

Summer Internship
at
Healthark Insights

From May 10th, 2021 to July 10th, 2021

**Project Report On Study Of Women's Mental Health During The
COVID-19 Pandemic**

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OBSERVATIONAL REPORT

LEARNINGS FROM
HEALTHARK INSIGHTS

INTRODUCTION : ORGANISATION PROFILE

HEALTHARK



Healthark Insights is a management-consulting firm located in Ahmedabad, Gujarat. It was established in 2016. The firm provides solutions to healthcare problems providing clients with end-to-end capabilities

SERVICES PROVIDED



Strategy and Market Research



Modelling and Forecasting



Medical Writing



Artificial Intelligence



Business Intelligence and Reporting



Claims Analytics



KOL Identification and Mapping

INTRODUCTION : OBJECTIVES AND DATA COLLECTION

HEALTHARK

MY OBJECTIVES FROM INTERNSHIP

- To understand the workings of a consulting company
- To understand the methods of primary and secondary data collection
- To hone secondary data collection skills
- To understand how to assimilate large amounts of data and derive actionable insights

MODE OF DATA COLLECTION



Official government websites



Other consulting firms



Google scholar



PubMed



Country specific research engines

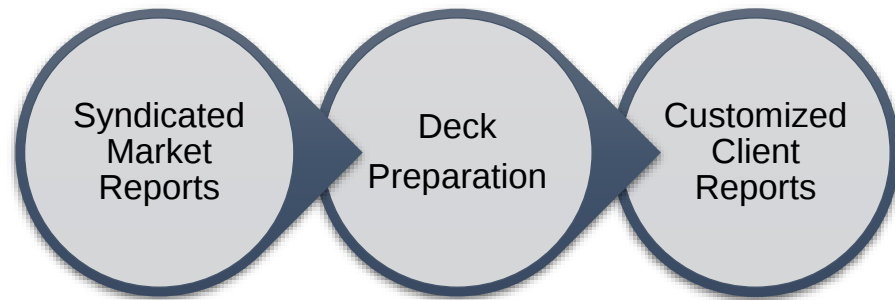


Other new articles and investor reports

INTRODUCTION : GENERAL FINDINGS ON LEARNING

HEALTHARK

MARKET REPORT PROJECT



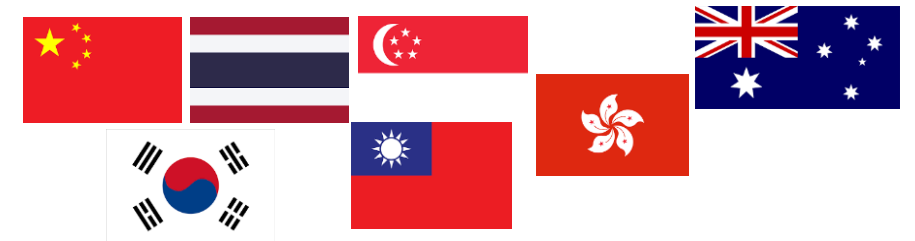
Netherlands



Behavioural Health



BIOSIMILAR PROJECT



Biosimilar Market

Denosumab Biosimilar

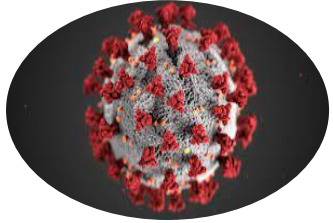
- Country policies regarding biosimilar drugs with respect to clinical development, reimbursements and commercialisation
- Denosumab biosimilar pipeline in the countries

PROJECT REPORT

STUDY ON WOMEN'S MENTAL HEALTH DURING THE COVID-19 PANDEMIC



INTRODUCTION : RATIONALE



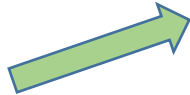
COVID – 19 Pandemic

- Strict social distancing measures
- Isolation and lockdown



Mental Distress

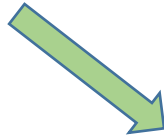
- Stressors like fear of infection
- Loss of a loved one
- Frustration
- Inadequate supplies



264 mn people suffer from depression worldwide



284 mn people suffer from anxiety worldwide



1 bn people suffer from at least 1 mental disorder worldwide



Increasing burden of mental disorders



68% adults suffering from mental disorders also suffer from other physiological diseases



Loss of productivity of USD 1 trillion to global economy annually

INTRODUCTION : REVIEW OF LITERATURE

Author	Year	Study Design	Objective	Indicator	Conclusion
Suryavanshi .N et al	2020	Cross – sectional online survey	“To assess mental health and quality of life among healthcare professionals during the COVID-19 pandemic in India”	- Depression: PHQ-9 > 10 - Anxiety: GAD-7 $\geq$ 10	Percentage of female participants with - Depression: 23% - Anxiety: 32%
Grover S et al	2020	Cross-sectional study with online	“To evaluate the psychological impact of lockdown due to COVID-19 pandemic on the general public with an objective to assess the prevalence of depression, anxiety, perceived stress, well-being, and other psychological issues.”	- Depression: PHQ-9 > 10 - Anxiety: GAD-7 > 10	Percentage of participants with - Depression: 10.5% - Anxiety: 38.2%
Liu, C. H et al	2020	Cross- sectional online study	“To identify factors associated with depression, anxiety, and PTSD symptomatology in U.S. young adults (18-30 years) during the COVID-19 pandemic”	- Depression: PHQ-8 scores $\geq$ 10 - Anxiety: GAD-7 scores $\geq$ 10 - PTSD: PCL-C scores $\geq$ 45	Percentage of participants with - Depression: 43.3% - Anxiety: 45.4% - PTSD: 31.8%
Shamim A.S. et al	2021	Cross- sectional online study	“To assess the impact of COVID-19 on the mental health of women in Karachi, Pakistan and investigate the possible risk factors”	- Depression: PHQ-9 - Anxiety: GAD-7	Percentage of participants with - Severe Depression: 17.8% - Severe Anxiety: 21.9%
Liu MB et al	2021	Cross- sectional online study	“The impact of the COVID-19 pandemic on the mental health of young people: A comparison between China and the United Kingdom”	- Psychological distress: GHQ-12 $\geq$ 4 - PTSS : PCL 5	Self-reported scores indicative of common mental disorders - UK: 34.4% - China: 14.1%

INTRODUCTION : REVIEW OF LITERATURE

Author	Year	Study Design	Objective	Indicator	Conclusion
Liu, N et al	2020	Cross sectional online study	"To investigate the prevalence and predictors of posttraumatic stress symptoms (PTSS) in China hardest-hit areas during COVID-19 outbreak, especially exploring the gender difference existing in PTSS."	• PTSD: DSM-5 Checklist • PSQI: 4 items	• Prevalence of PTSS: 7% • Women reported significant higher PTSS • Participants with better sleep quality reported lower PTSS
Souto, E. P et al	2021	Longitudinal study	"Social Capital and Depressive Episodes: Gender Differences in the ELSA-Brasil Cohort"	• Social capital : Resource Generator • Depressive Episodes : Clinical Interview Schedule - Revised (CIS-R)	• Men: low social capital in the "social support" dimension was associated with the incidence of depressive episodes • Women: social support was associated with the maintenance of depressive episodes
Solanki, H. K et al	2019	Cross sectional study	"To evaluate the coping mechanism used by homemakers in Kumaon region (Uttarakhand, India) to deal with stress in their day-to-day life"	• Depression: PHQ-9 • Anxiety: GAD-7	• Depression: 18.8% • Anxiety: 13.6% • Watching television (TV), getting busy with the work, and praying were the most frequently reported methods of coping • Activities involving children (including scolding them) and talking or discussing their situation with friends and neighbours also formed an important coping mechanism

INTRODUCTION : RESEARCH QUESTION AND SPECIFIC OBJECTIVES

What is the mental health status and coping strategies of women aged 15 to 60, during the COVID 19 pandemic in India and USA?

1

To know the mental health status in terms of **levels of anxiety and depression**, of women aged 15 to 60, during the COVID 19 in **India** in the last 2 weeks.

2

To know the mental health status in terms of **levels of anxiety and depression**, of women aged 15 to 60, during the COVID 19 in **USA** in the last 2 weeks.

3

To know **the most common coping mechanism** used by women aged 15-60 to deal with mental stress and suggest recommendation based on that.

INTRODUCTION : STUDY FRAMEWORK

OBJECTIVE	INDICATOR	TOOL
To know the mental health status in terms of levels of anxiety and depression, of women aged 15 to 60, during the COVID 19 in India in the last 2 weeks.	• Percentage of sample having GAD 7 scores of ≥ 10 • Percentage of sample having PHQ 9 scores of ≥ 10	• Generalised Anxiety Disorder – 7 (GAD-7) questionnaire in google survey form • Patient Health Questionnaire – 9 (PHQ-9) questionnaire in google survey form
To know the mental health status in terms of levels of anxiety and depression, of women aged 15 to 60, during the COVID 19 in USA in the last 2 weeks.	• Percentage of sample having GAD 7 scores of ≥ 10 • Percentage of sample having PHQ 9 scores of ≥ 10	• Generalised Anxiety Disorder – 7 (GAD-7) questionnaire in google survey form • Patient Health Questionnaire – 9 (PHQ-9) questionnaire in google survey form
To know the most common coping mechanism used by women aged 15-60 to deal with mental stress and suggest recommendation based on that	• Percentage of sample using different types of coping mechanisms	• Google survey form

METHODS AND MATERIALS



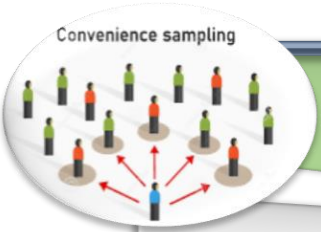
STUDY DESIGN

- Cross sectional study
- Use of online survey form
- WhatsApp platform



SAMPLE SIZE

- India: form reached 222 people, out of which 220 people consented to participate
- USA: form reached only 28 people, out of which all consented to participate



SAMPLING TECHNIQUE

Non Random Sampling



Convenience Sampling

METHODS AND MATERIALS

MODE OF DATA COLLECTION

Online Survey Form

In English language only

WhatsApp Platform used to reach participants

- Participants informed regarding the study and informed consent obtained prior to data collection
- No direct identification questions were asked
- Socio-demographic details were collected

GAD-7

- Used for anxiety
- Self-administered
- 7 items
- Uses Likert Scale from “0” to “3”
- Totalled scores range from 1 to 21
- Cut-off score ≥ 10

PHQ-9

- Used for depression
- Self-administered
- 9 items
- Uses Likert Scale from “0” to “3”
- Totalled scores range from 1 to 27
- Cut-off score ≥ 10

METHODS OF COPING

- Questions to address preferred method of coping

METHODS AND MATERIALS



ANALYSIS USED FOR COLLECTED DATA

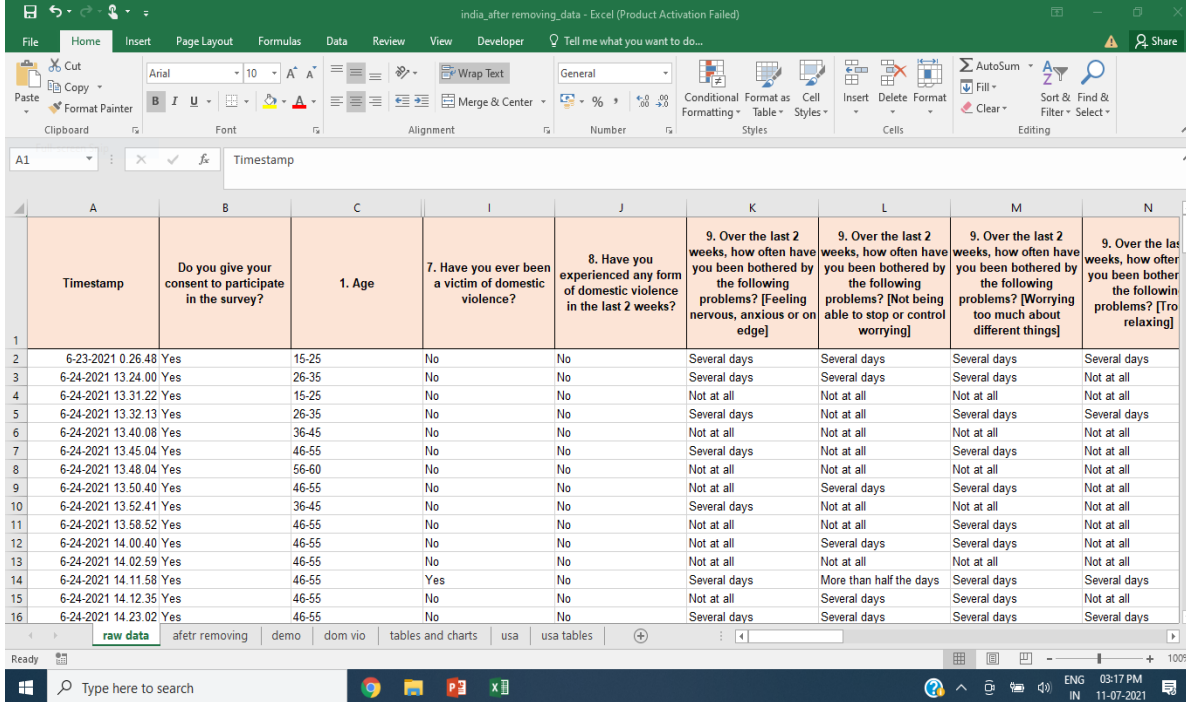
- MS Excel was used for analysis
- Use of functions like SUM, COUNTIF, COUNT, FILTER among others
- Replacement of answers with respective score
- Totalling of scores

- *Total responses in India : 220*
- *Total responses in USA : 28*

28 responses removed from India and 4 responses removed from USA as they were considered erroneous/biased as the total scores were "0"; giving the following :

India: 192

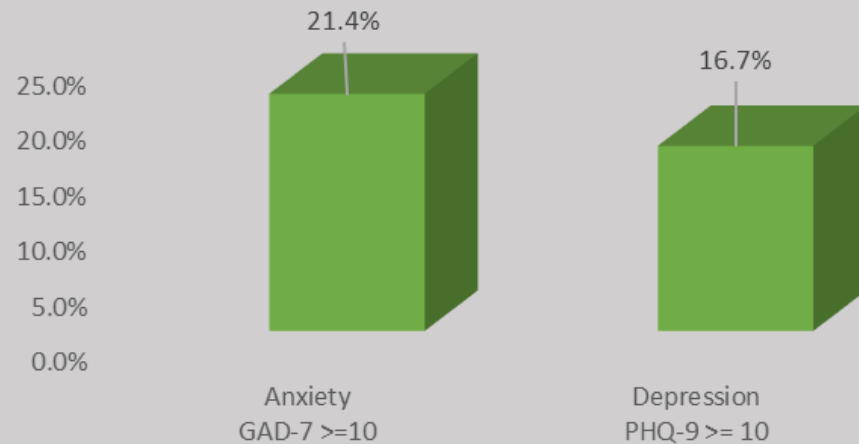
USA:24



	A	B	C	I	J	K	L	M	N
	Timestamp	Do you give your consent to participate in the survey?	1. Age	7. Have you ever been a victim of domestic violence?	8. Have you experienced any form of domestic violence in the last 2 weeks?	9. Over the last 2 weeks, how often have you been bothered by the following problems? [Feeling nervous, anxious or on edge]	9. Over the last 2 weeks, how often have you been bothered by the following problems? [Not being able to stop or control worrying]	9. Over the last 2 weeks, how often have you been bothered by the following problems? [Worrying too much about different things]	9. Over the last 2 weeks, how often have you been bothered by the following problems? [Trouble relaxing]
1									
2	6-23-2021 0.26.48	Yes	15-25	No	No	Several days	Several days	Several days	Several days
3	6-24-2021 13.24.00	Yes	26-35	No	No	Several days	Several days	Several days	Not at all
4	6-24-2021 13.31.22	Yes	15-25	No	No	Not at all	Not at all	Not at all	Not at all
5	6-24-2021 13.32.13	Yes	26-35	No	No	Several days	Not at all	Several days	Several days
6	6-24-2021 13.40.08	Yes	36-45	No	No	Not at all	Not at all	Not at all	Not at all
7	6-24-2021 13.45.04	Yes	46-55	No	No	Several days	Not at all	Several days	Not at all
8	6-24-2021 13.48.04	Yes	56-60	No	No	Not at all	Not at all	Not at all	Not at all
9	6-24-2021 13.50.40	Yes	46-55	No	No	Not at all	Several days	Several days	Not at all
10	6-24-2021 13.52.41	Yes	36-45	No	No	Several days	Not at all	Not at all	Not at all
11	6-24-2021 13.58.52	Yes	46-55	No	No	Not at all	Not at all	Several days	Not at all
12	6-24-2021 14.00.40	Yes	46-55	No	No	Not at all	Several days	Several days	Not at all
13	6-24-2021 14.02.59	Yes	46-55	No	No	Not at all	Not at all	Not at all	Not at all
14	6-24-2021 14.11.58	Yes	46-55	Yes	No	Several days	More than half the days	Several days	Several days
15	6-24-2021 14.12.35	Yes	46-55	No	No	Not at all	Several days	Several days	Not at all
16	6-24-2021 14.23.02	Yes	46-55	No	No	Several days	Several days	Several days	Several days

ANALYSIS AND INTERPRETATION : INDIA

Percentage of the sample showing symptoms of anxiety and depression in Indian sample



ANXIETY

- **21.4%** women in the sample had total scores equal to or above the cut-off score of 10 in **GAD-7**

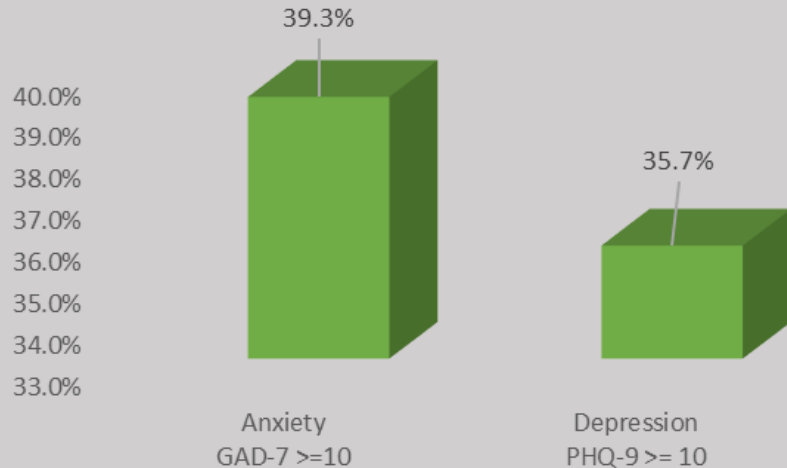
DEPRESSION

- **16.7%** women in the sample had total scores equal to or above the cut-off score of 10 in **PHQ-9**

	Anxiety GAD-7 >=10	Depression PHQ-9 >= 10
Number of participants with total scores of >= 10	41	32
Percentage	21.4%	16.7%

ANALYSIS AND INTERPRETATION : INDIA

Percentage of victims of domestic violence showing symptoms of anxiety and depression



No. of victims of domestic violence: 28	Anxiety GAD-7 >=10	Depression PHQ-9 >= 10
Number of participants with total scores of >= 10	11	10
Percentage	39.3%	35.7%

Percentage of anxiety and depression in a sub sample of victims of domestic violence

ANXIETY

- **39.3%** women in the sample had total scores equal to or above the cut-off score of 10 in **GAD-7**

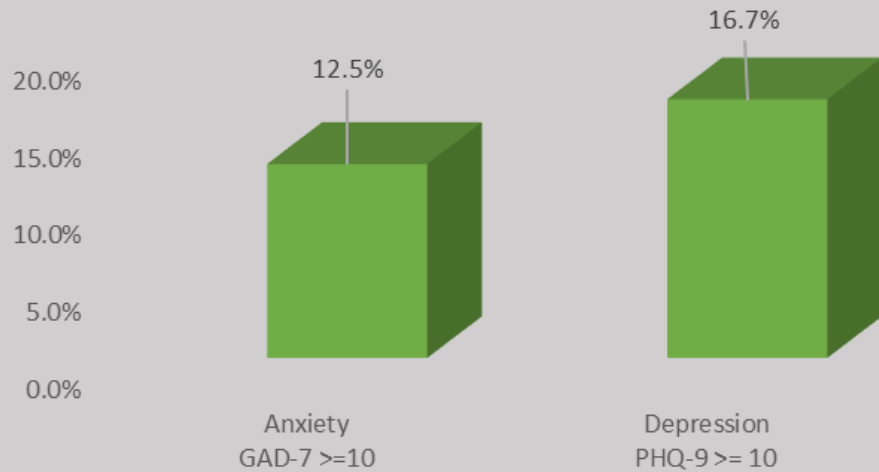
DEPRESSION

- **35.7%** women in the sample had total scores equal to or above the cut-off score of 10 in **PHQ-9**

Percentage of participants showing symptoms of anxiety and depression were comparatively higher than what was seen in the total sample.

ANALYSIS AND INTERPRETATION : USA

Percentage of the sample showing symptoms of anxiety and depression in USA sample



ANXIETY

- **12.5%** women in the sample had total scores equal to or above the cut-off score of 10 in **GAD-7**

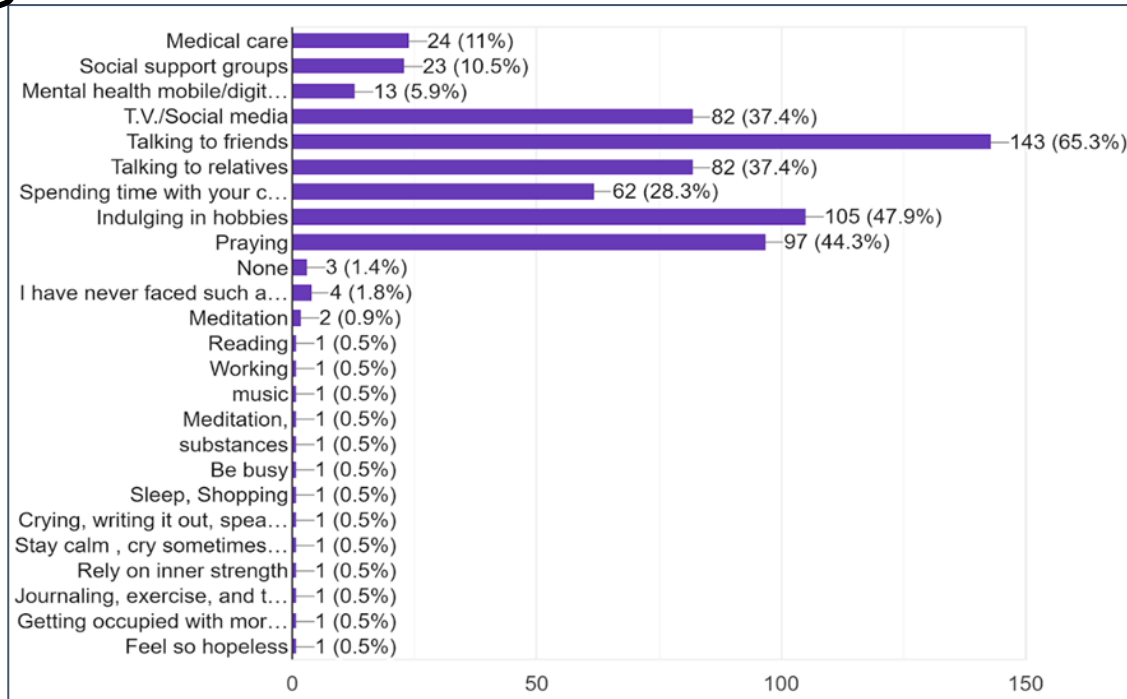
DEPRESSION

- **16.7%** women in the sample had total scores equal to or above the cut-off score of 10 in **PHQ-9**

	Anxiety GAD-7 >=10	Depression PHQ-9 >= 10
Number of participants with total scores of >= 10	3	4
Percentage	12.5%	16.7%

ANALYSIS AND INTERPRETATION: COPING MECHANISM

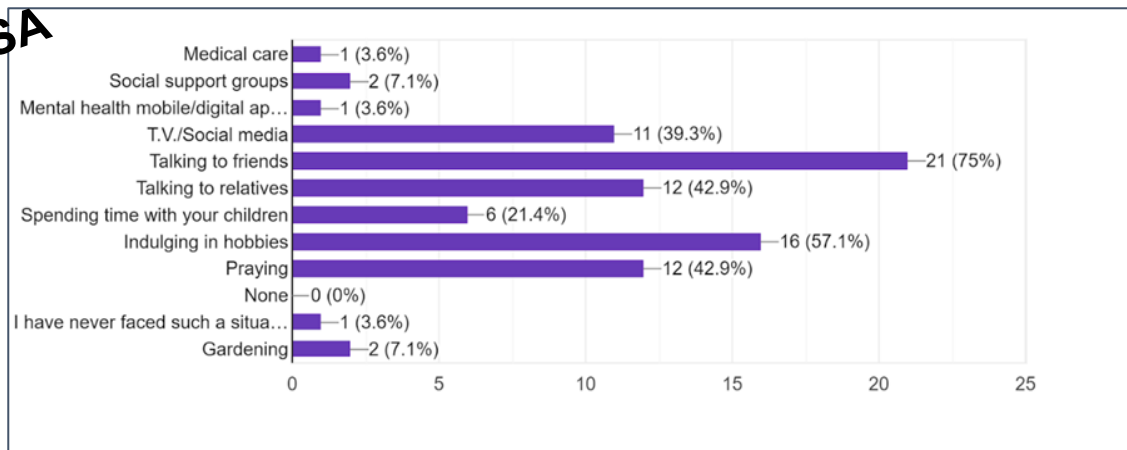
INDIA



COPING MECHANISMS

- The most common coping mechanisms include **reliance on friends and relatives**, which indicate the dependence of women on their social groups.
- There is **low reliance on medical care and mobile health applications**

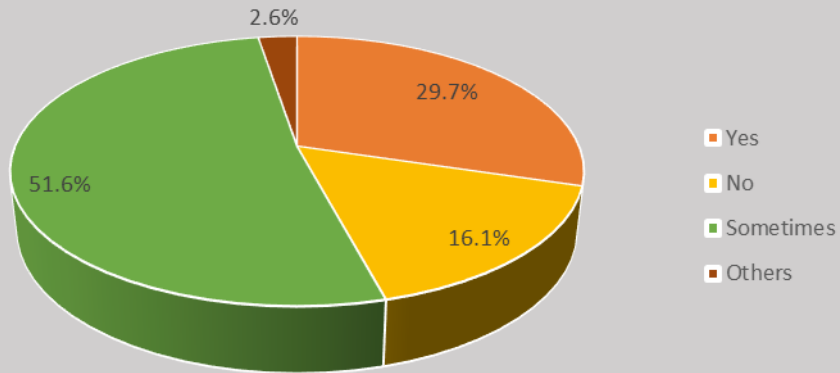
USA



ANALYSIS AND INTERPRETATION: COPING MECHANISM

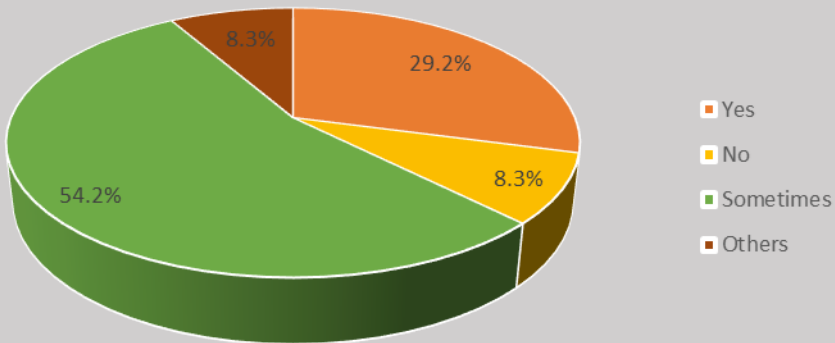
INDIA

When faced with a stressful situation, do you ask for help?



USA

When faced with a stressful situation, do you ask for help?



COPING MECHANISMS

- Only **29.7%** women were sure that would ask for help in the face of a stressful situation, and **51.6%** said that they would only ask for help sometimes In India
- 29.2%** women said that would ask for help when faced with a stressful situations, whereas, **54.2%** said that would as for help only sometimes in USA

RECOMMENDATIONS



Increased awareness and education regarding mental health.



Increasing awareness regarding medical therapies and mobile health applications



Increasing opportunities for women to engage in social activities

CONCLUSION

Objective 1

- Percentage of Indian participants showing anxiety and depression
 - Anxiety: 21.4%
 - Depression: 16.7%

Objective 2

- Percentage of USA participants showing anxiety and depression
 - Anxiety: 12.5%
 - Depression: 16.7%

Objective 3

- Most common coping mechanisms include reliance on friends and relatives, spending time with children
- The least common coping mechanisms include medical care, social support groups and mobile health applications

LIMITATIONS

- Non random sampling technique used.
- Results cannot be generalised
- Small sample size
- Covers only literate individuals

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THANK YOU