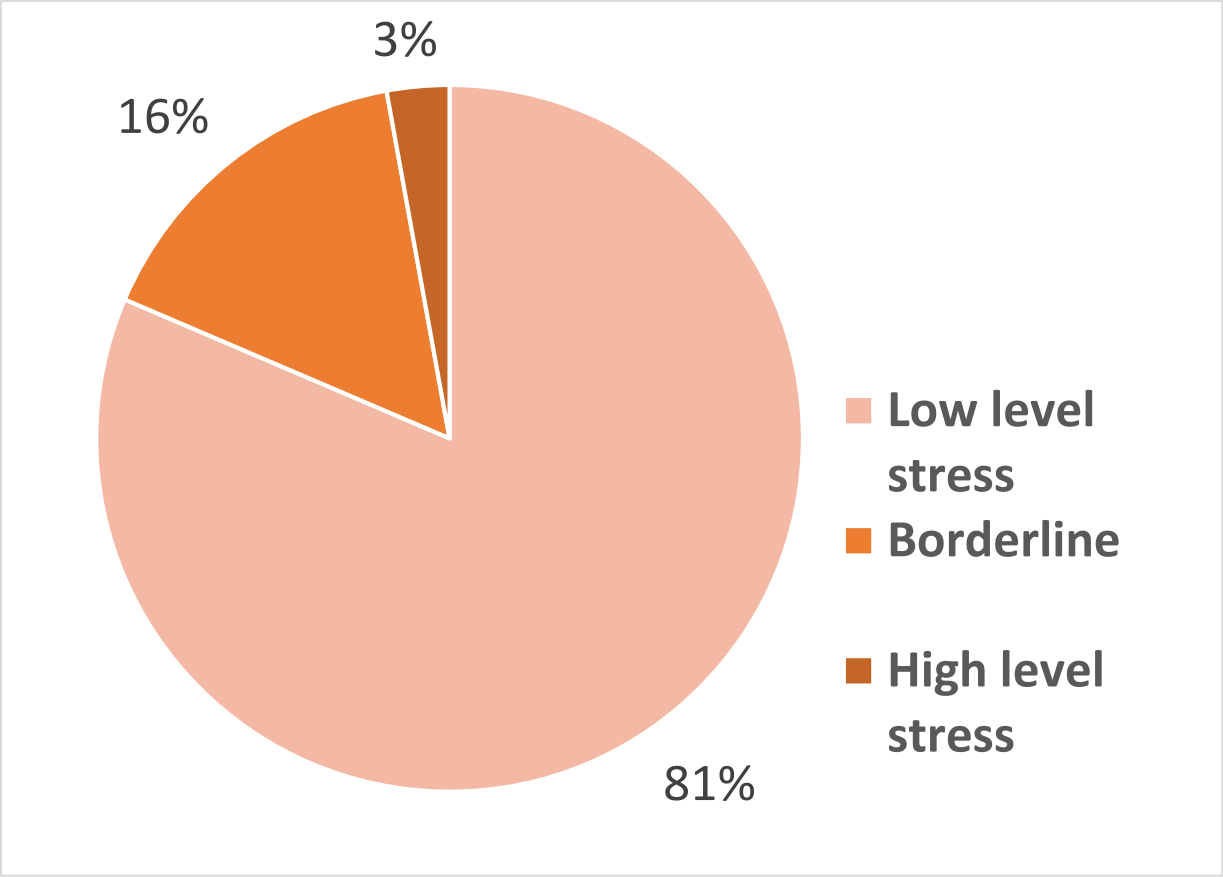



Only 51% of the workers interviewed are aware of the traffic rules to be followed by the ambulance.




39% workers are still not aware that the ambulance services can be availed by dialing either 104/108,defining feature of IAP.

2. Severity of stress among the ambulance workers by using PTSD scale




- Of the total samples analyzed, a positive insight was observed as 81% of the workforce had low level stress symptoms.
- 16% workers lie in the borderline symptom range, which can transition to either high level stress symptoms or low-level stress symptoms.
- Only 3% cases showed symptoms of high level of stress which are indicative of severe PTSD.
- Score range:
    - Low level stress – 0-27
    - Borderline – 28-40
    - High stress – 41-68

3. Relationship of Work experience and Stress symptoms

Null hypothesis – There is no relationship between experience and stress symptoms

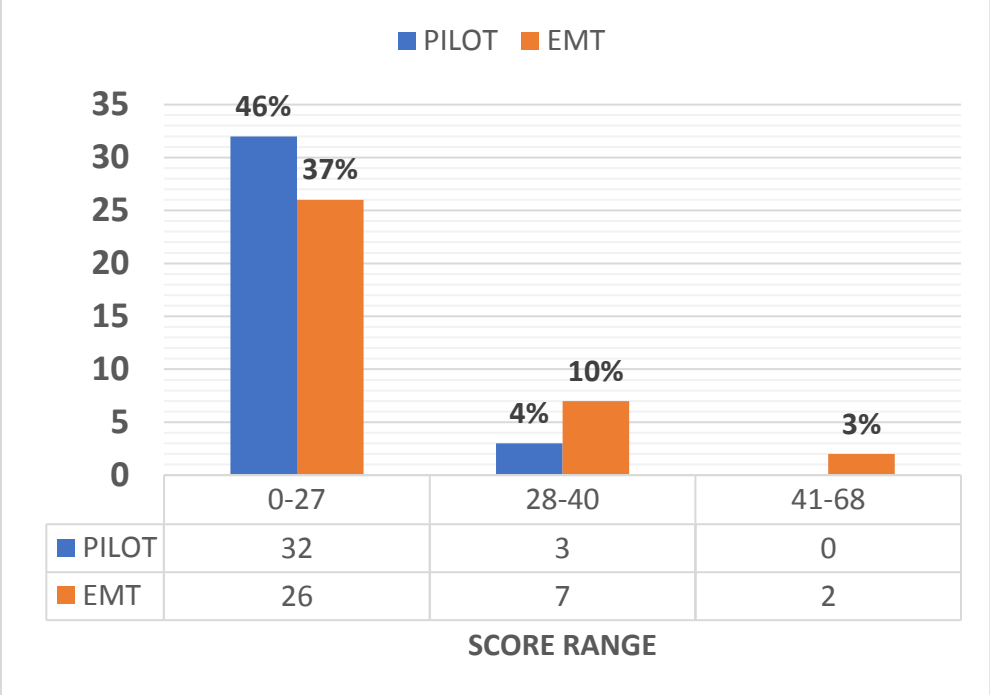
| | 0-4 YRS | 5-10 YRS |
|---|---|---|
| LOW | 18 | 39 |
| BORDERLINE | 8 | 3 |
| HIGH | 0 | 2 |

Chi squared = 13.892

Degrees of freedom - 4

Chi squared test was conducted to establish if a relationship exists between the stress symptoms and the work experience. Since a value of 13.89 was obtained from chi squared test, null hypothesis was rejected which implied that stress symptoms are linked to the work experience.

4.To identify the difference in symptom severity between EMTs and Pilots.




Severity symptoms varied in EMTs and Pilots as the number of EMTs in borderline or high-level stress were significantly higher when compared to Pilots.

Top 5 stress symptoms

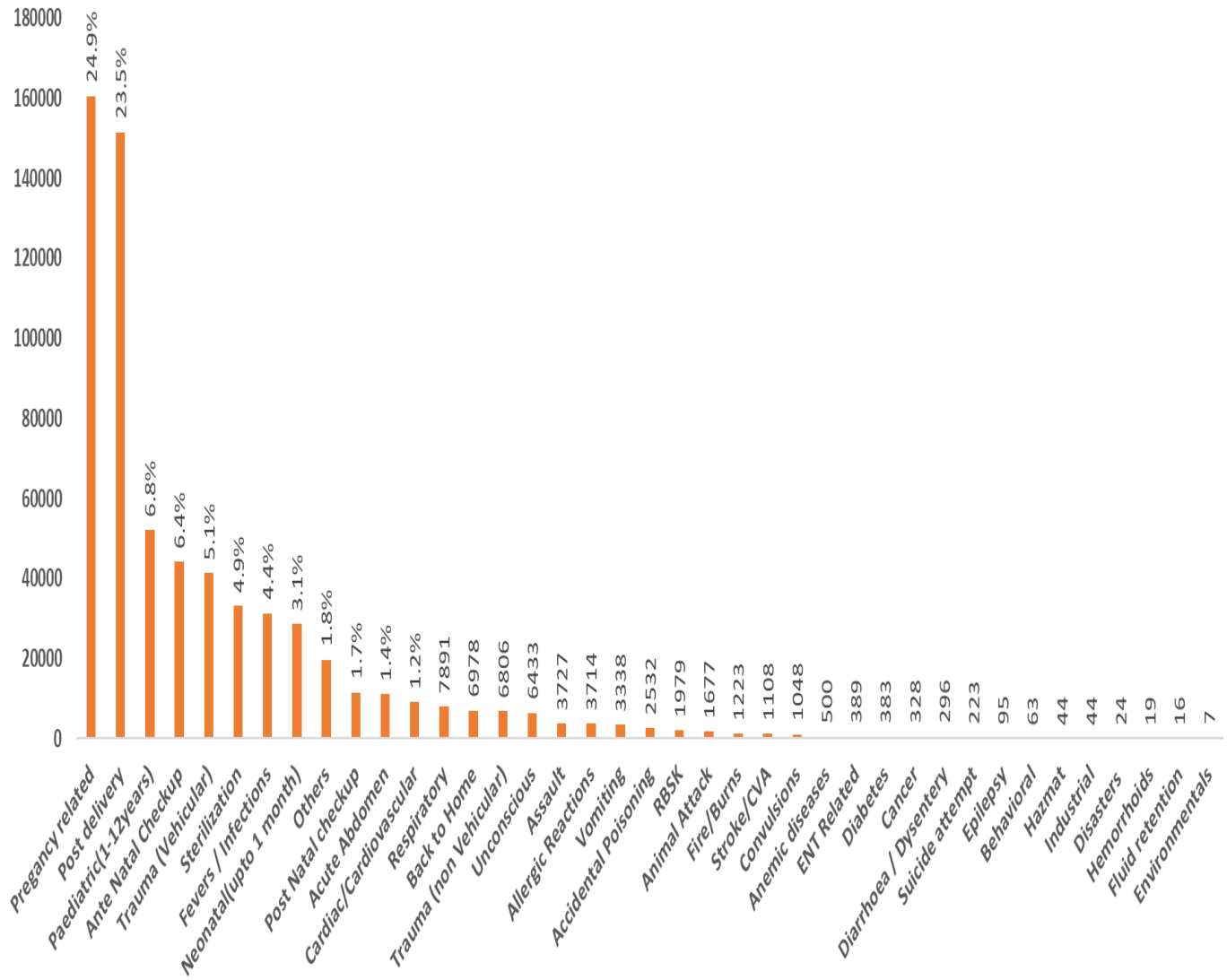

Based on analysis done on the data collected in the designed questionnaire, following symptoms were identified to be occurring at the highest frequency in stressed individuals.

These symptoms were then arranged according to the frequency of occurrence and were established as the symptoms to be looked for in the workforce to identify their psychological status of well-being.

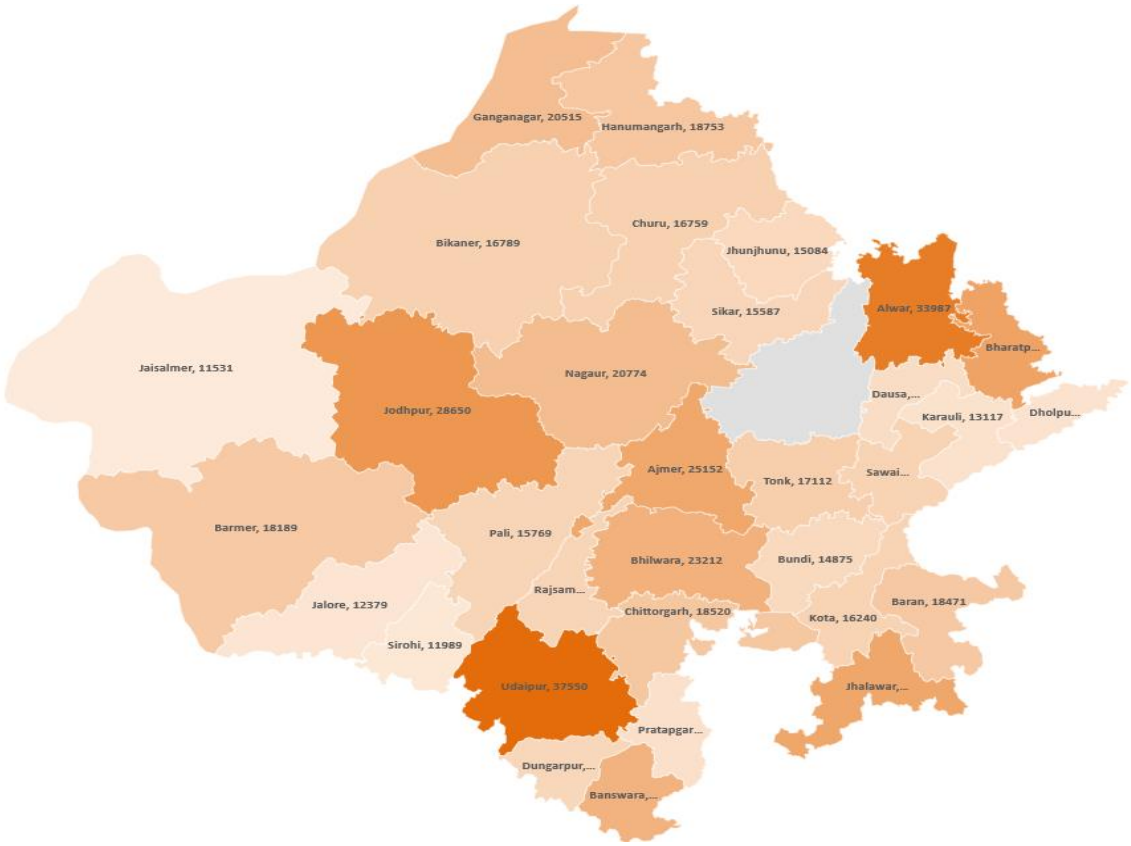
# Trend Analysis

1. Major chief complaints
2. District wise trends
3. Time based trends based on past 6 months data

# 1.MAJOR CHIEF COMPLAINTS



## 2. DISTRICT WISE TREND

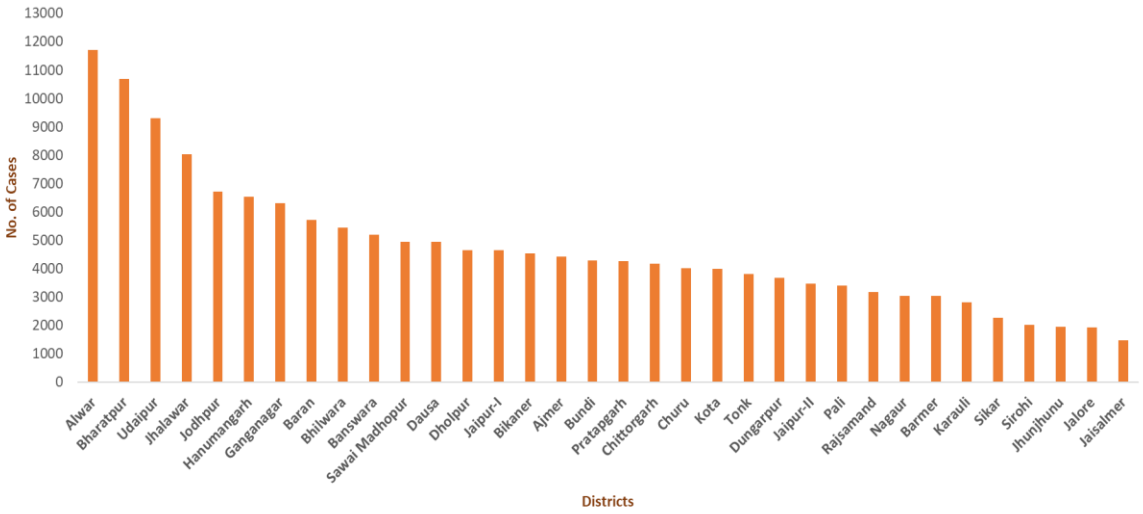



| S.NO | DISTRICT | TRIPS |
|---|---|---|
| 1 | Udaipur | 37550 |
| 2 | Alwar | 33987 |
| 3 | Jodhpur | 28650 |
| 4 | Bharatpur | 26204 |
| 5 | Jhalawar | 25397 |
| 6 | Ajmer | 25152 |
| 7 | Jaipur-I | 24123 |
| 8 | Bhilwara | 23212 |
| 9 | Banswara | 22810 |
| 10 | Nagaur | 20774 |

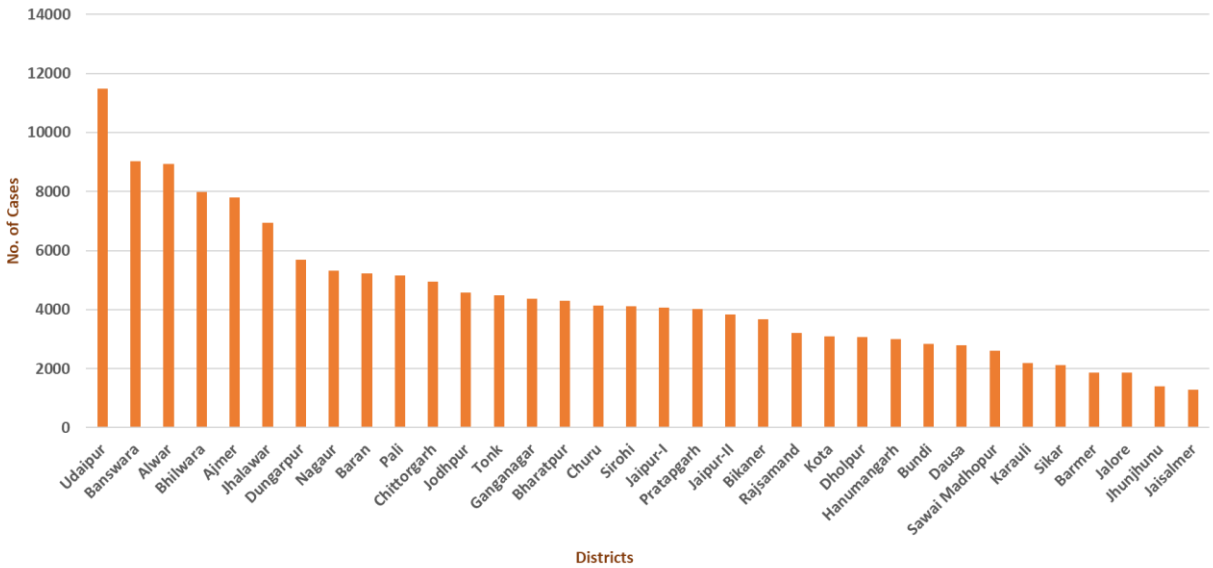
3.TRENDS BASED ON PAST 6 MONTHS DATA

Secondary data of past six months was analyzed to identify the major complaints for which the ambulance services were being availed and further study was done to recognize the districts which were actively availing the services for which ambulance was most often availed.

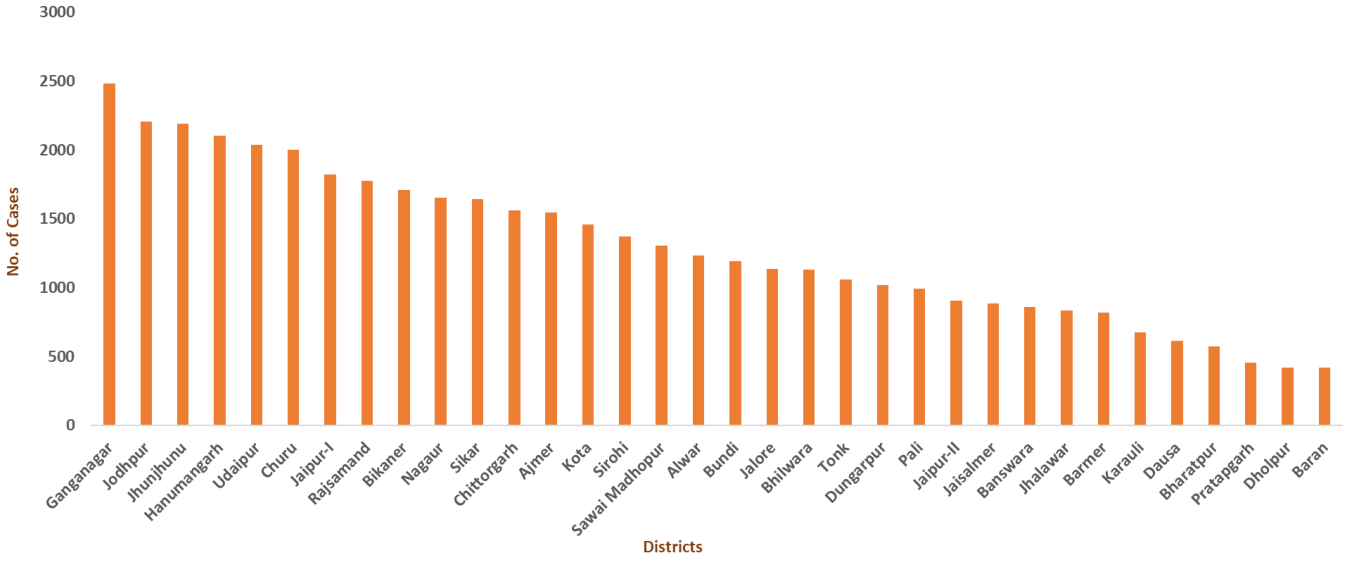
1. Pregnancy related



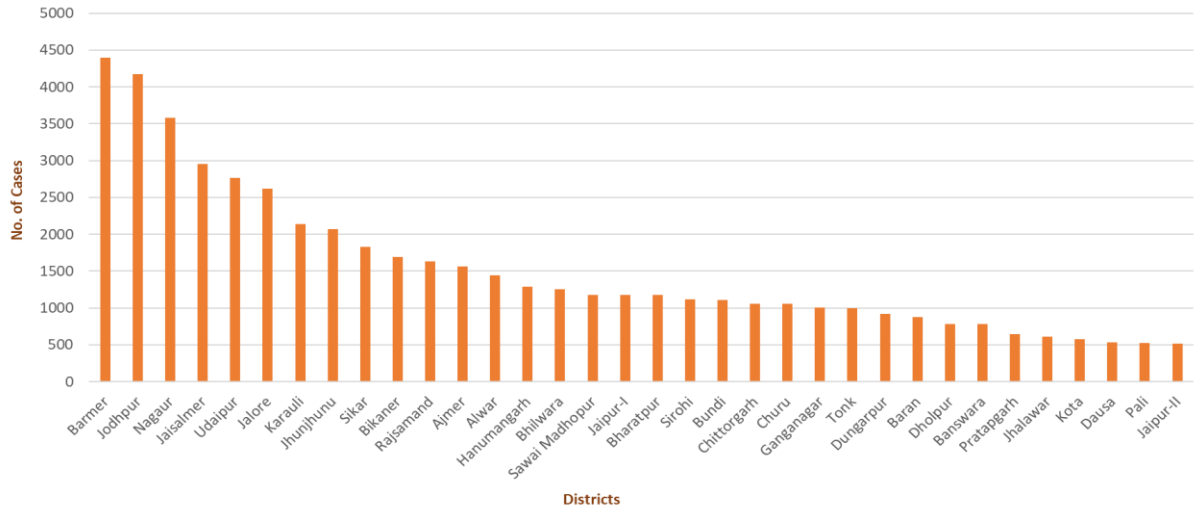

2. Post Delivery



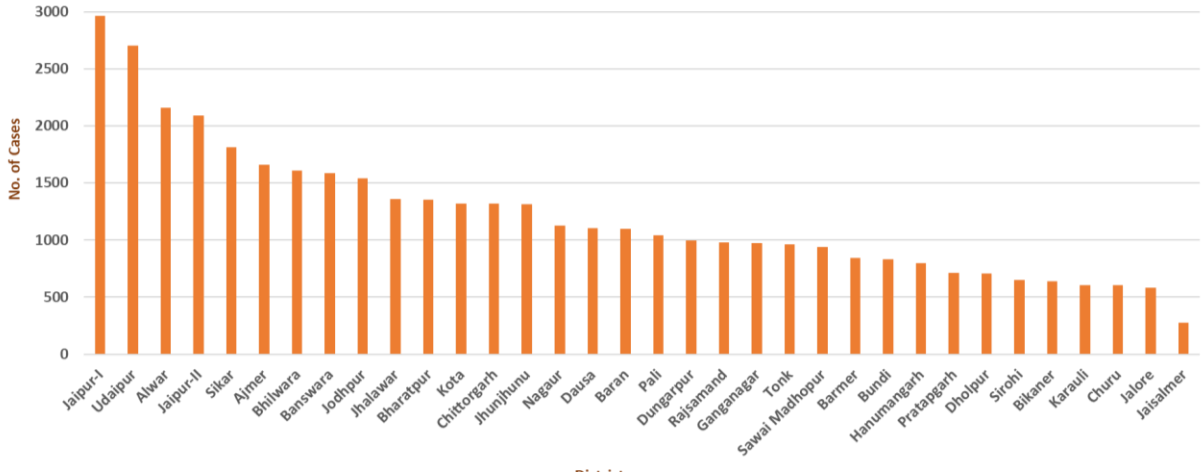
3. Paediatric




4. ANC




5. Trauma



# CONCLUSION

Awareness assessment results revealed that the awareness level of the workers was below the satisfactory levels required for the job. Majority of workers were not aware of the basic knowledge about their job duties such as response time, ambulance services, traffic signal rules and dialing information

The study yielded positive results as low prevalence of Post-Traumatic Stress Disorder symptoms was found which indicated the natural tendency of emergency workers to cope with the daily stressful conditions of their job.

- 81% of the workers interviewed showed low level stress symptoms.
- 16% cases were found to be having borderline stress symptoms who can transition to severe stress symptoms and therefore require immediate interventions to help them in shifting to low level stress rather than high level stress.
- 3% cases revealed to be suffering from high level stress indicating severe PTSD and need immediate counselling and assistance to cope with work related stress.

# RECOMMENDATIONS

- To prevent the upcoming of PTSD symptoms, intervention programs can be designed which focus on employee encouragement.

- Proper counselling sessions and grievance addressal programs should be organized on a regular basis to ensure a healthy work force.

- Short or long-term transfers to non-emergency duties on the basis of stress severity should be done to keep the workers motivated.

- To increase the awareness among the workers, proper re-orientation programs should be scheduled and assessment of the same should be done regularly.

Major stress inducing stress factors can be associated with social aspects of the work environment, in particular the lack of support from supervisor. Therefore, when implementing interventions at workplace, these social aspects need to be considered.

ANNEXURE

दिनांक_____ लोकेशन_____

पद_____ आईडी नम्बर_____

नाम

1. आपने जीवीके ईएमआरआई किस साल में ज्वाइन की ?
   क. 2008-10
   ख. 2011-13
   ग. 2014-16
   घ. 2017-18

2. जीवीके ईएमआरआई में आपका कार्य अनुभव कैसा है ?
   क. संतोषजनक
   ख. अत्याधिक संतुष्ट
   ग.असंतोषप्रद
   घ. कह नहीं सकते

3. आपातकालीन स्थिति में लोगों की जान बचाकर कैसा महसूस होता है ?
   क. गौरवान्वित
   ख. कोई अहसास नहीं
   ग. बेचैनी
   घ. कह नहीं सकते

4. क्या आपने कभी एम्बुलेंस चलाते हुए मोबाइल पर बात की है ?
   क. कभी कभी
   ख. हमेशा
   ग. ज़रूरत पड़ने पर
   घ. कभी नहीं

5. 108 एम्बुलेंस इनमें से कौनसी सेवाएं प्रदान करती है ?

   क. अस्पताल से पूर्व की देखभाल

   ख. हॉस्पिटल केयर

   ग. बेसिक लाइफ सपोर्ट

   घ. क और ग दोनों

6. 108 एम्बुलेंस का रिस्पांस टाइम ग्रामीण क्षेत्रों में कितना है ?

   क. 15 मिनट

   ख. 20 मिनट

   ग. 30 मिनट

   घ. 40 मिनट

7. क्या एम्बुलेंस ड्राइवर ट्रैफिक के लाल सिगनल को पार कर सकते हैं ?

   क. हाँ

   ख. नहीं

   ग. हाँ यदि ट्रैफिक पुलिस सिगनल पर मौजूद है और ट्रैफिक का संचालन करते हुए एम्बुलेंस को निकलने का सुरक्षित रास्ता देती है

   घ. इनमें से कोई नहीं

8. 108 एम्बुलेंस की सेवाएं लेने का शुल्क क्या है ?

   क. 50 रुपए

   ख. 100 रुपए

   ग. 400 रुपए

   घ. निशुल्क

9. 108 एम्बुलेंस कैसे बुलाई जा सकती है ?

   क.108 डायल करने से

   ख. 104 डायल करने से

   ग. क और ख

   घ. इनमें से कोई नहीं

10. आपने अपने कार्यकाल में निम्न में से कौनसी घटनाओं का अनुभव किया है ? (एक से ज्यादा घटनाओं पर चिन्ह लगा सकते हैं)
    - □ जान लेवा बीमारियां (दिल का दौरा, सांप का काटना)
    - □ मार पीट, हमले की घटना
    - □ शारीरिक शोषण (रेप की घटनाएं)
    - □ बाल शोषण की घटनाएं
    - □ एक्सीडेंट (गंभीर चोट या मृत्यु)
    - □ प्राकृतिक आपदा
    - □ अन्य _____

11. यदि आपने ऊपर दिए गए विकल्पों में से किसी विकल्प पर चिह्न लगाया है , तो इनमे से कौनसी घटना आपको परेशान करती है ?
    - □ जान लेवा बीमारियां (दिल का दौरा, सांप का काटना)
    - □ मार पीट, हमले की घटना
    - □ शारीरिक शोषण (रेप की घटनाएं)
    - □ बाल शोषण की घटनाएं
    - □ एक्सीडेंट (गंभीर चोट या मृत्यु)
    - □ प्राकृतिक आपदा
    - □ अन्य _____

**नीचे उन परेशानियों की सूची दी गयी है जो इस क्षेत्र में कार्य करने वाले लोग अक्सर अनुभव करते हैं . ऊपर की सूची में से आपकी चिन्हित की हुई सबसे विचलित करने वाले अनुभव का नाम लिखें.**

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**कृपया प्रत्येक कथन को ध्यान पूर्वक पढ़ें, और उन विकल्पों को चिन्हित करें जो आपकी परिस्थिति से मेल खाते हैं उन घटनाओं के सम्बन्ध में जो पिछले महीने आपने अनुभव की और आपको विचलित करती है तथा जो आपको सबसे ज्यादा परेशान करते हैं**

| | **परेशानी** | **कभी नहीं** | **शायद ही कभी** | **कभी कबार** | **ज्यादातर** | **हमेशा** |
|---|---|---|---|---|---|---|
| 1. | घटना की अनचाही यादें | | | | | |
| 2. | घटना से सम्बंधित बुरे सपने | | | | | |
| 3. | ऐसा महसूस होना जैसे वो घटना दोबारा हो रही हो | | | | | |
| 4. | घटना के बारे में सोच के भावुक रूप से उदास हो जाना | | | | | |
| 5. | घटना के बारे में सोचने पर शारीरिक प्रतिक्रिया होना (घबराना, पसीने छूटना) | | | | | |
| 6. | घटना से संभंधित याद से बचने की कोशिश करना | | | | | |
| 7. | उन परिस्थितियों से या जगहों से बचने की कोशिश करना जो आपको उस घटना की याद दिलाये | | | | | |
| 8. | घटना से सम्बंधित ज़रूरी बातों को याद न कर पाना | | | | | |
| 9. | खुद को या दूसरों को नकारात्मक तरीके से देखना | | | | | |

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| 10. | प्रबल नकारात्मक भावनाएं होना | | | | | |
| 11. | दिन प्रतिदिन की गतिविधियों में मन ना लगना | | | | | |

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| 12. | दूसरों से अलग थलग महसूस होना | | | | | |
| 13. | सकारात्मक महसूस करने में दिक्कतें होना | | | | | |
| 14. | चिड़चिड़ा महसूस होना | | | | | |
| 15. | ऐसे काम करना जो खुद को या दुसरो को खतरे में दाल सकते हैं | | | | | |
| 16. | बहुत ज्यादा सतर्क रहना | | | | | |
| 17. | बहुत जल्दी चौंक जाना | | | | | |
| 18. | किसी काम में एकाग्र ना हो पाना | | | | | |
| 19. | नींद आने में या सोने में तकलीफ | | | | | |
| 20. | ये परेशानियां आपको कितना विचलित करती हैं | | | | | |
| 21. | ये परेशानियां आपकी दिन प्रतिदिन की गतिविधियों को कितना प्रभावित करती हैं | | | | | |

# List of base locations visited

DH (Dausa)

Lalsot

Lawaan

Nagal rajwatan

Sainthal

Ashok Nagar

Metro Junction

Bani park

FS Vidhyadhar nagar

PS Harmada

Adarsh Nagar

Kothun

Ramganj

Choti Chaupar

Mansarovar

Mahila thana (Gandhinagar)

Gandhi Nagar

Sanganer thana

Sadar Thana

Pratap Nagar

Malviya Nagar

Vaishali Nagar