

**A Study on the Role of Internet Memes in Raising Social Awareness with
reference to Mental Well-Being of Indian College and University Students**

A Thesis submitted to the

UPES

For the Award of

Doctor of Philosophy

in

Design

By

Bhaskar Mishra

August 2025

Supervisor

Dr. Samrat Dev



School of Design (SoD)

UPES

Dehradun- 248007: Uttarakhand, India

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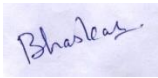
School of Design (SoD)

UPES

Dehradun - 248007: Uttarakhand, India

DECLARATION

I declare that the thesis entitled **“A Study on the Role of Internet Memes in Raising Social Awareness with reference to Mental Well-Being of Indian College and University Students”** has been prepared by me under the guidance of Dr. Samrat Dev, Sr. Associate Professor of Product Design, Industrial Cluster, School of Design, UPES, Dehradun, Uttarakhand. No part of this thesis has formed the basis for the award of any degree or fellowship previously.

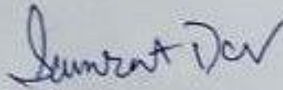


Bhaskar Mishra
School of Design, UPES,
P.O. Bidholi Via-Prem Nagar,
Dehradun - 248007, Uttarakhand.
DATE: 27-08-2025

Date: 27-08-2025

CERTIFICATE

I certify that Bhaskar Mishra has prepared his thesis entitled **“A Study on the Role of Internet Memes in Raising Social Awareness with reference to Mental Well-Being of Indian College and University Students”**, for the award of PhD degree of the UPES, under my guidance. He has carried out the work at the Department of the School of Design, UPES.



Supervisor
Dr. Samrat Dev
Sr. Associate Professor,
Product Design, Industrial Cluster,
School of Design, UPES,
Dehradun - 248007, Uttarakhand.

ABSTRACT

This study was aimed at investigating the potential of internet memes for raising awareness about mental health issues among college and university students in India using a mixed-methods approach, which included qualitative and quantitative analysis. The research indicates that internet memes were effective in capturing attention and increasing awareness, as supported by findings from the study on the Uttarakhand police department's road safety campaign, where memes achieved greater reach and engagement than posts without memes. Furthermore, the findings suggested the importance of relatable text, engaging visuals, and cultural relevance in meme design for effective communication and awareness among young people. It also highlighted that exposure to and engagement with mental health memes significantly increased the awareness of mental health issues among college and university students. Hence, the study concluded that internet memes are powerful tools for driving social change and can be important for raising awareness, challenging stigma, and promoting mental well-being in the digital world.

Internet memes, initially light-hearted, now cover diverse topics, from entertainment to serious social commentary. The potential of internet memes to engage people in meaningful ways presents an opportunity to examine how this form of media might contribute to raising awareness on important issues, such as mental health, among young people. The mental health landscape for young people today is increasingly complex and challenging. This demographic, encompassing late teens to early adulthood, is especially vulnerable to mental health issues such as anxiety and depression. As the prevalence of mental health concerns rises among young people, there has been a significant push to promote mental health awareness and to encourage open discussions about these issues. Nevertheless, traditional media and public health campaigns, while valuable, often struggle to reach young people effectively. In this context, Internet memes have emerged as a powerful tool for addressing sensitive topics like mental health. However, to date, there has been a limited study on the effectiveness of memes as tools for mental health awareness among college and

university students. Therefore, the study aims to investigate the use of internet memes to raise social awareness about societal issues, with a specific emphasis on mental health, particularly among college and university-going students within the Indian context.

The study adopted a mixed-method approach with a sequential exploratory design, focused on Uttarakhand and relevant areas, examining internet-sourced static memes that reflect common views, opinions, and social trends. To address the first objective, a quantitative, descriptive-comparative design; a survey (assessed awareness, behavior change, responsibility, and visual and verbal features) was conducted with 384 respondents i.e., followers of Uttarakhand police Facebook page (age group 18-29 years old; 59.6% male, 40.4% female); 5 university-educated visual experts evaluated posts according to visual and verbal characteristics; from January to December 2023, 25 road safety posts i.e., 16 internet memes and 9 non-memes posts were analyzed. For data analysis, a series of independent sample t-tests was conducted. The basic framework was based on the “Visual Methodologies” by Gillian Rose adopted to fulfil the second objective in which one of the framework's sites, the image site utilized in the study, where employed content analysis and semiology as research methods for the analysis and selected $N=153$ mental health memes (both English and Hinglish memes- English with Hindi script, posted between January 1, 2020, and July 31, 2024, from social media platforms, where Indian pages and accounts were RVCJ, memzformentalhealth, psycho_saiyaan). To address the third objective, the study used a descriptive-correlational research design; a survey (assessed relation with exposure to and engagement with mental health memes on awareness) was conducted with 979 respondents i.e., young people, particularly college and university students from northern states, including Rajasthan, Haryana, Uttar Pradesh, Bihar, Uttarakhand, and Delhi (age group 18-29 years old; 64.2% male, 35.8% female) and multiple regression was used for data analysis; study two used descriptive-comparative research design; a survey (evaluated the visual and verbal characteristics, likeability, shareability, and effectiveness in raising awareness of internet memes $N=20$ related to mental health issues) was conducted with 384 respondents i.e., young

people, particularly college and university students from Uttarakhand (age group 18-29 years old; 53% male, 47% female) and visual representations such as bar charts and tables were used for data analysis.

The findings suggested that the Internet meme posts used by the Uttarakhand police department on their Facebook page to promote road safety had higher reach, impressions, and engagement as compared to non-meme posts ($p < .05$). The survey results based on respondents' self-reports reported that the "Safety on the roads" campaign initiated by the Uttarakhand police through internet meme posts created awareness related to road safety, changed their attitude or behavior towards road safety, and made drivers more responsible while driving on the road. Furthermore, the findings revealed two primary themes: "Stigmatization of mental health through internet memes (N=94, 61.44% of the sample)" and "Internet memes as tools for coping with mental health challenges (N=59, 38.56% of the sample)." The categories include "Humour or light-heartedness", "Positivity", "Relatability", "Seeking support from friends, family, and professionals", "Self-care practices", "Stereotypes", "Minimization of mental health issues due to cultural and social concerns", or "Mockery or ridicule of mental illness" for memes about mental healthcare. Additionally, relatable text (e.g., the text being at the top and bottom of the meme layout, larger font sizes for context or punchline, while smaller sizes used for secondary details, had sans-serif fonts, normal and tight spacing, bright colors for text, colorful backgrounds, and outlined text), engaging visuals (e.g., the absence of direct gaze, close shots, images photographed at eye level, center/margin scheme used as a compositional aspects), and cultural relevance were all used in a balanced manner to engage and raise awareness among college and university students about mental health. Furthermore, the survey results (self-reported) have shown that exposure to and engagement with mental health memes significantly increased the awareness of mental health issues among college and university students. The regression model indicated that these two factors together explain 51.3% of the variance in awareness ($R^2 = .513$).

Internet memes are used as communication tools across various domains as they have been proven effective in capturing attention, engaging users, and raising

awareness. This potential is further highlighted by a study on the Uttarakhand police department's "Safety on the roads" campaign, which makes use of internet memes as a communication tool and promotes road safety issues and raises awareness among followers, particularly young people. The incorporation of intelligent design elements and meaningful themes in mental health memes highlights their potential as powerful tools for societal communication and awareness. The findings contribute to the growing body of literature on digital communication, highlighting the significance of internet memes in modern media landscapes. By providing a framework for understanding the impact of mental health memes, this study offers valuable insights for researchers, mental health advocates, and content creators. Internet memes are not just a fleeting trend; they are powerful tools for driving social change. As the digital world continues to shape public discourse, internet memes will remain an important medium for raising awareness, challenging stigma, and promoting mental well-being.

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ACRONYMS

Acronym	Full Form
AMOS	Analysis of Moment Structures
WHO	World Health Organization

LIST OF ABBREVIATIONS

Abbreviation	Full Form
AVE	Average Variance Extracted
CFI	Comparative Fit Index
CI	Confidence Interval
CVI	Content Validity Index
EEG	Electroencephalogram
GFI	Goodness of Fit Index
I-CVI	Item-Content Validity Index
IBM	International Business Machines Corporation
IEC	Information, Education, and Communication
MRA	Multiple Regression Analysis
MSV	Maximum Shared Variance
NHM	National Health Mission
RMSEA	Root Mean Square Error of Approximation
S-CVI	Scale-Content Validity Index
S-CVI/Ave	Scale-Content Validity Index/Average
S-CVI/UA	Scale-Content Validity Index/Universal Agreement
SNS	Social Networking Sites
SPSS	Statistical Package for the Social Sciences
SRMR	Standardized Root Mean Squared Residual
TLI	Tucker-Lewis Coefficient
URL	Uniform Resource Locator

LIST OF SYMBOLS

Symbol	Meaning
α	Cronbach's Alpha / Level of Significance
β	Regression Coefficient
λ	Factor Loading (in CFA/SEM)
p	Probability Value (p-value)
r	Pearson's Correlation Coefficient
t	t-test Statistic
CI	Confidence Interval
df	Degrees of Freedom
F	F-ratio (ANOVA Test Statistic)
M	Mean
N	Sample size
R^2	Coefficient of Determination
SD	Standard Deviation
SE	Standard Error

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CHAPTER 1

INTERNET MEMES IN SOCIAL AWARENESS: EXPLORING THEIR ROLE IN MENTAL HEALTH AWARENESS AMONG YOUNG PEOPLE

1.1 INTRODUCTION

In recent years, internet culture has dramatically transformed the way people communicate and engage with information, ideas, and social issues (Nicovich & Cornwell, 1998). A significant part of this transformation has been the rise of internet memes as visual, often humorous content that rapidly spreads across digital platforms. Internet memes, once limited to simple jokes or humorous images, have evolved into a cultural phenomenon capable of conveying complex messages quickly and effectively. Their unique ability to simplify intricate ideas into easily digestible, relatable content has made internet memes a powerful tool for communication in the digital age (Bauckhage, 2011). Internet memes, initially light-hearted, now cover diverse topics, from entertainment to serious social commentary. They act as digital shorthand, conveying nuanced perspectives on societal issues and personal struggles (Raj & Jayaprakash, 2021). This evolution in the use and impact of internet memes makes them an important area of study, especially for understanding how they shape people's perceptions and awareness. Unlike traditional media, which often presents information formally and directly, internet memes use humor, relatability, and informal language to engage people on a personal level. This style of communication may be particularly effective in reaching young people, as it aligns with their digital communication habits and sense of humor. The potential for internet memes to engage people in meaningful ways presents an opportunity to examine how this form of media might contribute to raising awareness on important issues, such as mental health, among young people.

The mental health landscape for young people today is increasingly complex and challenging. This demographic, encompassing late teens to early adulthood, is especially vulnerable to mental health issues (Jaisoorya, 2021; Jaisoorya et al., 2018; Pedrelli et al., 2011; TS et al., 2017). In this study, mental health issues are understood as a range of psychological conditions and subclinical symptoms that affect an individual's cognitive, emotional, and behavioral functioning. According to the World Health Organization (WHO, 2024), "A mental disorder is characterized by a clinically significant disturbance in an individual's cognition, emotional regulation, or behavior." There are many recognized mental disorders, including depression, anxiety disorders, bipolar disorder, PTSD, and eating disorders. However, in the context of this research focusing on young adults in college and university settings, the study emphasizes anxiety (excessive fear and worry, often accompanied by behavioral symptoms) and depression (persistent low mood, loss of interest or pleasure, low self-worth), which are commonly reported issues within this population. These are often linked to academic stress, interpersonal challenges, social isolation, and pressures of transitioning into adulthood (Cherian et al., 2024). This study focuses specifically on symptoms aligned with: Generalized Anxiety Disorder (persistent and excessive worry), Social Anxiety Disorder (intense fear of social situations), and Separation Anxiety Disorder (stress or fear stemming from separation from close emotional bonds) and depressive symptoms as they appear in everyday student experiences, such as lack of motivation, emotional exhaustion, and feelings of hopelessness, rather than clinical diagnoses. Thus, throughout the thesis, the term "mental health issues" refers to both these specific conditions (anxiety and depression) and their related psychological symptoms as reflected in and expressed through mental health memes.

With the rising prevalence of mental health concerns among young people, there has been a significant emphasis on promoting awareness and fostering open discussions around these issues. The stigma surrounding mental health remains a persistent barrier, making it difficult for individuals to seek help or openly address their struggles. Breaking down these stigmas and normalizing conversations around mental health has become an important societal goal, with

many advocates and organizations working to highlight the importance of mental well-being (Webb et al., 2009). However, traditional media and public health campaigns, while valuable, often struggle to reach young people effectively. Messages delivered through conventional channels can feel formal, distant, or impersonal, limiting their impact and engagement with digitally savvy people.

In this context, Internet memes have emerged as a powerful tool for addressing sensitive topics like mental health. They increasingly serve as a medium for expressing complex emotions and personal struggles, particularly those related to anxiety and depression. By using humor, mental health memes make serious topics approachable, reducing stigma and encouraging open discussions. Their relatability fosters connection, helping young people feel less isolated and more validated in their experiences. In this study, mental health memes are static visuals (images with text) shared on social media platforms that relate to the symptom experience of the specific psychiatric disorders (e.g., anxiety, depression, addiction, borderline personality, suicidal ideation), often using humor, or relatability to engage audiences (Akram & Drabble, 2022). In this thesis, the term “mental health memes” or “internet memes related to mental health” refers to memes that explicitly or implicitly depict mental health symptoms, commonly shared by online social media pages and accounts, among young adults, especially college and university students, who are the target population of this study. These memes could be an effective method of promoting mental health awareness and initiating dialogue, as their conversational tone resonates with this demographic. This study aims to examine the effectiveness of internet memes in raising mental health awareness by analyzing the visual content of mental health memes and assessing how young people respond to them. By investigating whether these memes can engage people meaningfully and foster open dialogue, this study will contribute insights into the potential of internet culture as a medium for addressing mental health issues in ways that are accessible, relatable, and impactful.

There is no universally agreed-upon international definition of the youth age group. In India, as per the National Youth Policy- 2014, “Youth” was

defined as a person between the ages of 15-29 years, considered a youth (Youth in India, Ministry of Statistics and Program Implementation [MoSPI], 2022). In this thesis, the term “young people” is consistently used to refer to this demographic, especially in the context of college and university students. To maintain consistency and avoid confusion, terms such as “young adults” or “youth” are not used interchangeably. The survey conducted for this study specifically targeted participants between the ages of 18 to 29 years, aligning with ethical research guidelines and the operational definition of young people adopted here. In addition, this study focuses on static memes rather than video memes. Static memes are the combination of images and short text, which are easy to create, consume, and widely shared across social media platforms. In comparison, video memes involve moving visuals, audio, and often longer content, which may influence engagement and interpretation differently. These memes were chosen for this research due to their prevalence, simplicity, and relevance in the Indian digital context, especially among college and university students. In addition, these memes are more commonly used by Indian social media pages, such as those run by public institutions and awareness campaigns, to communicate messages quickly and effectively.

1.2 MOTIVATION

The motivation behind this research stems from the growing importance of mental health awareness in today's fast-paced, technology-driven society. With mental health issues like anxiety and depression increasingly prevalent among young people, especially college and university students, there is an urgent need to explore innovative ways to engage this demographic in conversations about mental health. Traditional awareness campaigns often fail to resonate with younger people, who are highly active on digital platforms and consume information in visually appealing and relatable formats. In this context, internet memes have emerged as a powerful communication tool that blends humor, relatability, and visual appeal, making them ideal for addressing sensitive issues like mental health. Internet memes are inherently shareable and can promote discussions, making them a unique medium for creating awareness and reducing stigma. This research is further motivated by the lack of academic exploration

in the Indian context, where cultural nuances significantly influence communication strategies. By focusing on Indian social media accounts and static meme formats, this study aims to bridge the gap in understanding how internet memes can effectively deliver messages and raise awareness about mental health issues among young people in India.

1.3 LITERATURE REVIEW

The literature review discusses an overview of the importance of human communication, the role of social media, and the evolution of memes, from the original concept to internet memes. It also looks at internet memes as a communication tool, their importance in raising mental health awareness, the understanding of mental health among college and university students, and the connection between internet memes and mental health awareness.

1.3.1 IMPORTANCE OF HUMAN COMMUNICATION

Communication has been around since the beginning of civilization. Before the development of language, man used sounds, signals, and gestures to communicate with other beings. The word communication is derived from the Latin word “*communicatio*”, which means message or transfer. In general, communication is the exchange of information or data from one place, person, or group to another. Communication is a social process that helps people connect with each other. It is impossible to imagine modern life without communication (Kacharava & Kemertelidze, 2016). There are many different types of communication used today, including cross-cultural, mass, and social science communication, but verbal and nonverbal communication remain the most prevalent and important types. In verbal communication, speakers use their voices and other linguistic tools such as words and sentences to convey meanings. In addition to this, it can be broken down further into oral and written communication. Nonverbal communication is mostly crude expression, in which we observe body language in person and decode the meaning, to understand what message he is encoding through gestures. Gestures, facial expressions, body language and posture, tone, and pauses in speech are all forms of nonverbal communication (Fig. 1.1).

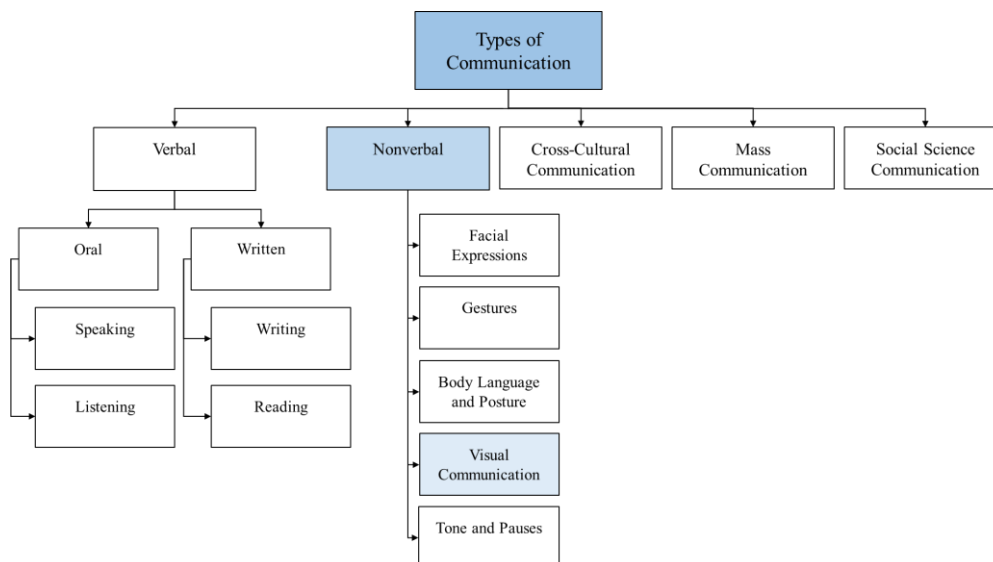


Fig. 1.1 Flowchart of types of communication

Visual communication is an important subtype of nonverbal communication, and it is the use of visual language to convey information in the form of images, signs, etc., (Dinică, 2014; Gozalova et al., 2016; Holsanova, 2014; Kacharava & Kemertelidze, 2016; Sheihets & Ishchuk, 2019). The images used in visual communication aid in entertaining, enlightening, persuading, and informing the audience. In human consciousness, the visual side is sometimes more effective than the content side. Furthermore, it is one of the most important and ancient ways of sharing information using different visual means such as signs, symbols, and images. For example, when language was not invented, cave paintings, which were drawn or etched into cave walls, acted as the most significant way of communication between our ancestors. From then on, people started to use this unique method to communicate with each other. After many changes, people have now entered the 21st century, and still, images play an incredible and extraordinary role in visual communication. Visual communication now drives our daily lives.

Communication began with cave paintings and pictograms, evolving into methods like carrier pigeons and organized postal services for long-distance message delivery. Innovations like paper and newspapers furthered the spread of information. Later, technological breakthroughs such as Morse code, the telephone, and TV broadcasts revolutionized communication, leading to the

internet and platforms like Facebook and Twitter, transforming global connectivity. Fig. 1.2 illustrates how communication and sharing have changed over time.

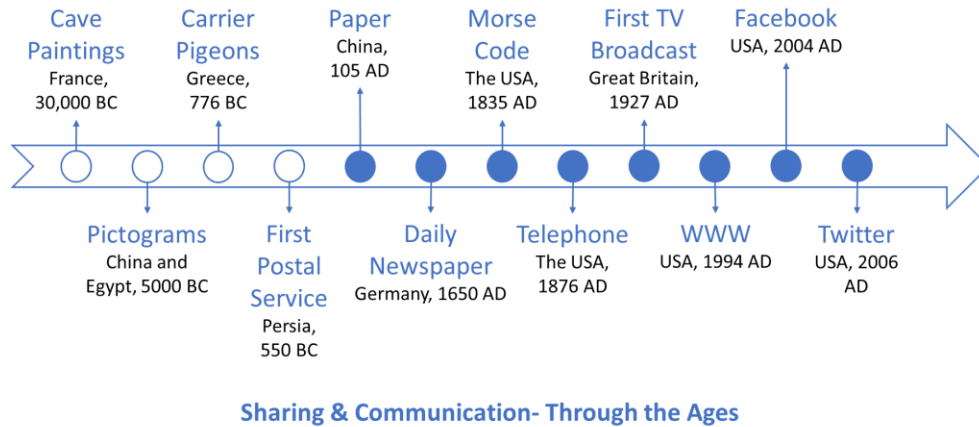
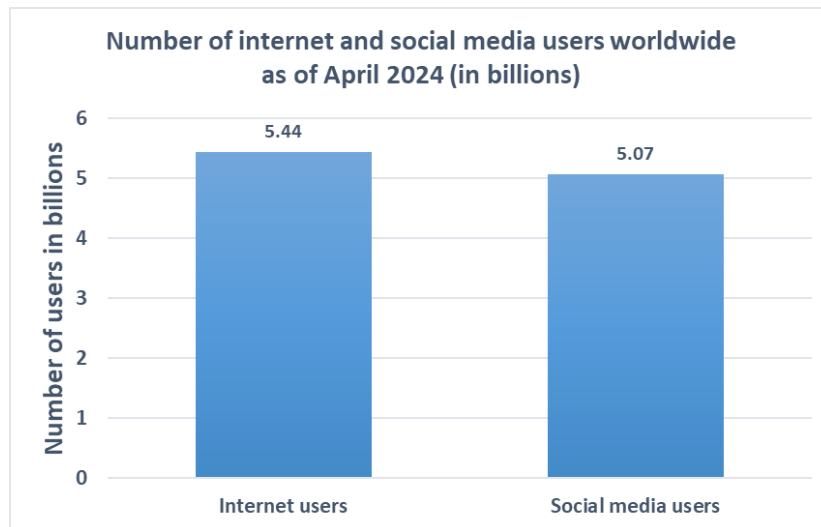


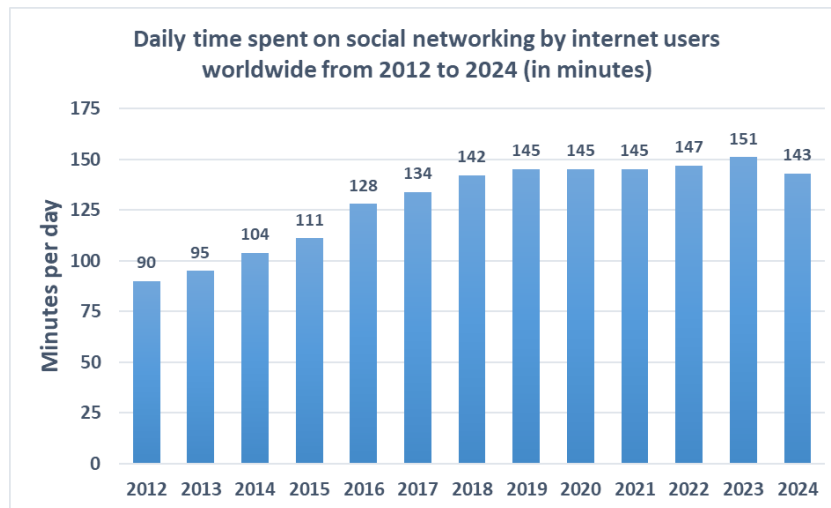
Fig. 1.2 Sharing and communication – through the ages.

1.3.2 SOCIAL MEDIA AND INTERNET MEMES

Visual communication is everywhere, online and offline, but social media's popularity and daily exposure have made it more important than ever. It has made visual communication a daily part of our lives (Adami & Jewitt, 2016). Social media serves as a major platform for communication, interaction, and information exchange in the digital age. It enables users to create, share, and engage with content instantly across diverse communities. People use social media platforms like Facebook, Instagram, LinkedIn, and Twitter every day (Alalwan et al., 2017). Social media platforms are some of the most popular ways to get information throughout societies and the world because they are easy and cheap to use, and have many registered users (González-Padilla & Tortolero-Blanco, 2020; Whiting & Williams, 2013). Its interactive nature has made it central to social connectivity and awareness. There were 5.44 billion internet users worldwide and 5.07 billion social media users by April 2024, and the average daily social media usage of internet users worldwide amounted to 143 minutes per day, as shown in Fig. 1.3 (a), (b). (Statista, 2024).



(a)



(b)

Fig. 1.3 (a) Number of internet and social media users worldwide as of April 2024 (in billions), (b) Daily time spent on social networking by internet users worldwide from 2012 to 2024 (in minutes). Source: Statista 2024

1.3.3 FROM THE CONCEPT OF THE MEME TO INTERNET MEMES

The newest forms of media have established internet memes, and the rise of digital media, most notably social networking sites (SNS), has provided a platform for creating, replicating, and distributing memes (Brubaker et al., 2018). An internet meme is a term that most frequent users of popular social media platforms should be well familiar with. Nonetheless, the term “meme” is not a recent invention by social media users. The term “meme” was first used

in 1976 by biologist Richard Dawkins in his book “The Selfish Gene.” Dawkins condensed the Greek word *mimema*, which means “something which is imitated,” to rhyme with “gene.” (Dawkins, 2016). As part of his larger effort to apply evolutionary theory to cultural change, Dawkins defined memes as “small cultural units of transmission, analogous to genes, that spread from person to person by copying or imitation.” Examples of memes include cultural artifacts such as melodies, catchphrases, and clothing fashions, as well as abstract beliefs (for instance, the concept of God) (Börzsei, 2013). For this initial concept of meme, Dawkins (1976) proposed three main characteristics: (a) fidelity (the meme can be readily copied and transmitted from person to person without significant alteration in shape or format), (b) fecundity (a high rate at which the information is copied and spread), and (c) longevity (the capacity of the meme for survival in a chained spreading process). From this initial idea of meme, replicating pieces of information that spread through the internet through user-to-user(s) communication have been labeled similarly: internet memes. This is not surprising since these memes do share some properties initially ascribed to memes in general (Davison, 2020; Dawkins, 2016). As a theoretical concept in the digital age, memes have been examined by researchers in various ways: as content presenting ideas, as well as variables to understand the dissemination of online cultural content. However, the definition of a meme remains debated, as meme formats and transmission patterns can vary widely. Limor Shifman has conducted extensive research on digital memes from the perspective of journalism and communication. According to Limor Shifman, the core issue in studying memes is defining exactly what a “meme” is. Richard Dawkins originally described memes as units of cultural transmission or imitation, which could include ideas, texts, and practices. Since then, scholars have debated this definition, leading to three main perspectives:

1. Mentalist-driven memetics is based on the differentiation between memes and meme vehicles. It was advocated by leading scholars in the field, such as Dawkins himself (in his 1982 clarification of the theory), Daniel Dennett, and Aaron Lynch. According to this school of thought,

memes are ideas or pieces of information that reside in the brain. They are not simple ideas, but complex ones, such as ideas of the alphabet, chess, or impressionism. In order to be passed along from one person to another, memes are “loaded” on various vehicles: images, texts, artifacts, or rituals. In other words, memes are idea complexes, and meme vehicles are their tangible expressions.

2. Behavior-driven memetics sees memes as behaviors and artifacts rather than ideas. In the behaviorist model, the meme vehicle and the meme itself are inseparable: the meme has no existence outside the events, practices, and texts in which it appears; that is, it is always experienced as encoded information.
3. Inclusive memetic approach, represented by Susan Blackmore in *The Meme Machine*, uses the term “indiscriminately to refer to memetic information in any of its many forms; including ideas, the brain structures that initiate those ideas, the behaviors these brain structures produce, and their versions in books, recipes, maps, and written music” (p. 66); that is, any type of information that can be copied by imitation should be called a meme. However, this inclusive approach may lack analytical power, as it assembles very different elements under its large conceptual tent (Blackmore, 2000).

Shifman's definition of the Internet meme differed slightly from Dawkins' initial definition. Shifman (Shifman, 2014) defines an ‘Internet meme’ as “(a) a group of digital items sharing common characteristics of content, form, and/or stance, which (b) were created with awareness of each other, and (c) were circulated, imitated, and/or transformed via the Internet by many users.” She also differentiates viral content from memetic content. She claims that viral content “is defined here as a clip that spreads to the masses via digital word-of-mouth mechanisms without significant change.” In contrast, memetic content is “... a popular clip that lures extensive creative user engagement in the form of parody, pastiche, mash-ups or other derivative work (Shifman, 2011, 2012, 2013, 2014).

1.3.3.1 History of internet memes

The earliest and maybe the first internet meme was “emoticon :-)”. It was discovered on 19 September 1982 on Carnegie Mellon University’s online bulletin board to flag humor by Scott E. Fahlman. An emoticon is a “sideways smiley face” made up of entirely punctuation marks. These emoticons contribute emotional meaning to a text in a minimalist form and can be very quickly used for possible meaning in the communication process (Beskow et al., 2020; Börzsei, 2013; Davison, 2020; Kostadinovska-Stojchevska & Shalevska, 2018; Zhang & Pinto, 2021). In 1997, the website “Bert Is Evil” was created by Filipino artist and designer Dino Ignacio, which collects “documents and images that show that Bert (a character from Sesame Street) is evil. This website was considered an example of the first modern remixed Internet meme (Fig. 1.4a). Ignacio created all of the images in which Bert is photoshopped into existing photographs, depicting him in incriminating situations (Börzsei, 2013; Zhang & Pinto, 2021). In 1998, Deidre LaCarte, a Canadian art student, made a GeoCities-hosted website called “Hamster Dance” as part of a contest with a friend to see who could generate the most online traffic. The website consisted of row upon row of animated GIFs, each one depicting a hamster dancing with a distorted 9-second audio loop (Fig. 1.4b) (Davison, 2020).

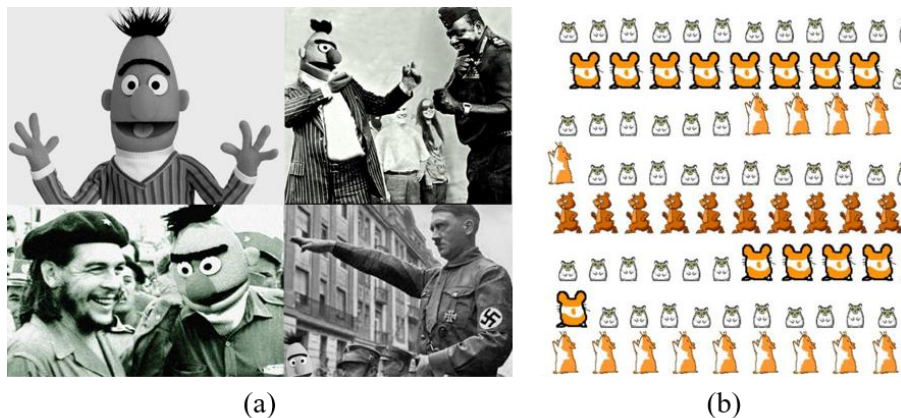


Fig. 1.4 (a) Bert and some compromising pictures, (b) The hamster dance (an example of early memes)

The term "Web 2.0" was coined in 1999, and as technology advanced, the current landscape of the Internet evolved, and that effect showed on the Internet memes as well. At the time, Mahir's first personal website, where he introduced

himself in bad English and posted domestic pictures of himself, became widespread on the internet, and also, advertising companies pioneered viral marketing. In the early 2000s, the “All Your Base Are Belong to Us” meme was the badly translated opening sequence of the arcade shooter game Zero Wing, later manipulated (remixed) many times by Photoshop. An image macro is a common example of a modern internet meme. An image macro is a piece of digital media consisting of an image or piece of artwork with text superimposed. Image macros are one of the most prevalent forms of internet memes, and they frequently include a witty message or catchphrase, though not all image macros are necessarily humorous. The text frequently appears at the image's top and bottom. Some image macros involve the addition of the same text to multiple images, while others involve the addition of unique text to a single image (Dynel, 2016; Oliveira et al., 2016; Wiggins & Bowers, 2014; Yus, 2019). In the mid-2000s, alongside domestic photographs of people, a large number of pet photos were uploaded. There are countless sub-memes within the image macro meme, such as Advice Dog, LOLcats, FAIL, and demotivators (Marwick, 2013). In the late 2000s, Rage Comics, in which stereotypical stock characters were created with simple drawing software, FFFUUUU Rage Guy, appeared on 4chan in 2008 in short comics form. Later on, on Reddit, people could upload their comics, and soon a great number of new characters were introduced, such as Forever Alone Guy, Trollface, “YUNO” Guy, and Cereal Guy. Starting from the late 2000s, however, online meme culture has seen a continuous increase in more localized Internet memes. Remixed memes also showcase this change, as seen in the memes that talk about celebrities and mainstream popular culture. People often turn to popular culture and humor to find answers to societal dilemmas, and in the early 2010s, the Internet meme was one of the ways people addressed such issues. Their nature and virality made Internet memes a fitting genre to express opinions, encourage participation, and stand up for a cause.

The aforementioned meme examples (image macro, reaction memes, rage comics) are considered Static memes, which are essentially designed templates or pictures with funny captions (Kumar, 2020). A static meme indicates the

mood of the image with funny captions, quotes, and other witty one-liners. Due to a low-cost and effective way to cover any promotional idea, these were used in public institutions, organizations, and social awareness campaigns.

An example of an internet meme related to mental health is shown in Fig. 1.5. The internet meme is represented by a still image from the Bollywood movie 3 Idiots, from the iconic scene where at a speech on teachers' day from Chatur Ramalingam as Silencer, written by Dubey Librarian, where Rancho replaces words. When Viru Sahastrabuddhe told Raju Rastogi to study like Chatur, Raju thought that he had to memorize things like him. So, Rancho planned to give him a demo that doesn't cram blindly, and doesn't memorize without understanding. As the character Chatur Ramalingam, as Silencer says, "hota sabke pass h, sab chupa ke rakhte h, deta koi nahi!!". Culturally, this image has been adapted to have the underlying goal of communicating a task that is the Indian education system's emphasis on memorization over understanding, but usually in a humorous manner. Retaining the partial quote "hota sabke pass h, sab chupa ke rakhte h" The added text, i.e., "Mental health problems in India be like:" provides the concept being communicated by the meme author. Here, specific to mental health, the internet meme highlights how mental health issues are common but often hidden due to stigma in Indian society. Using a popular movie quote, it emphasizes the lack of open discussion or help-seeking despite widespread struggles.



Fig. 1.5 Example of an internet meme related to mental health from social media platforms

Today's Internet memes, or contemporary memes, can be roughly divided into two groups. A study of YouTube memes by Shifman distinguishes between “viral videos” (for instance, the video for Korean pop star Psy’s “Gangnam Style,” which was a huge hit in his home country and became a worldwide phenomenon on the Internet) and “memetic videos,” which spur “extensive creative user engagement in the form of parody, pastiche, mash-ups or other derivative work” (Grundlingh, 2018; Malodia et al., 2022). These memes are nearly identical to static memes in design and process, but differ in content. While static memes are concentrated on images, “memetic videos or Video Memes” are centered on video clips, bytes, or any other type of video information (Kumar, 2020). Although video-based memes appear sophisticated, they are simple to create with the right platforms and video editors (Xie et al., 2011).

1.3.3.2 Characteristics, typology, and format of internet memes

Based on the literature, seven meme characteristics: fidelity, fecundity, longevity, meme fitness, ease of coping and translation, distinctness, and humor, five topologies: social commentary, absurdist humor, otaku or manga fandom, cohesive vs non-cohesive, and format as shown in Fig. 1.6, adapted from (Malodia et al., 2022) with adjustments to labels and formatting to align with the study's scope.

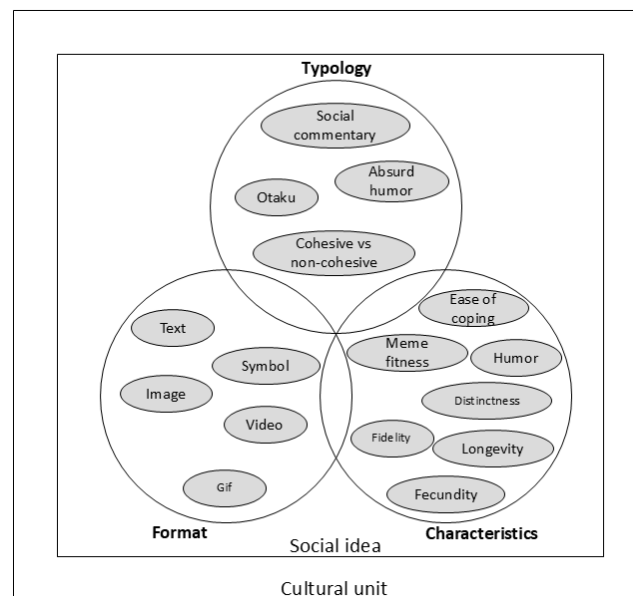


Fig. 1.6 Characteristics, typology, and format of internet memes.

1.3.4 INTERNET MEMES AS A COMMUNICATION TOOL

Internet memes were used as a tool for commentary, awareness, and activism on topics such as political movements, environmental concerns, and societal norms (Raj & Jayaprakash, 2021). Several studies aligned with the notion that internet memes serve as powerful communicative tools, capable of addressing complex societal issues in a format that resonates with a wide audience. One of the studies examined how environmental issues are communicated through English-language internet memes and explored the linguistic and pragmatic features of these memes, focusing on how they employ humor, irony, and other rhetorical strategies to engage audiences with environmental messages (Pavlova, 2023). A similar study explored the role of internet memes in influencing public engagement with climate change issues, and the findings highlighted the potential of memes as low-barrier, shareable content to inspire civic participation and awareness in addressing societal challenges like climate change (Zhang & Pinto, 2021). One of the studies highlighted the use of humor, irony, and relatability in internet memes to communicate serious messages about sustainability and the environment, especially in a way that resonates with younger people (Elgaaied-Gambier & Mandler, 2021). However, one of the studies demonstrated that internet memes are a powerful form of communication that can address complex and sometimes controversial topics, such as religion. It reinforced the idea that internet memes are not only humorous content but also effective tools for social commentary and dialogue, using humor and visual elements to communicate ideas and provoke thought (Aguilar et al., 2017).

Furthermore, Internet memes were employed to convey political messages and narratives, making them powerful tools for communication (Beskow et al., 2020; de Saint Laurent et al., 2021; Kulkarni, 2017; Martínez-Rolán & Piñeiro-Otero, 2016; Rastogi & Kashyap, 2019). In addition, one of the studies explored the use of political comic memes through a semiotic lens, focusing on how visual and textual elements combine to communicate political messages. It highlighted the role of internet memes in facilitating public discourse and shaping political ideologies, making them significant tools for communication

in contemporary society (Mubarak & Aayid, 2022). Furthermore, internet memes are used to convey brand messages in a fun and engaging way, making them more appealing to younger audiences (Fauziah et al., 2019). Additionally, they are not only a form of digital communication but also an influential tool used in strategic communication, particularly in marketing contexts (Arroyo-Almaraz & Díaz-Molina, 2021; Csordás et al., 2017; How, 2022; Kee-Man Chuah et al., 2020; Malodia et al., 2022; Sharma, 2018; Sirimarco Bara & Magano, 2021; Yang & Hayashi, 2021). In addition, internet memes were effective communication tools, extending their utility beyond entertainment to education and cross-cultural engagement (Brown, 2020; Maples, 2023; Sedliarova & Solovyeva, 2020; Wells, 2018). In addition, internet memes allowed individuals and groups to articulate aspects of their identity, including cultural and social affiliations, through humor and shared understanding (Yus, 2018).

1.3.5 THE IDEA OF MENTAL HEALTH AMONG COLLEGE STUDENTS

In recent years, college students' mental health has become a significant issue and topic of research (Pedrelli et al., 2015). Mental health problems are very common among college students (Blanco et al., 2008). This could be attributed to the fact that attending college or university corresponds to a challenging time for many college-going students. During the formative years, stress, anxiety, depression, and suicide are common issues, typically due to academic failures, high work demands, relationship issues, and separation from their family of origin (Cherian et al., 2024). There are strong and reliable studies from all across the world showing college or university students are more likely to experience anxiety, depression, and use of substances. A series of surveys in 19 colleges in eight countries (Australia, Belgium, Germany, Mexico, Northern Ireland, South Africa, Spain, and the United States) were given to first-year college students as part of the WHO WMH-ICS project. At least one-third of the college students who took part in the questionnaires stated that they had previously experienced one or more of the mental illnesses that were covered (Auerbach et al., 2018). Similar outcomes have been reported from several Indian states (Jaisoorya, 2021; Jaisoorya et al., 2018; Pedrelli et al., 2011; TS et al., 2017).

The highest onset of the majority of mental health disorders occurs during young adulthood. 75% of those who will experience a mental health issue have experienced its initial beginnings by the time they are 25 years old (Kessler et al., 2007). Anxiety disorders affect 11.9% of college students, making them the most common mental issue (Blanco et al., 2008). The median age of onset for social phobia is between 7 and 14 years old, but the development of panic disorder, generalized anxiety disorder (GAD), and post-traumatic stress disorder (PTSD) is slightly later, among the anxiety disorders (Pedrelli et al., 2015). In a population sample of adolescents, the greatest risk period for having PTSD was 16-17 years, with almost one-third developing the disease by the age of 14 (Giaconia et al., 1994). The mean age of beginning for obsessive-compulsive disorder (OCD) was 19 years old, and for generalized anxiety disorder (GAD), it was 20 years old, according to a national mental health survey that looked at 6,616 respondents (Giaconia et al., 1994). Therefore, Students with PTSD may experience symptoms before college, while those with GAD and OCD may develop symptoms throughout college. Depression is another prevalent mental health issue among college students, with prevalence rates ranging from 7% to 9% (Blanco et al., 2008; Pedrelli et al., 2015). More than half of all depression cases began in childhood, adolescence, or early adulthood (Zisook et al., 2007). Bipolar disorder's (BAD) onset seems to follow a similar pattern. Roughly 3.2% of college students fit the BAD requirements. Research indicates that most adults with BAD develop the illness during childhood or adolescence, with at least one-third experiencing it before the age of 12 (Perlis et al., 2009). Despite not having a particular diagnosis, suicide is the third most common cause of death for young adults and a major issue for college students (Pedrelli et al., 2015). Since depression is one of the main risk factors for suicide in this age range (Farabaugh et al., 2012), screening techniques are essential to detect and include students who are experiencing suicidal thoughts, as many of them do not seek treatment. Recognizing these ideas is essential for addressing challenges and promoting awareness.

1.3.6 MENTAL HEALTH AWARENESS AND MEDIA

Media have been found to promote help-seeking and positive coping skills and advance knowledge via educational websites, stories of lived experience, and interviews with experts (Arendt et al., 2017; Till et al., 2018). Media coverage can also raise public awareness, alleviate stigma, and correct misinformation and stereotypes (Arendt et al., 2017; McTernan et al., 2023). Various traditional media platforms (such as television, websites or webpages, posters or print advertisements, billboards, ads in newspapers, and movie theatre Public Service announcements) have been used for mental health campaigns, more specifically for anxiety, depression, and self-harm for young people, to increase knowledge, raise public awareness, reduce stigma, and correct misinformation and stereotypes (Arendt et al., 2017; Carli, 2016; Halsall et al., 2019; Jenner et al., 2010; McTernan et al., 2023; Thompson et al., 2020; Zenone et al., 2020). However, digital platforms, including social media, can be efficient tools for sharing information and promoting health-related behaviors. Young people regularly use social media accounts to share information and get updates, which helps them become more aware of health conditions and has altered how they behave in daily life toward their own health and the health of others. Social media platforms such as Facebook and Instagram in various campaigns have been utilized to promote mental health campaigns since they can quickly reach a large number of people (Hill & Hayes, 2015; Horrell et al., 2019; Latha et al., 2020; Loft et al., 2020; Mora et al., 2023).

1.3.7 INTERNET MEMES AND MENTAL HEALTH AWARENESS

Recently, a significant proportion of mental health memes have been seen on pages, groups, and forums dedicated to the dissemination of content related to the symptoms of mental health disorders such as depression, anxiety, suicidal ideation, and stress and these pages, groups, and forums have a diverse user base including young people (Hong & Low, 2024). Limited exploration has been done in this area. Research suggests that internet memes related to endangered species are effective in generating interest and raising awareness to promote conversation (Lenda et al., 2020). One of the studies examined how the Bird of the Year campaign uses internet memes to raise awareness of endangered

wildlife, and the findings show that light-hearted memes can operate for consciousness-raising (Fraser et al., 2022; Lenda et al., 2020). Some studies employ online communication tools, such as mental health memes, to assess sensitivity to mental health issues (Gupta et al., 2021), while others suggest that mental health memes are used as a coping method (Akram & Drabble, 2022; Myrick et al., 2021; Parsons et al., n.d.; Weiser & Alam, 2022), depressive internet memes are more humorous or relatable to those who experiencing these symptoms (Akram et al., 2020, 2021). However, to date, there has been no study conducted on the effectiveness of mental health memes as tools for mental health awareness among young people, especially college and university students. Further research on the effectiveness of internet memes as tools for mental health awareness is essential.

1.4 FOCUS AREA

In the context of communication, traditional media have long been a powerful tool for disseminating information to the public. Newspapers, television, and radio have been the primary sources of information, especially for raising awareness on various social issues, including mental health. However, with the advent of the digital age, social media platforms have emerged as a dominant force, transforming the way information is shared and consumed. It has become an essential space for engagement, particularly among young people who are highly active on social media platforms. Within this social media landscape, internet memes have emerged as a unique communication tool. Internet memes, often characterized by humorous or relatable content, are shared widely across digital platforms. They have become a versatile medium for conveying messages, including those related to social awareness campaigns.

The study focuses on the Indian context, which will be central to understanding the role of internet memes in raising awareness about mental health issues. This research specifically focuses on Indian social media accounts and pages, chosen to align with the cultural context of the target audience. The internet memes selected for this study will be primarily static and will adhere to popular meme formats commonly used in Indian digital culture. The internet

memes will be chosen for their ability to convey messages related to mental health, addressing issues such as anxiety and depression.

The target audience for this study comprises young people, especially college and university students, a group that is particularly active on digital platforms and highly engaged with meme culture. This demographic is also more likely to experience mental health challenges due to the academic and social pressures they face. The study will explore how mental health memes, through their visual and textual components, can both inform, engage, and aware this audience, fostering a more open dialogue about mental health in a society where such conversations are often stigmatized.

1.5 RESEARCH QUESTION

Based on the above brief literature review (from various sources), the following research questions have come to the fore:

1. How are internet memes currently being used to raise social awareness about societal issues?
2. What are the key characteristic features associated with mental health memes shared on online platforms?
3. What are the emergent themes and categories of mental health memes addressing mental health issues?
4. What is the effectiveness of mental health memes in raising social awareness related to mental health issues among college and university students?
5. What is the relationship between exposure to and engagement with mental health memes and the level of awareness about mental health issues among college and university students?

The above sets the focus for the current study and hypotheses, which are outlined on the following page.

1.6 HYPOTHESIS

Internet memes significantly contribute to raising awareness about mental health issues among young adults by serving as an effective and engaging tool for social awareness campaigns.

1.7 AIM AND OBJECTIVES

The study aims to investigate the use of internet memes to raise social awareness about societal issues, with a specific emphasis on mental health, particularly among college and university students in the Indian context.

Objectives- Towards achieving the aim, the following objectives are chosen to study:

1. To understand and explore the present scenario of internet memes in social awareness for societal issues.
2. To identify the key characteristic features and emergent themes or categories related to mental health memes on online platforms.
3. To examine the effectiveness of mental health memes in raising social awareness related to mental health issues among college and university students.

1.8 STUDY DESIGN

Mixed-method research is currently seen as one of the main research approaches that defines the modern way of doing research (Giddings & Grant, 2007; Johnson et al., 2007). Creswell crafted a leading definition of the mixed method approach and referred to it as “research in which the investigator collects and analyses data, integrates the findings, and draws conclusions using both qualitative and quantitative approaches or methods in a single study or a program of inquiry” (Creswell & Tashakkori, 2007). In addition, understanding the importance and advantages of both qualitative and quantitative methods while doing mixed methods is paramount because everything done is in relation to the two methods (Anguera et al., 2018).

This study adopts a mixed-methods approach (Kasirye, 2021) with a sequential nature to explore how internet memes raise awareness about mental

health issues. The sequential nature of the design means that one phase of the study builds on the results of the other. The research follows a sequential exploratory design, meaning the qualitative findings inform the quantitative analysis (Deveci & Kavak, 2020; Hidalgo et al., 2020; Schmid, 2023) as shown in Fig. 1.7. Qualitative analysis through content analysis and semiotics identifies themes, characteristics, and key features of mental health memes (Chapter 3), while quantitative analysis employs statistical methods, such as regression analysis, to examine the relationships between meme exposure, engagement, and mental health awareness (Chapter 4). Combining qualitative and quantitative methods in this research is essential to provide a comprehensive understanding of how internet memes contribute to mental health awareness. By using both methods, the study bridges the gap between what internet memes communicate (qualitative insight) and how they impact awareness and engagement (quantitative evidence).

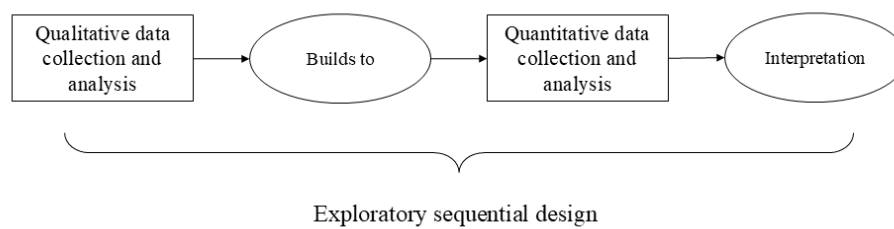


Fig. 1.7 Sequential exploratory mixed methods research design

The research process is conducted in sequential phases:

1. Phase 1 explored how internet memes were used across various contexts, and a detailed explanation is presented in Chapter 2. The study conducts a literature survey on the use of internet memes in advertising and political propaganda, acknowledging that significant research and work have already been done in these areas, and the focus of this survey is to synthesize and examine existing literature, highlighting key findings, trends, and insights, while situating this study within the broader context of prior research on the topic. Additionally, a quantitative, descriptive-comparative design (Johnson et al., 2018; Madani et al., 2013; Sinel'nikova-Muryleva et al., 2019) was employed in the promotion of

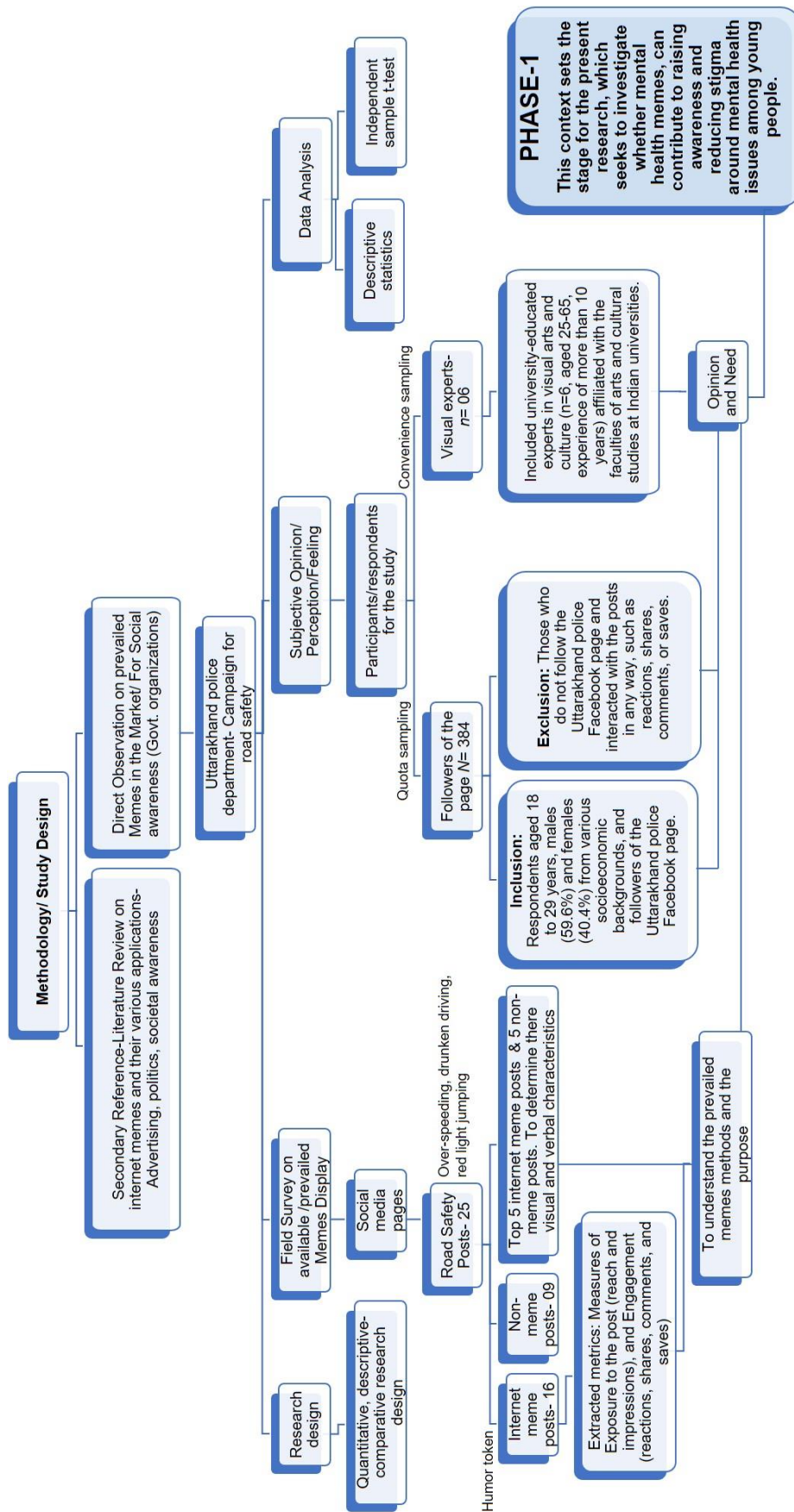
social awareness to understand the approach and effectiveness of the Uttarakhand police department's "Safety on the Roads" campaign, specifically focusing on the use of internet memes to raise awareness about road safety on its Facebook page. The study analyzed the design and implementation of the "Safety on the roads" campaign by the Uttarakhand police, specifically examining how internet memes address key road safety issues such as over-speeding, drunken driving, and red light jumping. It also explored page followers' perceptions and opinions regarding the visual and verbal elements of the internet memes shared on the Uttarakhand police's Facebook page and assessed how these elements contribute to the campaign's resonance with the public. It also compared the effectiveness of meme-based posts versus non-meme posts within the campaign, specifically evaluating differences in metrics (e.g., exposure-reach, impressions, and engagement) between humorous, meme-based content and traditional, informational content that focuses solely on safety tips and advice without humor. This phase laid the groundwork for understanding the characteristics of internet memes across different contexts or applications. The study design for Phase 1 is represented in Fig. 1.8 (a).

2. Phase 2 employed qualitative analysis, specifically content analysis and a semiotics approach, to identify themes and visual/verbal features of mental health memes, a detailed explanation presented in Chapter 3. We employed three steps in content analysis: first, we chose a data source and coded data, then identified similar patterns and developed categories, further generated themes, and last, interpreted or analyzed results. An inductive approach in which examination without pre-conceived notions or categories was employed (Mayring, 2000). Our study uses a social constructivist theoretical framework (Churcher et al., 2014; Mayring, 2000) that emphasizes the relevance of collaborative learning, as does other qualitative research on internet memes (Chagas et al., 2019; Herbenick et al., 2023; Iloh, 2021). Furthermore, based on the Gillian Rose framework, we used a visual semiotic approach to

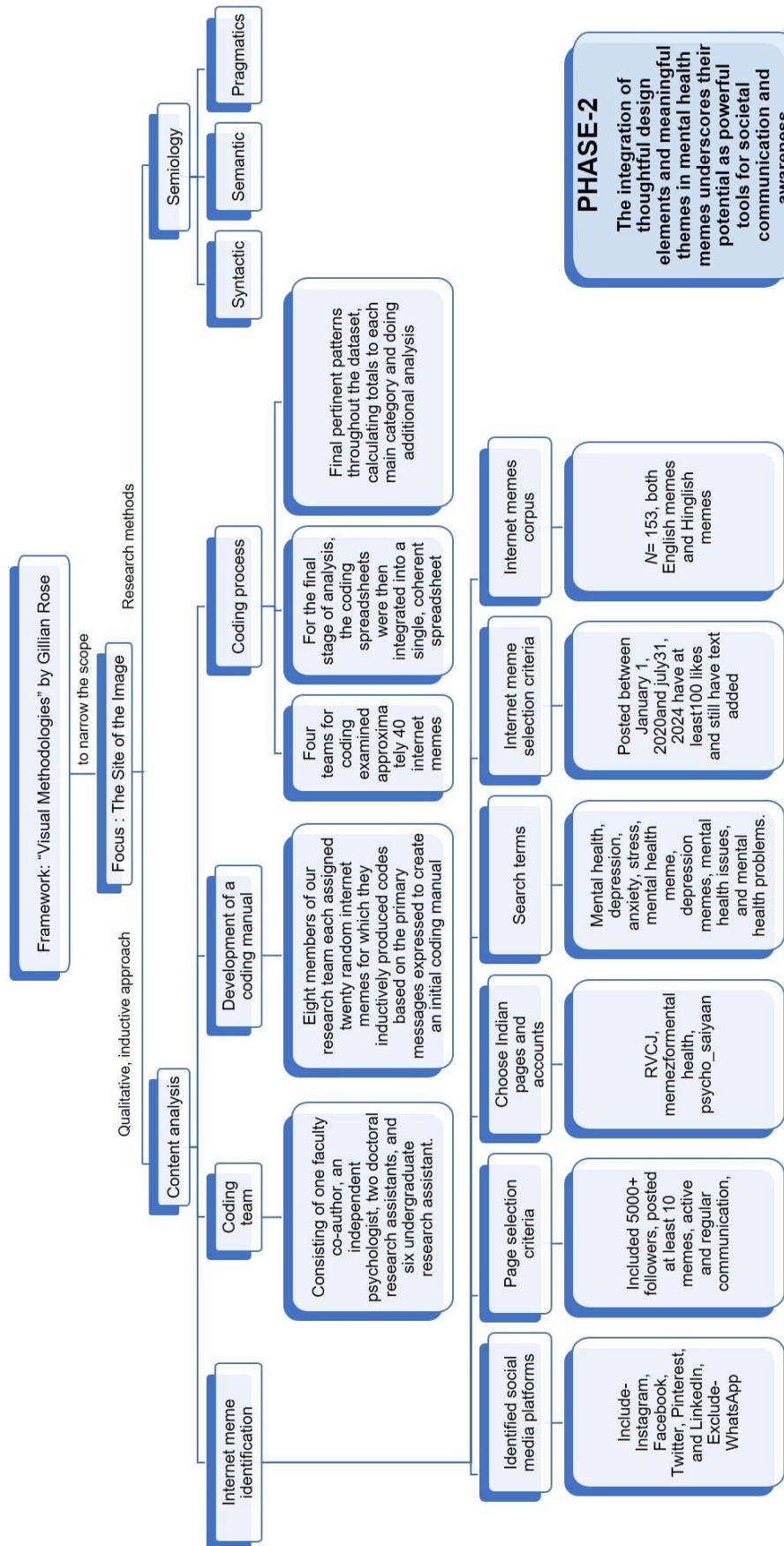
investigate internet meme design and the key features associated with it. Using semiotics, the analysis is divided into three sections: syntactic, semantics, and pragmatics. The syntactic approach has been used to understand the formal structure of the meme design and the structural relationship among the different elements. Semantics has been utilized to understand the meaning-making nature of differing elements, whereas pragmatics gives an understanding of the role of the context in the meme design development. The study design for Phase 2 is represented in Figure 1.8 (b).

3. Phase 3 employed quantitative research with two distinct approaches, a detailed explanation presented in Chapter 3.
 - i. Study one utilized a descriptive-correlational research design (Acebes-Sánchez et al., 2019; Bailey et al., 2010; Beauvais et al., 2014; Devi, 2023; Isabel Tan et al., 2021) to describe and analyze the relationship between exposure to and engagement with mental health memes and their effect on mental health awareness among college and university students.
 - ii. Study two applied a descriptive-comparative research design to evaluate the visual and verbal characteristics, likeability, shareability, and effectiveness in raising awareness of internet memes ($N=20$) related to mental health issues, selected from various categories.

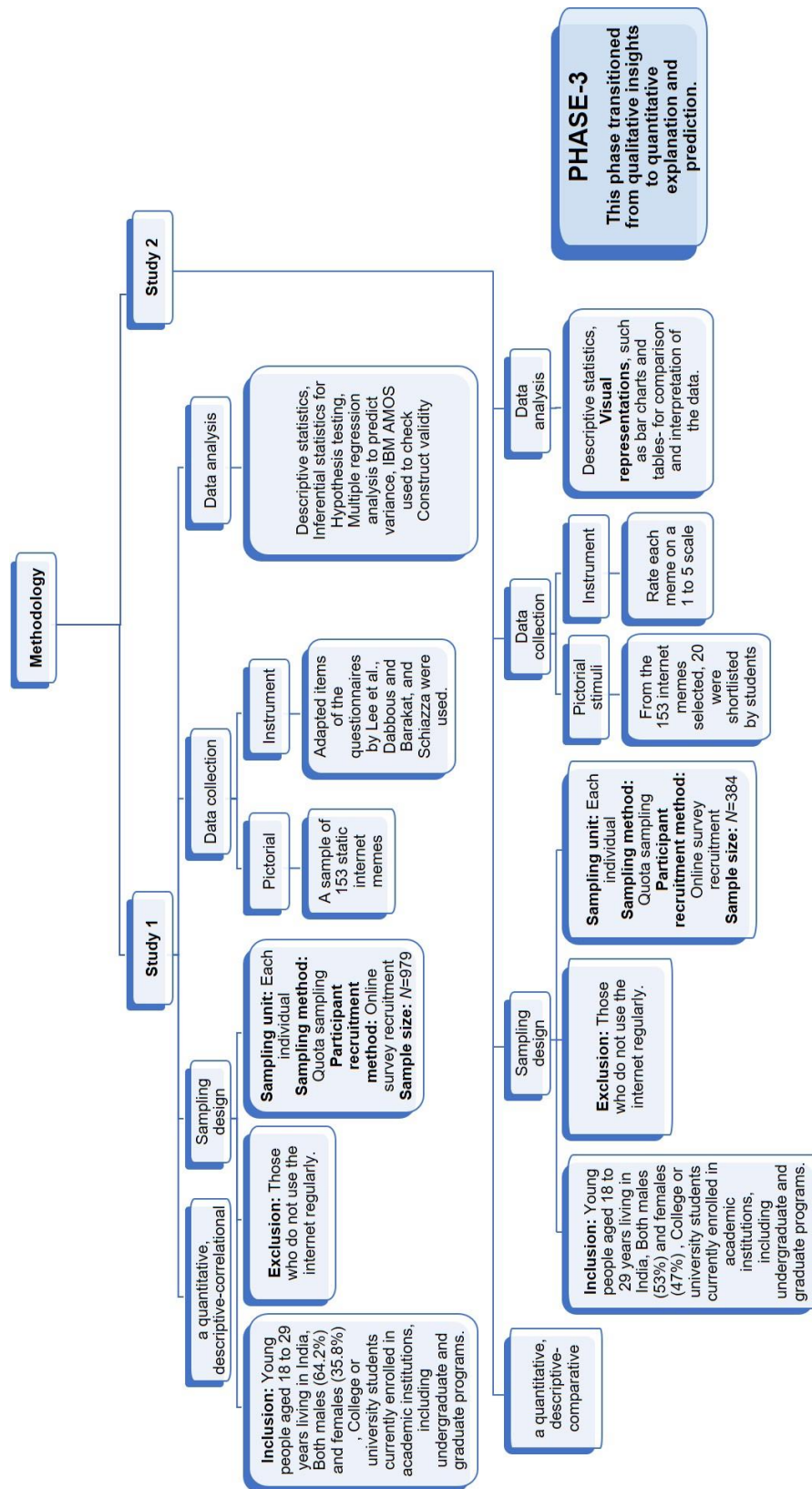
This phase of the research marked a methodological transition from the qualitative insights of the earlier stage to a structured quantitative explanation and prediction, allowing a deeper understanding of how internet memes function in terms of engagement and awareness, while also providing an empirical foundation for assessing their role as tools for social communication and awareness-building. The study design for Phase 3 is represented in Figure 1.8 (c).



(a)



(b)



(c)

Fig. 1.8 Study design framework (a) Phase 1, (b) Phase 2, (c) Phase 3.

1.9 THESIS LAYOUT

The study is presented in five chapters as briefed below.

Chapter 1: Internet memes in social awareness: Exploring their role in mental health awareness among young people

This chapter discusses the motivation for the study and highlights the channels through which the study is narrowed down to title “A study on the role of internet memes in raising social awareness with reference to the mental well-being of Indian college and university students.” It emphasizes that internet memes are used as a tool for commentary, awareness, and activism across a range of topics. It also underlines the research gap in the existing literature on memes related to mental health and stressed that there is a need for a systematic investigation to understand their role in mental health awareness among young people. Based on the gap, three objectives and related research questions have been proposed. The Study design section provides an overview of the mixed-method approach with a sequential nature used in this study.

Chapter 2: From advertising and politics to societal awareness: The transformative role of internet memes

This chapter outlines the evolving role of internet memes beyond humor, focusing on their use in marketing and advertising, politics, and social awareness initiatives such as the Uttarakhand police department's “Safety on the roads” campaign. It discusses how internet memes have transformed into persuasive tools that influence public opinion, shape narratives, and engage people on complex societal issues.

Chapter 3: A comprehensive analysis of characteristic features and categories of mental health memes

This chapter presents a comprehensive analysis of the characteristic features and categories of mental health memes. It examines the visual and verbal elements, like layout, text style, and imagery, that make these memes effective for communication. The chapter also classifies the memes into categories like positivity, relatability, humor, and self-care to understand their role in promoting mental health awareness.

Chapter 4: Mental health memes and their role in raising social awareness on mental health issues among college and university students

This chapter explores how mental health memes help to raise awareness among young people, particularly college and university students, by analyzing their exposure to and engagement with these memes. Using regression analysis, the chapter examines the relationship between meme interaction (exposure and engagement) and awareness levels. It also evaluates 20 selected memes based on their visual and verbal elements, likeability, shareability, and effectiveness in promoting mental health awareness.

Chapter 5: Conclusion and future scope

The final chapter serves to provide a concise summary of the research study, restating its purpose, objectives, and key findings. It highlights the major contributions and implications of the work, acknowledges its limitations, and suggests directions for future research. This chapter ties together the entire study, offering a reflective and forward-looking perspective on its significance and potential impact.

CHAPTER 2

FROM ADVERTISING AND POLITICS TO SOCIETAL AWARENESS: THE TRANSFORMATIVE ROLE OF INTERNET MEMES

2.1 INTRODUCTION

In today's digital landscape, internet memes have emerged as a powerful and pervasive tool for communication, transcending their initial role as simple humorous images or videos. They have evolved into a prominent medium that influences public discourse and culture, addressing everything from light-hearted humor to significant societal issues.

Internet memes have found unique applications across various domains. In advertising, brands use internet memes to create relatable content that resonates with younger people, engaging them in an informal way that promotes brand awareness and loyalty. Political groups and movements have also leveraged internet memes as forms of political propaganda, simplifying complex ideas, influencing public opinion, and rallying support for causes. Beyond commercial and political uses, internet memes have also proven to be valuable tools for societal awareness, where organizations and individuals employ them to address pressing issues such as environmental responsibility, road safety, cybercrime, women's safety and consent, and health (Fig. 2.1). Given their influence, this chapter will explore the current scenario of internet memes in promoting social awareness, particularly focusing on their effectiveness in addressing societal issues. By examining examples across advertising, political campaigns, and public awareness efforts (including campaigns by the Indian police department), this chapter will highlight how internet memes have become a crucial element in modern communication strategies.

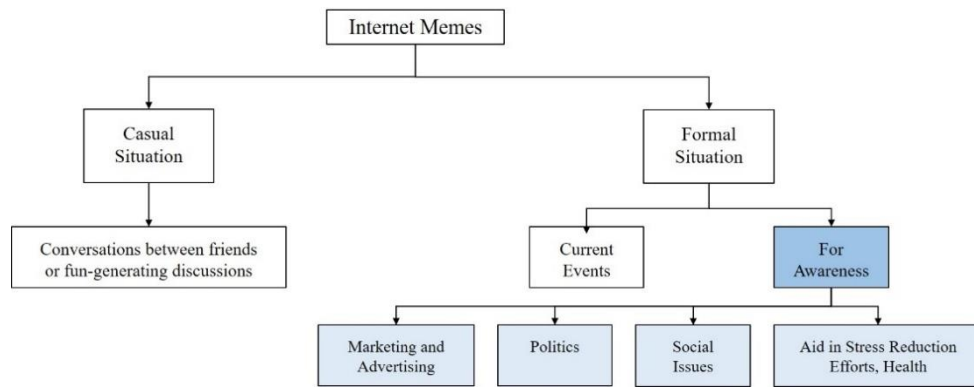


Fig. 2.1 A schematic representation, in the form of a block diagram, that visually illustrates the presence and utilization of internet memes across different contexts.

2.1.1 LITERATURE REVIEW

The literature review discusses the use of internet memes in advertising, political propaganda, the impact of memes on society and societal awareness, and the use of internet memes by police departments.

2.1.1.1 Internet memes in advertising

Internet Memes on the internet are today's most effective social media weapon. Internet memes are used not only in casual situations, such as conversations between friends or fun-generating discussions, but also in formal situations, such as closer connections between brands and consumers via social media. Memes as a form of brand communication or meme marketing are the use of meme formats, such as humorous photos, GIFs, and videos to promote your brand and products (Yang & Hayashi, 2021). Memes have the potential to alter brand perception among consumers (Vasile et al., 2021). Furthermore, the most important thing is that the meme elements are relevant to your brand and tickle your audience's funny bone.

Nowadays, marketers use popular or funny memes that are already refreshing, relatable, and have the potential to go viral to promote their brands or products. Marketers and brands must determine the appropriate occasion or moments to adapt memes for their own marketing or promotions (Sharma, 2018). Bury has discussed the use of creativity in memes for advertising in the form of image and phrase juxtaposition to create humor. Marketers use memes to grab the attention of their target audience (Bury, 2016). Popular topics and characters are used as meme elements by some marketers (Chowdhury &

Chakraborty, 2021). Also, eye-catching memes elicit a positive response from buyers. Meme marketing is more than just creating and posting memes; the emphasis should be on the quality of the meme page as well as being a part of or aware of the meme culture. Furthermore, marketers must be familiar with and understand how the meme world works. Meme-based marketing has some drawbacks as well. Traditional media-based marketing allows for tight control of the message, whereas with meme-based marketing, the brand may struggle to maintain control of the message (Sharma, 2018). Many brands, such as major food delivery apps and fashion e-commerce companies from India, use memes as a form of brand communication. However, they have yet to fully realize the potential of meme marketing. Here are some examples of brand communication memes (Fig. 2.2).

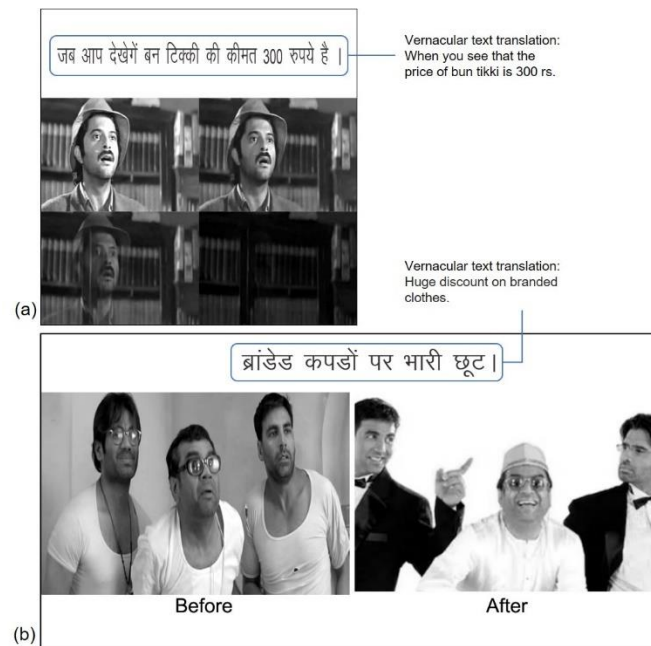


Fig. 2.2 Examples of brand communication memes: a When you see bun tikki costs rupees 300; b Huge discounts on branded fabrics

2.1.1.2 Intrenet memes in pololitical propaganda

Memes are widely used in political contexts due to their ability to synthesize an idea, circumstance, or expression. Furthermore, internet memes can effectively convey complicated political facts in a concise format, engaging audiences (Martínez-Rolán & Piñeiro-Otero, 2016). Mixed results have been observed in several studies that have investigated the influence of political memes on user

engagement. Although some studies indicate that political memes substantially increase engagement by simplifying complex issues and encouraging participation through humor and relatability. One of the studies reported on the role of memes during political campaigns during the 2017 UK general election, which employed a combination of metadata and content analysis. The findings suggest that citizens were the most common meme creators. The sample had nearly half a million shares, indicating a high level of engagement with memes. Furthermore, one of the studies suggests that online memes can effectively convey messages in a visual format, highlighting the importance of visual content in cyberspace. These memes can connect playful interpersonal practices on social media with critical awareness of political issues (Dewi et al., 2017; Sreekumar & Vadrevu, 2013). However, other studies have found limited engagement, particularly when the information lacks emotional or ideological relevance. A discourse analytical approach is used to investigate the visual-discursive characteristics of Internet memes in connection with Donald Trump and Hillary Clinton, the 2016 U.S. presidential contenders, and the data shows that the focus is on how memes attempt to create a negative image of the candidates and undermine their legitimacy as presidential contenders (Ross & Rivers, 2017). Similarly, during election campaigns, most political parties post memes against opposing parties in order to raise awareness or have a negative impact on the public's perception of other parties (Chitra, 2021). Some of the studies reported that internet memes are utilized for political debate but have little impact on audiences (Kulkarni, 2017); the level of policy information in memes was low, indicating that they are unlikely to improve political expertise (McLoughlin & Southern, 2021). Furthermore, political memes have frequently been used as strategic tools to create or maintain bad impressions of political candidates, typically employing stereotypes, sarcasm, or misinformation to affect public perception and opinion.

These findings indicate that political memes function as digital political propaganda tools, shaping narratives, reinforcing biases, and influencing public opinion, in addition to promoting humor and engagement. This is frequently

achieved through nuanced and persuasive methods that compromise the distinction between entertainment and ideological messaging.

2.1.1.3 The impact of internet memes on society and societal awareness

Internet memes are media forms that convey a message in a humorous manner while also commenting on society. Internet memes provide satirical commentary on current events (Nandi et al., 2022). Internet memes can be used in a variety of contexts, including marketing and advertising, politics, aiding stress reduction efforts, cultural education tools, awareness, and so on. The impact of internet memes on society is mixed. The vast majority of its societal consequences are favorable. Internet memes are more popular among young people, and they are a popular tool for social media communication as well as a dominant medium for social discussion in a humorous manner. “Internet memes have become a stand-alone mechanism to change the youth into societally responsible individuals” (Raj & Jayaprakash, 2021). Climate change memes primarily focus on the risks that animals and humans face as a result of climate change. Individual intentions for online civic engagement in climate change are increased by exposure to climate change memes. As a result, internet memes have the potential to address both humorous and serious social issues (Zhang & Pinto, 2021). During the pandemic, many popular internet memes were spread across the internet, and viewing these internet memes generates psychological responses such as stronger cuteness responses, higher levels of reported humor, more positive emotions, and lower levels of information processing. As a result, internet memes have the potential to influence people's COVID-19 stress and coping efficacy (Myrick et al., 2022). Internet memes are used to communicate political satire, but they have no effect on people's voting behavior, political opinions, or ideologies. Memes are thought to have been created for the purpose of entertainment (Kulkarni, 2017). Internet memes are typically thought of as humorous and entertaining items in social communication, but they are also used in secondary education to develop social and cultural awareness. In L2 (language 2) teaching, internet memes are used as cultural education tools (Sedliarova et al., 2020). Memes with negative intentions, such as attacks on people based on identity, race, gender, and so on, are sometimes created and

shared (Nandi et al., 2022). Internet memes can have both positive and negative effects on society. If no one pays attention to it, there could be serious consequences. Monitoring procedures must be put in place (Bhattacharya, 2019).

2.1.1.4 Internet memes used by Indian police departments

Social media has become a popular tool for individuals (of all ages), corporations, and governments to interact. With social media becoming more integrated into daily life, more government organisations are increasing their presence on social platforms such as Facebook, Instagram, Twitter, and YouTube (Srivastava, 2013). Social media in government organisations may transform citizen involvement and participation through accountable responsiveness and collaborative transparency (Bonsón et al., 2017; Charles & Pal, 2020; Karakiza, 2015; Sharif et al., 2015). Government organisations like police departments are increasingly using social media to engage with the public, for real-time data exchange, to transform police-public relations, and to raise awareness regarding social issues (Sachdeva & Kumaraguru, 2014).

In the last few years, several Indian police departments across the country have adopted a new approach on social media platforms to increase user interactions on their respective platforms and to raise awareness on social topics such as road safety, cybercrime, health, women's safety and consent. This new approach uses humorous posts, which are often internet meme-based (Mishra & Chowdhury, 2024), on their respective social media platforms (Shamita Iskur, 2023). Over time, police departments have started using the internet meme approach, while previously, the police were the topic of the internet memes produced by others (Bayerl & Stoykov, 2014). The internet meme approach has led to a substantial rise in the number of followers on the police department's social media accounts (TNN, 2019). In addition, the Police Department's use of internet memes has been widely reported in the mainstream media, such as the Delhi Police's use of internet memes to communicate with young people, published in the (Amit Pandey, 2022). The Assam Police also started a campaign against drunk and rash driving using multiple famous figures like Hamlet and

James Bond, Iron Man, and Captain America to combat crime and generate awareness (India News, 2022).

“Safety on the roads” campaign through internet memes. Road safety is a fundamental concern for public health and development, and it is a major source of death and injury worldwide. Over the last four decades, there has been a steady rise in road traffic crashes-related fatalities and injuries, which are increasing due to factors such as lack of awareness among drivers and the public, overpopulation, poor road quality, inadequate driver training, overspeeding, and alcohol usage (Balasubramanian & Sivasankaran, 2021; Tsala et al., 2021). The India Status Report on Road Safety 2024” states that in 2021, injuries and fatalities from traffic crashes ranked as India’s 13th most common cause of mortality and 12th most common cause of health loss. Among the top 10 causes of health loss in six states, including Uttarakhand, are road crashes (Tikender Singh Panwar, Geetam Tiwari, 2024). In Uttarakhand, in 2022, the number of road crashes was 1674, of which 1042 people died in road traffic crashes, and around 1613 were injured. In terms of road-user categories, two-wheeler riders had the highest fatalities (19.53%), followed by pedestrians (17.32%), of persons killed in road traffic crashes. However, Road traffic injuries are the leading cause of death among children and young adults aged 5 to 29 years (World Health Organization). Young drivers are frequently involved in traffic violations, including speeding, which is considered a form of risky behavior (Scott-Parker et al., 2013). Some studies found that young drivers tend to tailgate vehicles in front of them, overtake vehicles dangerously (Fernandes et al., 2010; Tarlochan et al., 2022). In addition, high-risk behaviors like street racing and on-road stunt driving are linked to a higher chance of crashes, injuries, and fatalities among young drivers (Vingilis et al., 2018). The skills required to identify and respond to road hazards in a safe manner are not completely developed in young drivers due to a lack of driving experience (Lyon et al., 2020). Additionally, driver inattention among young drivers is a substantial factor in collisions (Neyens & Boyle, 2008). This age group also statistically shows higher involvement in risky driving behaviors such as overspeeding, red light jumping, and drunk driving, making them a critical

target audience for road safety awareness campaigns. Overspeeding is the leading cause of death among traffic rule violations, accounting for 46.8% of fatalities (State Transport Department, Government of Uttarakhand, India, 2022). Drunken driving also contributes to a high proportion of crashes, more frequent among men 18- 34 years old than any other group (Shope & Bingham, 2015; Williams et al., 2018; Wu & Chen, 2024). As per the 2024 report from the State Transport Department of the Government of Uttarakhand, India, driving under the influence of alcohol was responsible for a substantial number of road incidents (5.7%), fatalities (2.9%), and injuries (4.2%). Similarly, red light jumping increases the likelihood of side-impact collisions at intersections, which can result in serious injuries or fatalities (Gopaul et al., 2016; Retting et al., 1999). However, despite this, road accidents and fatalities due to red light jumping account for only 0.06%. Notably, 2232 court summons were issued for red light violations, whereas only 1032 instances of compliance were recorded (State Transport Department, Government of Uttarakhand, India, 2024). According to the aforementioned data, road safety requires immediate attention.

Many studies have been conducted on road safety awareness, behavioral patterns, knowledge of basic traffic rules, and driving attitudes toward road safety among young people (Chaurasiya et al., 2020; Gaire et al., 2022; Oinam et al., 2019). There is an urgent need for innovative, scalable, and technological solutions despite numerous efforts by several sectors to raise awareness. The use of social media by individuals, organizations, and governments for communication has increased in recent years. With the increasing integration of social media into everyday life, many government organisations are creating a presence on these platforms (Bonsón et al., 2017). Government organisations, such as police departments, are increasingly utilising social media to engage with the public, share information, strengthen ties, and increase awareness (Charles & Pal, 2020; Dev & Mishra, 2024). The Uttarakhand police department in India recently implemented a strategy approach to engage, effectively communicate, and create public awareness about social and public concerns, including road safety, through social media platforms. This innovative method uses humorous posts, such as internet memes and other comical posts, on their

respective social media sites (Mishra & Chowdhury, 2024). Given their critical role in road safety, these issues (over-speeding, drunken driving, red light jumping, etc.) have become key themes in public awareness campaigns, including those conducted through social media platforms using internet memes.

2.1.2 OBJECTIVES OF THE STUDY

In the promotion of social awareness, the study aims to understand the approach and effectiveness of the Uttarakhand police department's "Safety on the roads" campaign, specifically focusing on the use of internet memes to raise awareness about road safety on its Facebook page. The study will analyze the design and implementation of the "Safety on the roads" campaign by the Uttarakhand police, specifically examining how internet memes address key road safety issues such as over-speeding, drunken driving, and red light jumping. It will also explore follower perceptions and opinions regarding the visual and verbal elements of the internet memes shared on the Uttarakhand police's Facebook page and assess how these elements contribute to the campaign's resonance with the young people. It will also compare the effectiveness of meme-based posts versus non-meme posts within the campaign, specifically evaluating differences in metrics (e.g., exposure-reach, impressions, and engagement) between humorous, meme-based content and traditional, informational content that focuses solely on safety tips and advice without humor.

This analysis will set the groundwork for understanding the potential of internet memes to raise awareness on specific issues, such as mental health, and lay the foundation for further exploration into their impact on young people in the context of this study.

2.2 METHODOLOGY

This section discusses the research design and data collection methods, including pictorial stimuli and the instrument used, and data collection methods.

2.2.1 RESEARCH DESIGN

This study used a quantitative, descriptive-comparative design to describe the objective. The study included respondents aged 18 to 29 years, males (59.6%) and females (40.4%) from various socioeconomic backgrounds, and followers of the Uttarakhand police Facebook page. It excluded those who do not follow the Uttarakhand police Facebook page and interact with the posts in any way, such as reactions, shares, comments, or saves. Quota sampling, a non-probability sampling, was used to select the respondents. The questionnaire was sent to around 759 followers who follow the Uttarakhand police Facebook page, and a total responses were received 507, of which 384 responses were found suitable as per the inclusion criteria for the present research. Based on Krejcie and Morgan (Krejcie & Morgan, 1970), the sample size for a population of 354953 followers is 384 with a 95% confidence level and 5% error estimate (Krejcie, 1970). The study spanned four months. Additionally, the study included university-educated experts in visual arts and culture (n=6, aged 25-65, with experience of more than 10 years) affiliated with the faculties of arts and cultural studies at Indian universities. The visual experts were selected using convenience sampling, which is a type of non-probability sampling.

2.2.2 DATA COLLECTION

This section outlines the data collection methods used in the study, including the design of the survey instrument and the use of pictorial stimuli.

2.2.2.1 Pictorial stimuli

From January 2023 to December 2023, we manually identified and collected a sample of twenty-five road safety posts from the Uttarakhand police Facebook page, sixteen of which were internet memes (address topics such as road safety, i.e., over-speeding, drunken driving, red light jumping, collect stills, have some form of humor token (Carroll, 2014), and more than a minimum of 1000 likes) and nine of which were non-meme posts (focus solely on providing safety tips and advice without incorporating humor or light-hearted elements, collected stills, and more than a minimum of 1000 likes), using a criteria sampling approach. Furthermore, we extracted metrics from the Uttarakhand police social media team, which were obtained post-wise by the Facebook business suite:

measures of Exposure to the post (reach and impressions), and Engagement (reactions, shares, comments, and saves) from the same. The internet meme posts and non-meme posts for the study are presented in Appendix A.

2.2.2.2 Instrument

A questionnaire survey was conducted with 384 respondents (voluntarily participated) who were followers of the Uttarakhand police Facebook page. We accessed their Facebook accounts, went to their message inbox, and sent the questionnaire. The survey offered the respondents a questionnaire in Hindi and English containing closed-ended questions, multiple-choice questions, as well as five-point rating scale questions. Additionally, five visual experts (with over ten years of experience) assessed the top five meme posts and five non-meme posts on the internet based on visual and verbal characteristics. The questionnaire was adapted from the study of (Smirnova et al., 2021) for visual and verbal evaluation. The questionnaire used to assess the effectiveness of the campaign is provided in Appendix B, while the questionnaire assessing visual perceptions of meme vs. non-meme posts is shown in Appendix C.

2.2.3 DATA ANALYSIS

The statistical analysis was conducted using SPSS (Version 25.0). To find out whether there is a statistically significant difference in reach, impression, and engagement between the two groups of internet meme posts and non-meme posts, a series of independent sample t-tests was conducted.

2.3 RESULTS AND DISCUSSION

A total of 384 respondents who responded to the online survey were followers of the Uttarakhand police Facebook page. Table 2.1 displays the respondents' demographic information. The survey result was based on respondents' self-reported perceptions, not objective or experimental measures. The majority of the respondents said that the "Safety on the roads" campaign initiated by the Uttarakhand police through internet meme posts created awareness related to road safety, changed their attitude or behavior towards road safety, made drivers more responsible while driving on the road, and also shared these posts with friends or on social media (Fig. 2.3).

Table 2.1 Demographic characteristics (N=384)

Sample Characteristics	Frequency (N=384)	Percent (%)
Gender		
Male (M)	229	59.6
Female (F)	155	40.4
Age Group		
18-29 Years Old	384	100
Level of Education		
Less than a high school	-	-
High school (or equivalent)	58	15.1
Undergraduate	278	72.4
Postgraduate	44	11.5
Ph.D. Or higher	4	1.0
Mode of transport you use to commute		
Two-wheeler	175	45.6
Four-wheeler	48	12.5
Both (a two-wheeler, and a four-wheeler)	81	21.1
Public transport	52	13.5
I do not drive	28	7.3
Have you ever faced any crashes while driving?		
Yes	272	70.8
No	112	29.2

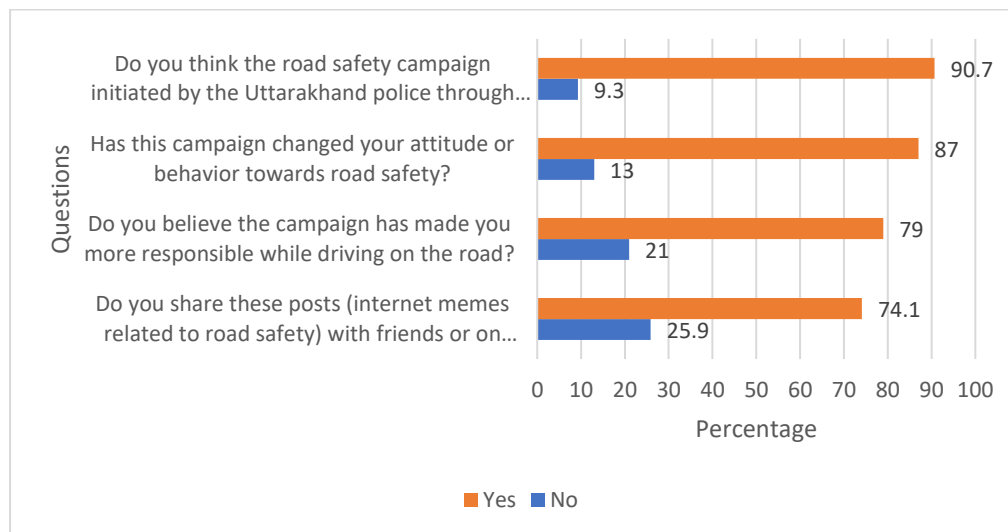


Fig. 2.3 Respondents' responses to questions regarding the "Safety on the Roads" campaign initiated by the Uttarakhand police

Internet memes have been utilized in earlier research to increase awareness for a variety of initiatives, including the Bird of the Year campaign for endangered wildlife (Fraser et al., 2022; Lenda et al., 2020) and a campaign addressing climate change via internet memes related to the issues. It follows that humorous and serious societal concerns can be addressed through internet memes (Zhang & Pinto, 2021). In addition, the use of internet memes, with humour, proved to be an effective medium for engaging and easily shareable platforms for the intended demographic, namely the younger users of social media. One of the key elements in the success of the Uttarakhand police's "Safety on the roads" campaign is the use of light-hearted, humorous content in internet memes. When internet memes contain incongruent components like the use of movie scenes, movie actors/actresses, and cricketers, humour is created (Klien-Thomas, 2021) such as internet meme posts A, B, and D. Due to this, the campaign by Uttarakhand police was able to convey serious road safety messages in a way that was both entertaining and thought-provoking, increasing its exposure, i.e., reach and impressions, and engagement across various social media platforms and leading to increased awareness among young users.

Therefore, the question that needs to be answered is whether the increased awareness translated into actual changes in driving behavior or not. Survey results showed that a significant portion of the young followers of the Uttarakhand police Facebook page reported that they were more conscious of their driving habits after encountering the campaign's messages through internet memes. Data from traffic police about Road accidents year-wise is available, while there is no specific data or report available that includes information on traffic violations such as over-speeding, drunk driving, and red light jumping. This is because collecting such data is quite intricate. However, anecdotal evidence indicates a beneficial influence on driving behavior. For example, a police officer involved in the campaign reported a considerable improvement in traffic safety in an area where the campaign was extensively promoted using internet memes. The police officer stated that after an incident involving bike stunts by local riders, the police took immediate action, issued a "court summons", and created an internet meme of the incident before the rider

performed the stunts and after he received the “court summons”, raising awareness about traffic violations in the area. The campaign's presence was followed by a decrease in such risky activities, as riders were more aware of the implications of unsafe driving practices. However, this instance implies that the campaign had a notable impact, especially in regions where traffic safety was a major concern, because the memes of these riders on the Facebook page may have made young adults aware of and motivated to respect traffic regulations and avoid traffic offenses. The observed change in attitudes and behaviors towards road safety indicates that such campaigns can contribute to long-term behavioral change. Furthermore, the police's "Safety on the roads" campaign may help to reduce accidents, both reportable and non-reportable.

In addition, the study reveals that the internet memes used in the Uttarakhand police's “Safety on the roads” campaign had impactful visual and verbal aspects, as affirmed by visual experts and respondents. The results of the questionnaire responses of the visual experts for the five-road safety-related internet meme posts (A, B, C, D, and E) and five non-meme posts (A, B, C, D, and E) on the Uttarakhand police Facebook page have been presented in Fig. 2.4 and Fig. 2.5, respectively. Every internet meme post and non-meme post has used a table to show the visual experts' average scores. By rating it on a scale of 1 to 5, experts determine an average score based on multiple factors related to their verbal and visual qualities. Based on the questionnaire results, Meme B got a higher overall score (visual and text elements) of 4.0 from the visual experts, while Meme C got a lower overall score (visual and text elements) of 2.4 from the visual experts. Conversely, Non-meme A got a higher overall score (visual and text elements) of 3.4 from the visual experts, while non-meme B, C, and D got a lower overall score (visual and text elements) of 2.4 from the visual experts. As a result, visual experts’ average scores for internet meme posts are greater than those for non-meme posts. In addition, the self-reported perceptions of the respondents about visual and verbal evaluation of the internet memes were displayed in Table 2.2.

Table 2.2 Responses of respondents' perceptions on Visual and Verbal evaluation of internet memes used for road safety awareness by Uttarakhand police

Items	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Decision
The images	0 (0)	68 (17.7)	179 (46.6)	63 (16.40)	74 (19.3)	2.38	Low perception
The texts or phrases	11 (2.9)	48 (12.5)	121 (31.5)	147 (38.3)	57 (14.8)	2.50	High perception
The overall composition	0 (0)	60 (15.6)	139 (36.2)	117 (30.5)	68 (17.7)	2.49	High perception

Note: N= 384, SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree. Decision-weighted average= $7.37/3=2.45$

The visual and verbal aspects of internet memes have not been examined in any previous research related to the police force or department, which sets this paper apart from others in the field (Charles & Pal, 2020; Wood, 2020; Wood & McGovern, 2020). Conversely, one of the studies related to meme virality talked about the visual design of the image meme, which found that an image's composition can both draw viewers' attention and help a meme become viral. The composition includes the number of panels (single or multiple), the type of images (photo, screenshot, illustration), scale (close-up, medium shot, long shot), and movement (physical, physical and casual, physical, emotional and causal movement) to capture viewers' attention (Ling & Blackburn, 2021). Furthermore, one study on COVID-19-related internet memes discovered that the visual element is critical to effectively understanding the internet meme (Smirnova et al., 2021). The findings suggest that the five road safety-related meme posts (A, B, C, D, and E) in which the C meme post is a textual meme, not an image meme, got very low responses among all the internet meme posts through visual experts i.e., the visual idea of the internet meme =2.2, choice of composition =2.6, choice of colors =2.6, visual form of the internet meme =2.6, and the relationship between visual and text elements =2.6. These results suggest that image memes are frequently more succinct than textual memes and, due to their higher information density in the form of visuals, may even be more effective (Ling & Blackburn, 2021).

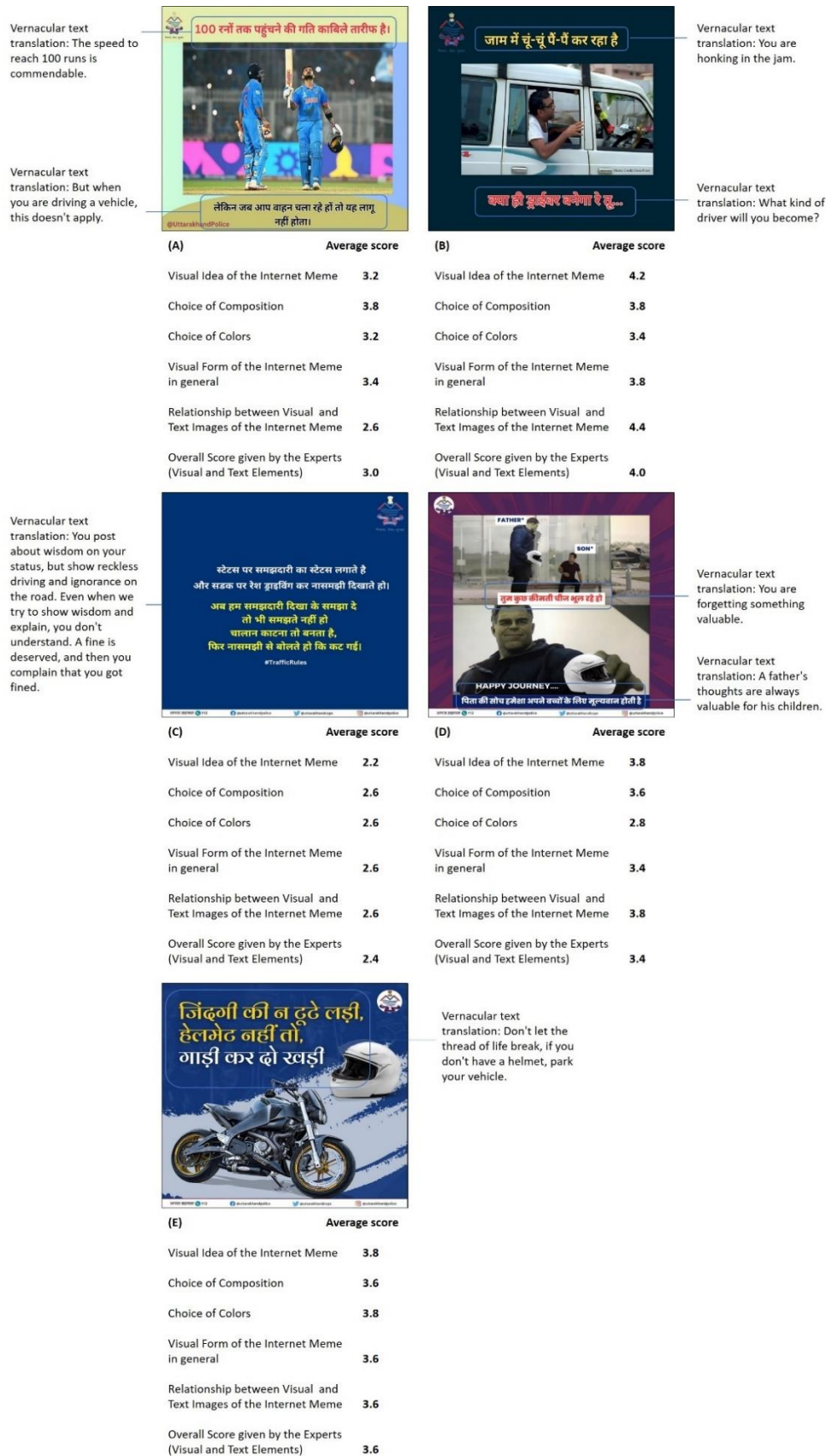


Fig. 2.4 The visual experts' average scores for the five-road safety-related internet meme posts (A, B, C, D, and E) from the Uttarakhand police Facebook page.



Fig. 2.5 The visual experts' average scores for the five-road safety-related non-meme posts (A, B, C, D, and E) from the Uttarakhand police Facebook page

Also, internet meme posts D and E have low scores on the choice of composition =3.6 among meme posts, except textual meme post. For the D meme post, one explanation for the low score could be the two panels, which take longer to read than a single panel; thus, this could have an impact on capturing readers' interest. For meme post E, one reason for the low score could be that there is no perception of movement in an image meme, which implies it is less likely to capture the viewer's attention (Ling & Blackburn, 2021). As a result, the visual design of internet meme posts plays an important part in communication, capturing the viewer's attention and drawing the audience back to the page. The findings suggest that the use of engaging visuals or pictures and enticing content (text or phrases) most likely improved overall message delivery and retention among the users. The effectiveness of the internet memes underscores the need for high design standards in campaign materials. Public sector agencies and govt organizations should invest in professional visual design to ensure their messages are clear, attractive, and impactful as well as provide training and resources to their communication teams on effective visual design principles. This could involve workshops with visual experts or collaboration with design professionals.

Also, a series of independent sample t-tests was conducted on the secondary data, which was obtained post-wise through the Facebook business suite and provided by the Uttarakhand police social media team. The purpose of the test was to compare the exposure- reach, impressions, and engagement between internet meme posts and non-meme posts. Internet meme posts had considerably higher reach, impressions, and engagement compared to non-meme posts ($p < .05$). For reach, we found that internet meme posts significantly received more reach than non-meme posts ($p < .05$). There were significant differences ($t(23) = 2.903, p < .008$) in the scores with the mean score for internet meme posts ($M = 30618.12, SD = 8498.15$) higher than non-meme posts ($M = 20465.78, SD = 8191.70$). The magnitude of the differences in the means (mean difference = 10152.34, 95%CI [2918.2, 17386.4] was significant. In addition, for impressions, we found that internet meme posts significantly received more impressions than non-meme posts ($p < .05$). There were significant differences (t

(23) = 2.968, $p < .007$) in the scores with the mean score for internet meme posts ($M = 31398.69$, $SD = 8701.43$) higher than non-meme posts ($M = 20838.67$, $SD = 8229.66$). The magnitude of the differences in the means (mean difference = 10560.02, 95%CI [3198.78, 17921.25] was significant. In addition, for engagement, we found that internet meme posts significantly received more engagement than non-meme posts ($p < .05$). There were significant differences ($t(23) = 2.487$, $p < .021$) in the scores with the mean score for internet meme posts ($M = 312.44$, $SD = 161.23$) higher than non-meme posts ($M = 166.44$, $SD = 91.27$). The magnitude of the differences in the means (mean difference = 145.99, 95%CI [24.54, 267.44] was significant. The study found that internet meme posts significantly outperformed non-meme posts in terms of exposure, i.e., reach, impressions, and engagement. The significant difference in reach, impressions, and engagement between internet meme posts and non-meme posts underscores the effectiveness of this communication strategy. One of the reasons why internet meme posts perform better than other posts is that internet meme posts combine humor with information that attracts the viewer's attention. Using humor and relatable content can make important messages more appealing and easier to disseminate. According to similar findings from earlier research, humor is always used to draw attention in this age of information overload, especially in online communities where it can foster a "shift in the collective consciousness and behavior" and serve as a means of user bonding and affiliation. Conversely, non-meme posts or serious posts perform informative and persuasive functions (Dynel & Poppi, 2021). Similar research revealed that posts that particularly provide comedy and emotional support have a higher chance of being liked, shared, and commented on. However, information-related posts are unpopular with followers (Oviatt & Reich, 2019). Despite information-related posts having lower exposure (reach, impressions) and engagement, providing information to users regarding road traffic safety remains important. Though the Uttarakhand police campaign, which uses an "Internet Meme Strategy" to raise awareness of road safety, has only been going for a year, its response has been overwhelmingly positive. The State Transport Department, Government of Uttarakhand, India, 2024, generated road traffic accident statistics for this year that are equal to or greater than that of the

previous year. However, there might be fewer unreported accidents, i.e., Over Speeding, Drunken Driving, and Red-Light Jumping cases. Furthermore, the success of the Uttarakhand police campaign using internet memes suggests that other police departments and public government organizations could use similar strategies. Additionally, policymakers should consider incorporating social media strategies into their road safety programs.

This study relied on self-reported data, which may be influenced by social desirability bias. Moreover, all respondents were followers of the Uttarakhand police department's Facebook page, which may indicate a pre-existing interest in road safety or positive bias toward meme-based communication. This self-selection limits the generalizability of the findings to the broader population. Additionally, the study used a cross-sectional design and did not employ a pre-post or experimental approach, which means that claims of attitude or behavior change are based on respondents' perceptions rather than measured change over time.

2.4 CONCLUDING REMARKS

From examining various applications of internet memes in advertising, political propaganda, and societal awareness campaigns, it's evident that internet memes possess a unique effectiveness in capturing attention, engaging people, and raising awareness. Across these domains, internet memes have demonstrated their capacity to convey messages in a way that resonates with diverse audiences, particularly young people who are more immersed in digital culture. The study on the Uttarakhand police department's use of internet memes further emphasizes this potential. The Uttarakhand police's use of internet memes in their "Safety on the Roads" campaign effectively raised awareness, changed attitudes, and promoted responsible driving behaviours. The campaign's success underscores the importance of visual and textual design in communication, with internet memes significantly outperforming non-meme posts in exposure (i.e., reach, impressions) and engagement metrics. In addition, Uttarakhand's road safety memes gained more attention due to their relevance, iconicity, humor, and spreadability, which significantly increased exposure and engagement,

particularly among young audiences, compared to non-meme posts. These findings demonstrate the potential of internet memes as a powerful tool in public safety campaigns, suggesting that similar strategies could be beneficial in other contexts. These campaigns show that internet memes, when used strategically, can make serious topics more approachable, relatable, and memorable, ultimately influencing public behavior and raising awareness effectively.

This chapter underscores the idea that internet memes are not just tools for humor but are powerful agents for social change when used in awareness campaigns. This context sets the stage for the present research, which seeks to investigate whether mental health memes, through their humor, relatability, and approachable nature, can contribute to raising awareness and reducing stigma around mental health issues among young people. However, it is equally important to understand what makes these memes effective. Therefore, the next Chapter focuses on the characteristic features of these memes, examining both visual and verbal elements. By analyzing these components in detail, the chapter aims to reveal how meme design contributes to audience engagement, relatability, and message clarity, particularly in the context of mental health awareness.

CHAPTER 3

A COMPREHENSIVE ANALYSIS OF CHARACTERISTICS FEATURES AND CATEGORIES OF MENTAL HEALTH MEMES

3.1 INTRODUCTION

In recent years, the significance of mental health has been widely acknowledged, as society has come to recognize that mental well-being is just as essential as physical health. This change has emphasized the necessity of open dialogue regarding mental health, particularly in online environments like social media platforms, where young people are more inclined to share personal experiences and seek support. Social media platforms provide a vast, accessible platform for these discussions, enabling young people to share, communicate, and challenge misconceptions regarding mental health.

Internet memes have become a dominant form of digital communication, often used to address serious societal issues in an accessible and engaging way. This chapter investigates the visual content of internet memes related to mental health, focusing on key characteristic features, as well as identifying recurring themes or categories within the sample. The visual and textual composition of internet memes plays a crucial role in shaping their message and impact. Additionally, the analysis categorizes internet memes into thematic groups, providing a deeper understanding of the types of messages they deliver and their role in influencing perceptions about mental health.

3.1.1 LITERATURE REVIEW

The literature review provides an overview of the semiological and cognitive design aspects of internet memes, establishing the theoretical foundation for their role in communication and meaning-making.

3.1.1.1 Internet memes and semiotic theory

There has been considerable work on the semiotic theory. The fundamental supposition of semiotics is that cultural objects communicate meaning and can be interpreted as a text. Signs blend to operate on denotative and connotative levels. By considering the interaction of the denotative and connotative in the context of popular culture, scholars might investigate cultural artifacts as signifiers of myths about a particular culture. Therefore, gaining an understanding of semiotics might help in making sense of visual forms of communication (Huntington, 2013). The previous studies involving the examination of Internet memes in light of semiotics deserve attention. One of the studies examined internet meme templates as cultural expressions using semiotics and symbolic interactionism and highlighted their cultural significance, emotional expression, and challenges in decoding deeper symbolic meanings, especially for educational use (Alcantara et al., 2022). One of the studies explored the use of political comic memes through a semiotic lens, focusing on how visual and textual elements combine to communicate political messages (Mubarak & Aayid, 2022). Using a pragma-semiotic framework based on Mey's Pragmatic Acts theory, one of the studies examines how internet memes use humor and symbolism to critique societal norms and deconstruct cultural myths, demonstrating their role as tools for social and political commentary (Ugah, 2022). A similar study examined how humor in political memes is used to critique and deconstruct dominant ideologies in Philippine society, and the findings revealed that humor, beyond entertainment, serves as a tool for political dissent and critique in Philippine culture (Calimbo, 2016). One of the studies examined how meanings are constructed, conveyed, and received by audiences, focusing on the role of signs in both advertising and meme culture. This approach highlighted the dynamic relationship between media creators and their audiences in meaning-making (Razdan et al., 2019). Using a social semiotic approach at the semantic, syntactic, and pragmatic levels, one of the studies explored how cross-language memes, combining multiple languages and cultures, construct identity and influence digital communication, to examine their multimodal and multilingual aspects (Huang et al., 2024). One of the studies examined how internet memes use semiotics to

convey and deconstruct myths and ideologies through the interplay of visual and verbal signs, drawing from theories of Saussure and Eco to highlight their dual role as tools for communication and potential sources of misinterpretation (Pratiwi et al., 2023). Furthermore, one of the studies examined historical memes shared in Eno Bening's Twitter interactions. Using semiotic analysis, the study deciphered visual and verbal signs in the memes to explore how they constructed meanings related to historical events and figures (Bethavianus & Dewanto, 2021). One of the studies explored internet memes from a semiotic perspective, analyzing them as digital signs that convey cultural meanings. The paper delved into how memes act as visual and textual symbols, shaping and reflecting the values, humor, and ideologies of online communities. It emphasized the role of memes in constructing shared meanings and narratives, allowing for both individual expression and collective understanding. The study also examined the fluidity of meme meanings, as they evolve and adapt through sharing, remixing, and contextual shifts within digital spaces (Cannizzaro, 2016). These previous studies provide a valuable foundation for understanding the role of semiotics in analyzing memes and their significance in contemporary social media discourse.

3.1.1.2 Cognitive design aspects of internet memes

Previous studies suggest that internet memes, though often perceived as humorous or cultural artifacts, can also be understood as products of cognitive design (Ayele et al., 2025; Glasford & Joy, 2024; Wong & Holyoak, 2021). Their effectiveness depends not only on the message they convey but also on the design attributes that shape perception, processing, and engagement. Cognitive design elements such as incongruity and humor, fluency, aptness, exclusivity, and replicability determine whether an internet meme feels relatable, humorous, and shareable (Ayele et al., 2025). These aspects influence how quickly an audience (college and university students) understands the internet meme, how strongly it captures attention, and how easily it can be reproduced or adapted in different contexts.

Several variables are central to this process:

1. **Incongruity and Humor-** A common cognitive mechanism in internet memes arises from incongruity between image and text. Resolving this incongruity elicits humor, which increases engagement and message salience. The humor in internet memes can be explained through the Incongruity-Resolution Theory (Suls, 1972), which suggests that humor arises when an initial incongruity is recognized and subsequently resolved through contextual or cultural cues. In internet memes, this often occurs when a visual element (such as a movie still or celebrity expression) appears mismatched with the accompanying text or phrase, creating a sense of incongruity. The resolution emerges when the viewer interprets the caption in relation to the image or recalls relevant cultural associations, producing an “aha” moment of cognitive satisfaction. This interplay of expectation, surprise, and resolution not only elicits humor but also enhances engagement, making internet memes effective vehicles for communication and social commentary.
2. **Processing Fluency-** Processing fluency defines how easy or difficult it is for the brain to perceive, understand, and process a stimulus. If something is fluent (easy to process), it feels pleasant, familiar, and true, and if something is disfluent (hard to process), it feels confusing, unpleasant, or boring (Winkielman et al., 2003). Internet memes are designed to be processed quickly due to a clear template, simple text, relatable cultural context. When an internet meme is fluent, it’s understood easily and quickly; it feels funny, pleasant, and even “true,” and it gives the “aha-experience” (sudden recognition, positive feeling, sense of truth). Prototypical meme formats (e.g., widely recognized templates such as “Distracted Boyfriend” or “Drake meme”) enable faster recognition and smoother comprehension, thereby evoking positive affect and increasing shareability (Winkielman et al., 2006). In contrast, internet memes that are excessively disfluent, due to complexity or unfamiliarity, often generate confusion and reduce appreciation. However, over-familiarity and extreme fluency may also lead to boredom. The Pleasure-Interest Model (Graf & Landwehr, 2015)

explains that optimal engagement arises when internet memes balance fluency with a manageable level of disfluency: pleasantness is derived from ease, while interest emerges from resolving mild incongruity. Thus, the effectiveness of internet memes lies in achieving this balance, where simplicity ensures comprehension, and novelty sustains attention and shareability (Reber et al., 2004).

3. **Metaphorical Aptness:** A metaphor compares two different things or domains: the Source domain, i.e., the familiar image or situation, and the Target domain, i.e., the actual concept or message being explained. In internet memes, the image usually acts as the source domain, and the text/caption acts as the target domain. such as an internet meme of a sinking boat (image) with text about college deadlines, explains that the boat is the source domain, and deadlines are the target domain. Internet memes often function as visual metaphors in which the image serves as the source domain and the accompanying text represents the target domain. The effectiveness of this metaphor relies on aptness, or the extent to which the image captures and reinforces the intended meaning of the text (Chiappe et al., 2003). High aptness creates a stronger cognitive link between source and target domains, making the internet meme appear clever, humorous, and easy.
4. **Exclusivity-** It is another important ingredient in internet meme appreciation. Unlike processing fluency, which emphasizes ease of understanding, exclusivity highlights the role of insider knowledge and subcultural familiarity in valuing internet memes. Prior research demonstrates that internet memes often function as cultural capital, signaling belongingness to specific communities. For instance, Nissenbaum and Shifman (2017) showed that internet memes on 4chan's /b/ board were used to gatekeep community membership, with users condemning "incorrect" or "outsider" usage. Similarly, Literat and van den Berg (2017), in their study of the r/MemeEconomy subreddit, found that internet memes labeled as "normie" were criticized for lacking subcultural sophistication, thereby reinforcing distinctions between insiders and outsiders. This suggests that internet memes that

are more exclusive could also generate better appreciation because they signal in-group membership of a niche community.

5. **Perceived Replicability-** In internet culture, an internet meme's value and appreciation often depend on how easy it is to replicate, remix, and adapt into new versions. An internet meme that is simple, versatile, and flexible invites more people to make their own versions, which increases its spread and cultural impact. Dawkins originally described internet memes as analogous to genes, suggesting that successful ones possess three qualities: fidelity (the ability to be copied accurately), fecundity (the ability to spread rapidly), and longevity (the ability to persist over time). In internet culture, however, fidelity in the strict sense of exact copying is less important (Knobel & Lankshear, 2007). Online, internet memes are rarely replicated without change; instead, they are constantly remixed, altered, and recontextualized. What matters more is replicability: the ease with which an internet meme can be reproduced, modified, and adapted while still remaining recognizable as part of the same meme family (Dawkins, 1976). Therefore, internet memes that are highly replicable are often appreciated more because they feel open, participatory, and flexible.
6. **Emotional Triggers-** Beyond humor, fluency, and exclusivity, emotions are central to why people like and share memes. But instead of just looking at ordinary emotions, the study uses the framework of aesthetic emotions, i.e., emotions that contribute directly to aesthetic appreciation (liking) (Menninghaus et al., 2019, p. 185). These emotions can mix positivity and negativity, balance novelty with familiarity, and be experienced more intensely because they happen in a safe, aesthetic context.

Together, these aspects highlight that internet memes are not random creations but rather rely on design attributes that shape perception, cognition, and communication effectiveness. Considering internet memes as cognitive design artifacts helps explain their popularity as well as their potential for raising awareness about societal issues, including mental health.

3.1.2 OBJECTIVES OF THE STUDY

This study aims to investigate the visual content of internet memes related to mental health, focusing on their key characteristic features, as well as identifying recurring themes or categories within the sample. To achieve this, the study is divided into two parts:

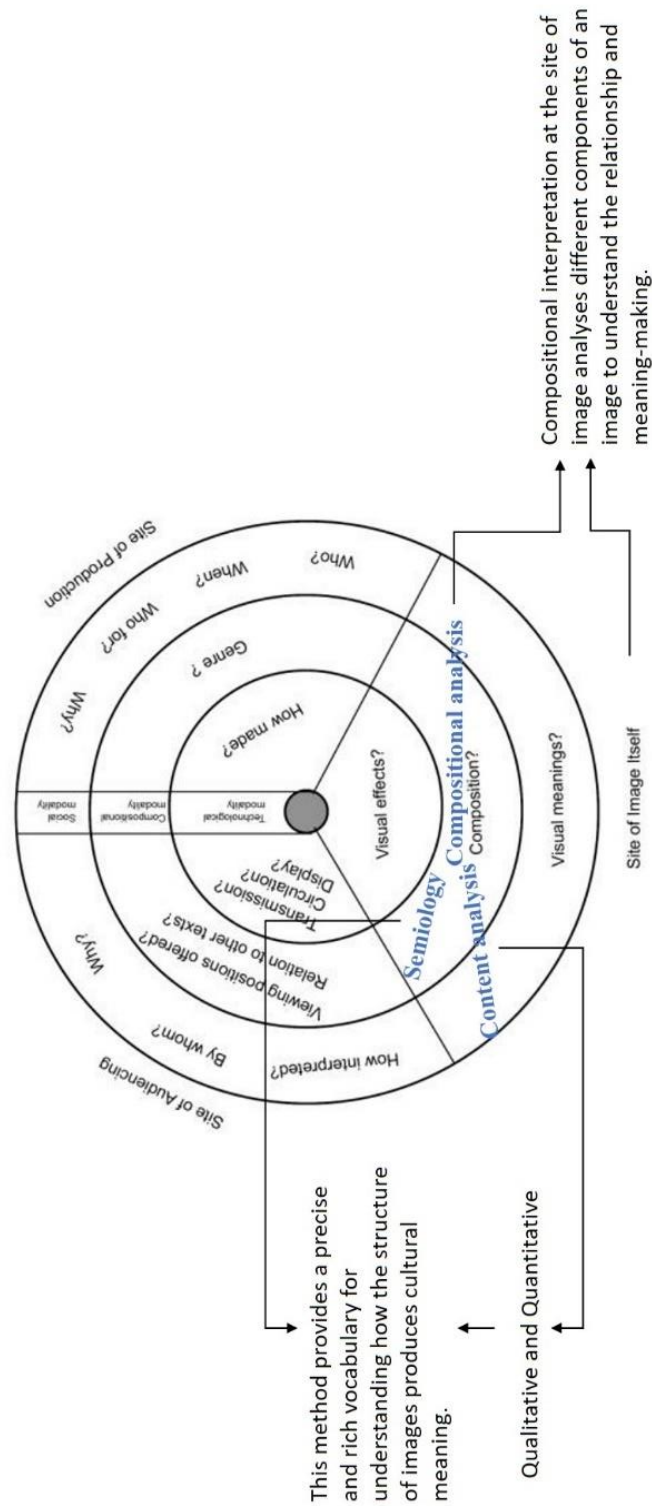
1. To understand emergent themes or categories related to mental health memes on various social media platforms.
2. To identify the key characteristic features associated with mental health memes on various social media platforms.

3.2 METHODOLOGY

The study adopts Gillian Rose's "Visual Methodologies" framework, focusing on sites, modalities, and methods for interpreting visual materials (Rose, 2006). This framework is based on thinking about the visual materials in terms of three sites: the production site, the image site, and the audience site (Fig. 3.1). The study focuses on Rose's Site of the Image, excluding Sites of Audiencing and Production. This decision was made to narrow the scope of the research and focus on the visual content of the memes. Content analysis and semiology research methods have been used in the image site.

3.2.1 CONTENT ANALYSIS

Meme analysis interprets text and visuals using qualitative content analysis. We employed three steps in content analysis in which we first chose a data source and coded data, then identified similar patterns and developed categories, further generated themes, and lastly interpreted or analyzed results. An inductive approach in which examination without preconceived notions or categories was employed (Mayring, 2000). Our study uses a social constructivist theoretical framework (Churcher et al., 2014) that emphasizes the relevance of collaborative learning, as does other qualitative research on internet memes (Herbenick et al., 2023; Iloh, 2021). The interdisciplinary, multigenerational research team helped reduce individual subjectivity in the investigation, and we think that the text and visuals in internet memes present in the sample represent socially created understandings of the phenomenon.



RQ: 2 & 3

1. What are the key characteristics features associated with mental health memes shared on online platforms?
2. What are the emergent themes and categories of mental health memes addressing mental health issues?

Fig. 3.1 Framework for analysis. Source: Gillian Rose, 2006

3.2.1.1 Internet meme identification

For visual and textual internet memes related to mental health issues, we identified social media platforms like Instagram, Facebook, Twitter, Pinterest, and LinkedIn. These platforms were chosen because of their popularity among young people. We didn't include WhatsApp or any other platform where users primarily engage in private chats or groups. From identified social media platforms, we chose Indian pages and accounts like RVCJ, memezformentalhealth, psycho_saiyaan to ensure cultural relevance and resonance with young people in India. These sources reflect issues, humor, and experiences that are more relatable to this demographic, enabling a deeper understanding of how mental health topics are discussed within this cultural context. Page selection criteria included 5000+ followers, posted at least 10 memes, active and regular communication, interactive and diverse mix of followers. We used the following search terms to find internet memes about mental health issues: mental health, depression, anxiety, stress, mental health memes, depression memes, mental health issues, overthinking, and mental health problems, and we expanded these to include others that we noticed were present in many social media posts. In addition, these were selected based on the keywords used in the internet meme captions (e.g., “depressed,” “anxious,” “panic attacks”), hashtags (#anxietymeme, #depressionhumor, #mentalhealthawareness), and visual metaphors or imagery conveying relatable experiences for individuals experiencing anxiety or depression. The selected memes analyzed in the study were either explicitly themed around anxiety and depression, or contained visual/textual cues that referenced symptoms like overthinking, social withdrawal, low mood, loss of interest or pleasure, hopelessness, low self-worth, and disrupted sleep. The selection criteria for internet memes were as follows: they had to be posted between January 1, 2020, and July 31, 2024, have at least 100 likes, and still have text added. We considered internet memes that have recently been shared on social media platforms; however, some internet memes reposted by social media pages date back to 2017. In the metadata, we included the original date of each internet meme. Although exact duplicates were deleted from the dataset, partial duplicates were kept, for example, as one characteristic of the internet meme is

replication, owing to sometimes identical text used with two distinct images, other times the same image was used with different accompanying text. Out of the 182 internet memes that were found, 29 were excluded because they were duplicates, did not discuss mental health issues, or were no longer accessible at the URL. The remaining internet memes ($N=153$) were all copied into digital folders on the internet as image files. In the sample, we considered both English memes and Hinglish memes (Guleria et al., 2024). In Hinglish, the words are written in the Roman script rather than the Devanagari script (Rajput et al., 2022).

3.2.1.2 Coding team

The coding process was carried out by a team consisting of one faculty co-author, an independent psychologist, two doctoral research assistants, and six undergraduate research assistants. Leading the analysis was the faculty co-author, an expert in qualitative methodologies, alongside a psychologist with relevant knowledge in this area. Together, they trained the other eight coders, including the two doctoral research assistants with prior experience in mental health research and six undergraduate assistants who had completed relevant coursework. Engaging undergraduate students as coders was crucial, as mental health issues are common among young people, and internet memes are often created by and for this demographic, aligning with their humor and perspectives (see Fig. 3.2).



Fig. 3.2 Primary phase of coding, with undergraduate students coding internet memes.

3.2.1.3 Development of a coding manual

Eight members of our research team—two PhD research assistants and six undergraduate research assistants—were each assigned twenty random internet memes for which they inductively produced codes based on the main or primary messages expressed to create an initial coding manual. The group of coders then gathered to evaluate, agree on the categories of interest, and make sense of the key codes in the context of the wider dataset. After that, codes were arranged into a first manual of more general categories that most fairly reflected them. From these categories, we then developed themes. Fig. 3.3 shows the coding tree we made, which helps keep coding simple by showing the key themes and categories.

3.2.1.4 Coding process

Ten coders were divided into groups of two or three, and internet memes related to mental health issues were distributed among the four teams for coding. Each of the four groups examined approximately 40 internet memes relating to mental health issues ($N=153$). Each group commenced by separately coding 20 memes, thereafter convening to get a consensus on the coding, and then independently coding the remaining allotted internet memes. Then, all coders convened to review discrepancies and new codes not in the codebook. Emergent codes were introduced or integrated into existing codes. Each group convened to reach a consensus and harmonize coding spreadsheets after coding all internet memes. For the final stage of analysis, the coding spreadsheets were then integrated into a single, coherent spreadsheet. This involved finding pertinent patterns throughout the dataset, calculating totals in relation to each main category, and doing additional analysis. Finally, we displayed all the internet memes from the sample along with their categories and subcategories (Fig. 3.4).

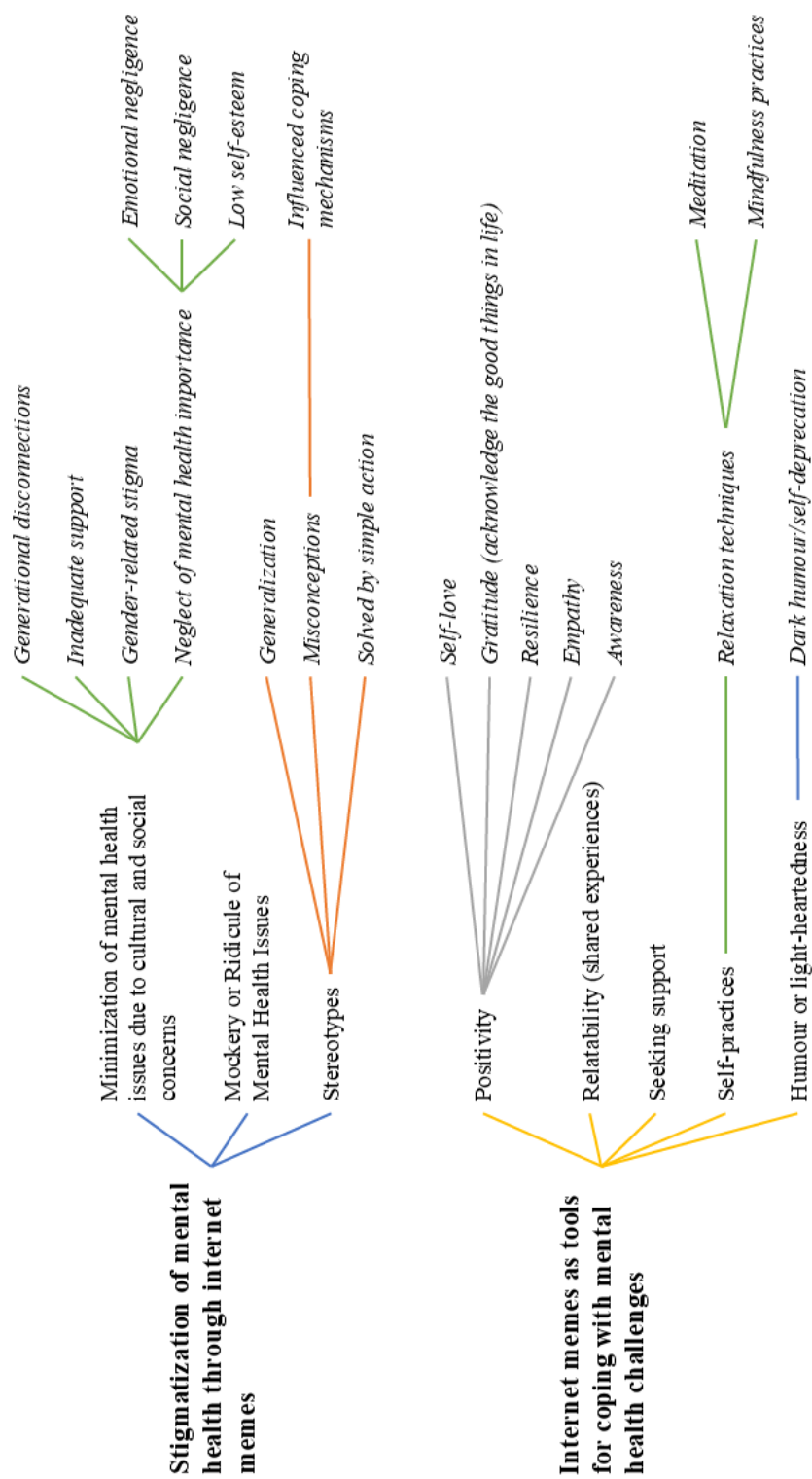


Fig. 3.3 Coding tree illustrating main themes and categories

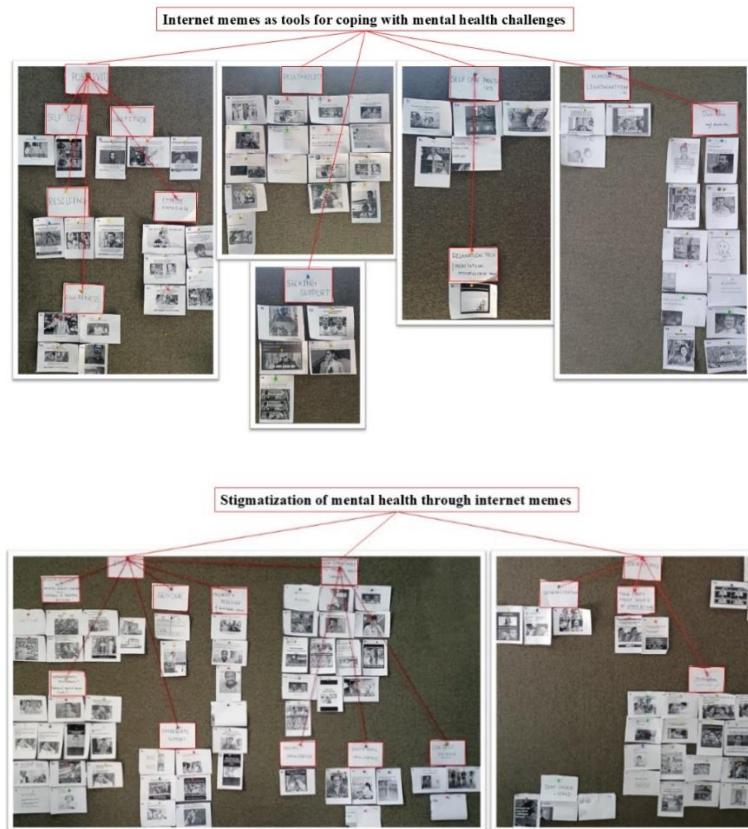


Fig. 3.4 Categorized display of internet memes by theme, showing main categories and subcategories related to mental health topics.

3.2.2 SEMIOLOGY

Based on the Gillian Rose framework, this chapter uses a visual semiotic approach to investigate internet meme design and the key features associated with it (Aulia & Rosida, 2022; Bastari et al., 2021). Using a visual semiotic approach, the analysis is organized into three parts: syntactic, semantic, and pragmatics. This has aided in the understanding of the structural details of an internet meme and meaning-making through both connotative and denotative means.

3.3 RESULTS AND DISCUSSION

As shown in Table 3.1, the following themes and categories were identified from the sample of internet memes i.e., Stigmatization of mental health through internet memes: Cultural and societal minimization of mental health concerns, Mockery or ridicule of mental health issues, Stereotypes; Internet memes as

tools for coping with mental health challenges: Positivity, Relatability, Seeking support, Selfcare practices, Humour or light-heartedness.

Table 3.1 Internet memes by themes and categories.

	English language memes	Hinglish memes	Total (N=153)
Stigmatization of mental health through internet memes (N=94, 61.44%)			
Categories			
Minimization of mental health issues due to cultural and social concerns	35	21	56
Mockery or ridicule of mental health issues	01	05	06
Stereotypes	13	19	32
Internet memes as tools for coping with mental health challenges (N=59, 38.56%)			
Categories			
Positivity	12	05	17
Relatability	09	07	16
Seeking support	02	03	05
Self-care practices	03	03	06
Humour or light-heartedness	09	06	15

Note: Hinglish- a blend of Hindi and English commonly used in casual speech.

3.3.1 THEME 1 - STIGMATIZATION OF MENTAL HEALTH THROUGH INTERNET MEMES

3.3.1.1 Minimization of mental health issues due to cultural and social concerns

The minimization of mental health concerns through internet memes is a form of stigmatization that reflects broader societal and cultural attitudes. Minimization of Mental Health Concerns due to Cultural and Societal attitudes was prevalent among internet memes present in the sample. Minimization of mental health concerns refers to the tendency to downplay, dismiss, or trivialize the significance of mental health issues. This often occurs in various contexts, such as within families, workplaces, or broader society, where mental health struggles are not treated with the same seriousness as physical health issues. Minimization of mental health over physical health was illustrated, for example, in internet memes that depicted the disparity in how society viewed physical health versus mental health, and it reflected frustration with the fact that while

physical health issues were openly acknowledged and addressed, mental health remains a sensitive and less-discussed topic.

Generational Disconnections. Many internet memes in the sample acknowledged generational disconnections. Generational disconnections, as a subcategory of the minimization of mental health concerns, refers to the gap in understanding and attitudes between older and younger generations regarding mental health. This gap often arises from differences in upbringing, societal norms, and exposure to mental health awareness. The set of internet memes from Fig. 3.5A-E reflected the concept of generational disconnections related to mental health issues. Each internet meme highlighted how older generations, particularly parents, tend to downplay or misunderstand the significance of mental health challenges faced by younger generations.

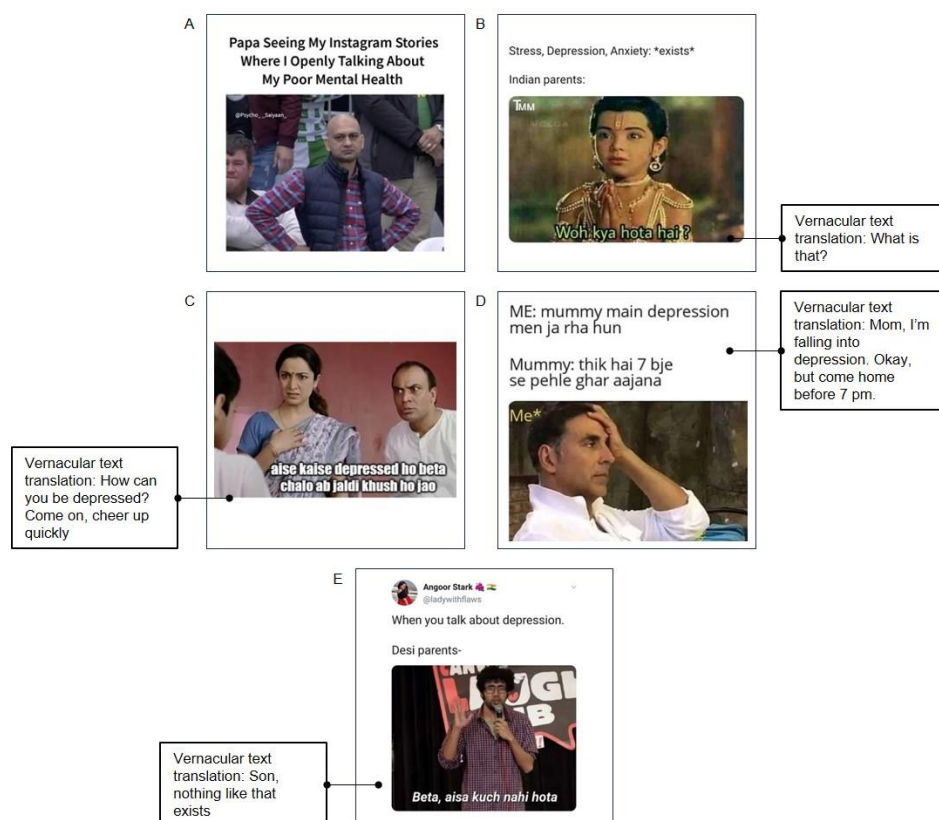


Fig. 3.5 Internet memes that acknowledge generational disconnections.

Inadequate Support. Issues of Inadequate Support were prevalent in many internet memes present in the sample. Inadequate support is characterized by insufficient or ineffective assistance provided to individuals struggling with

mental health issues. Many internet memes collectively highlighted how institutions, individuals, and society fail to provide adequate support for mental health. From dismissive attitudes and reliance on unqualified advice to performative advocacy, they captured how mental health was often downplayed or mishandled. Schools and universities often prioritize academic performance over student well-being. As seen in many internet memes and real-life scenarios, while there was structured support for academics, mental health concerns were often trivialized, with insufficient resources dedicated to counseling or professional help (Fig. 3.6A-C).



Fig. 3.6 Internet memes related to inadequate support.

One of the internet memes showed the irony of bullies now promoting mental health awareness. It showed how superficial and performative some social media activism is, addressing mainly surface-level issues (Fig. 3.6D). Furthermore, one internet meme mocked how individuals rely on superficial, unprofessional sources like Google or YouTube for significant mental health issues, owing to a lack of expert support. This showed how poor official mental health services lead people to seek unqualified advice (Fig. 3.6E). One of the

internet memes mocked untrained motivational speakers who claim mental health competence without a professional education. The concern that such speakers may give superficial or harmful advice highlighted the lack of professional mental health care (Fig. 3.6F).

Gender-Related Stigma. Gender-related stigma forms a significant subcategory under the broader minimization of mental health issues due to cultural and social concerns. It refers to mental health difficulties, especially in men, that are minimized due to cultural and social conventions that reinforce gender roles. Men are expected to be strong, resilient, and emotionally invulnerable in many cultures. Men's mental health issues are minimized since emotional expressiveness and vulnerability are considered evidence of weakness, which goes against masculinity. A few internet memes addressing gender-related stigma are depicted in Fig. 3.7A-B; each meme in the figure consists of multiple panels. Internet meme boldly challenges the social norm that males should "man up" and not seek mental health care. It emphasized toxic masculinity and cultural stigma against men displaying vulnerability, especially mental health issues. Memes like this showed how gendered stigma hurts guys and how social conventions prohibit them from getting emotional help (Fig. 3.7A). Similarly, the internet meme showed how men's mental health is often overlooked by other social topics despite its importance. The meme hilariously yet poignantly depicts men's mental health awareness's loneliness and neglect through a lone, depressed character. It criticized the lack of focus on men's mental health, especially during months dedicated to other social issues (Fig. 3.7B).

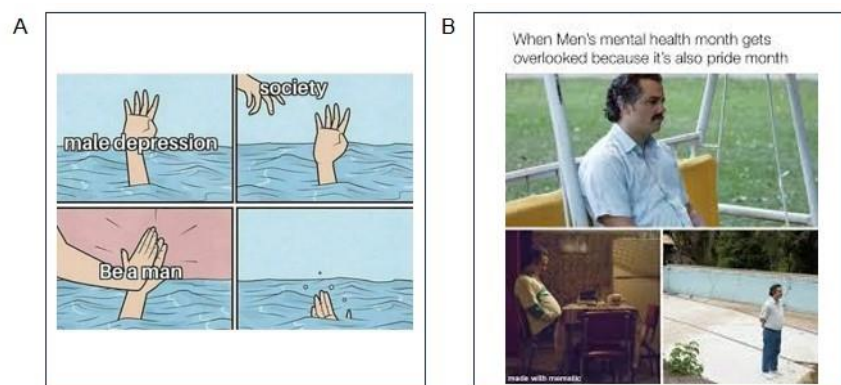


Fig. 3.7 Internet memes related to gender related stigma.

Neglect of Mental Health Importance. Neglect of Mental Health Importance is a subcategory under the larger issue of the minimization of mental health concerns that arise due to cultural and societal attitudes. This subcategory highlighted how mental health, despite being a critical aspect of overall well-being, is often overlooked or de-prioritized compared to physical health or other societal expectations. Some of the internet memes from the sample reflected a broader commentary on India's societal and Indian government attitude toward mental health, exposing how cultural attitudes, budgetary neglect, and prioritization of physical health over mental well-being contribute to the ongoing neglect of mental health in Indian society (Fig. 3.8A-D).



Fig. 3.8 Internet memes from the sample that highlight the neglect of mental health importance.

One of the internet memes showed a character smiling, with the caption: "Everyone saying 'Ye bhi theek hai,' but no one is asking 'Tu theek hai?'" (Everyone says "they are fine," but no one asks, "Are you okay?"). This interpreted how society prioritizes surface-level pleasures over mental health. It

showed that interpersonal talks disregard mental health, omitting to ask if someone is okay (Fig. 3.8E). Furthermore, one of the internet memes showed a person surrounded by their "self-doubt," "insecurities," and "anxiety," while they try to navigate life. This emphasized how mental health disorders like anxiety and insecurities are part of daily life yet often overlooked (Fig. 3.8F).

3.3.1.2 Mockery or Ridicule of Mental Health Issues

Internet memes that mock mental health disorders are one of the worst forms of stigmatization. This category degrades mental health issues, including depression, anxiety, and stress, by making them laughable. Mockery or ridicule of mental health issues was characterized by the tendency of individuals or groups to make fun of, belittle, or trivialize the struggles associated with mental health. We identified internet memes that mock mental health issues by trivializing and mocking them. Each meme minimized mental health issues, making them appear small or easily solved. The three memes represented in Fig. 3.9A-C showed how excessive or snarky replies can insult mental health issues. They depicted the frustration, complexity, and daily struggles of mental health, but they downplayed the severity of these concerns by treating them with humor or simple advice.

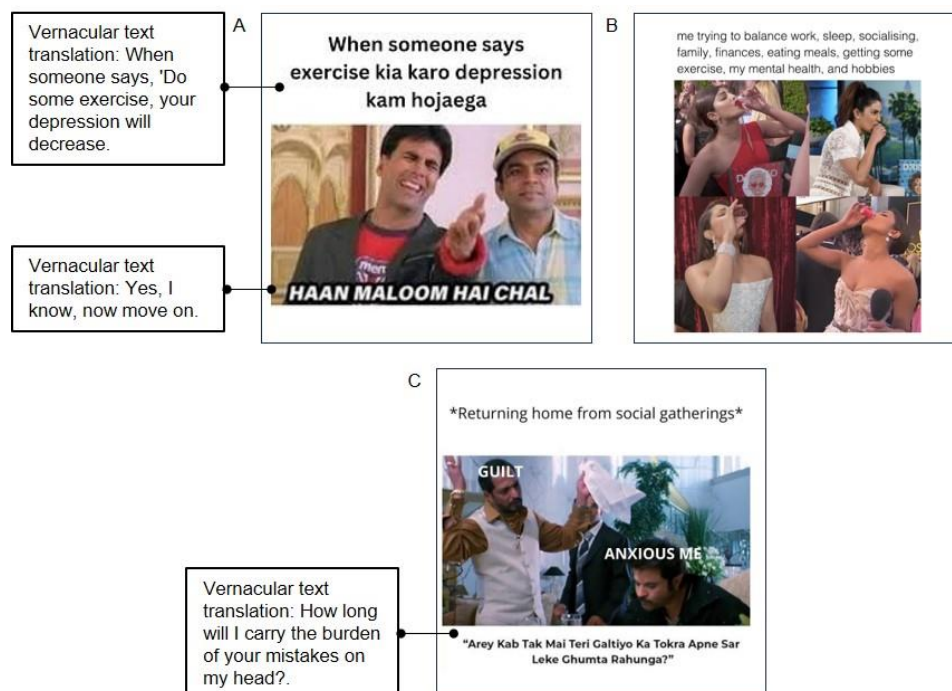


Fig. 3.9 Internet memes related to the mockery or ridicule of mental health issues.

For example, internet memes spoofed mental health advice like exercising to prevent depression. The sarcastic retort “Haan Maloom Hai Chal” trivialized the well-meaning but oversimplified fitness advice to combat depression. Although exercise does assist, the internet meme downplays depression's complexity, making the suggestion ludicrous. Being taught something too simplistic for a mental health condition is exasperating.

3.3.1.3 Stereotypes

Stereotypes in internet memes related to mental health are a significant form of stigmatization. Internet meme stereotypes related to mental health issues are preconceived, simplistic, and negative views about mental health illnesses and their sufferers. Stereotypes reinforce ignorance and stigmatize mental health. Internet memes trivialize complicated mental health disorders by making them clichés or caricatures.

Generalization. A few internet memes in the sample acknowledged generalization. Generalization as a subcategory of stereotypes refers to the tendency to make broad, sweeping assumptions about mental health conditions or the people who experience them.



Fig. 3.10 Examples of internet memes from the sample that highlight generalizations about mental health.

The set of internet memes from Fig. 3.10A-C reflected the concept of generalization related to mental health issues. Each internet meme explored the overall idea that depression is always evident. Sometimes people think they can tell if someone is depressed by how they appear or act. However, reality is more complex. On the exterior, many depressed people laugh, joke, and smile. In addition, the idea that depression usually causes sadness is widespread. These internet memes showed that confidence and smiles can hide mental health

issues. They say depression has no "one look," and presuming it does can lead to miscommunication and stigma.

Misconceptions. Misconceptions are wrong or deceptive ideas that come from missing or false information. They are a type of stereotype because they happen when false, simple, or general ideas about people or things become widely believed, which causes confusion. Some internet memes (though fewer in number) depicted different misconceptions that stem from broader stereotypes around mental health, illustrating how mental health issues are often misunderstood, oversimplified, or dismissed.

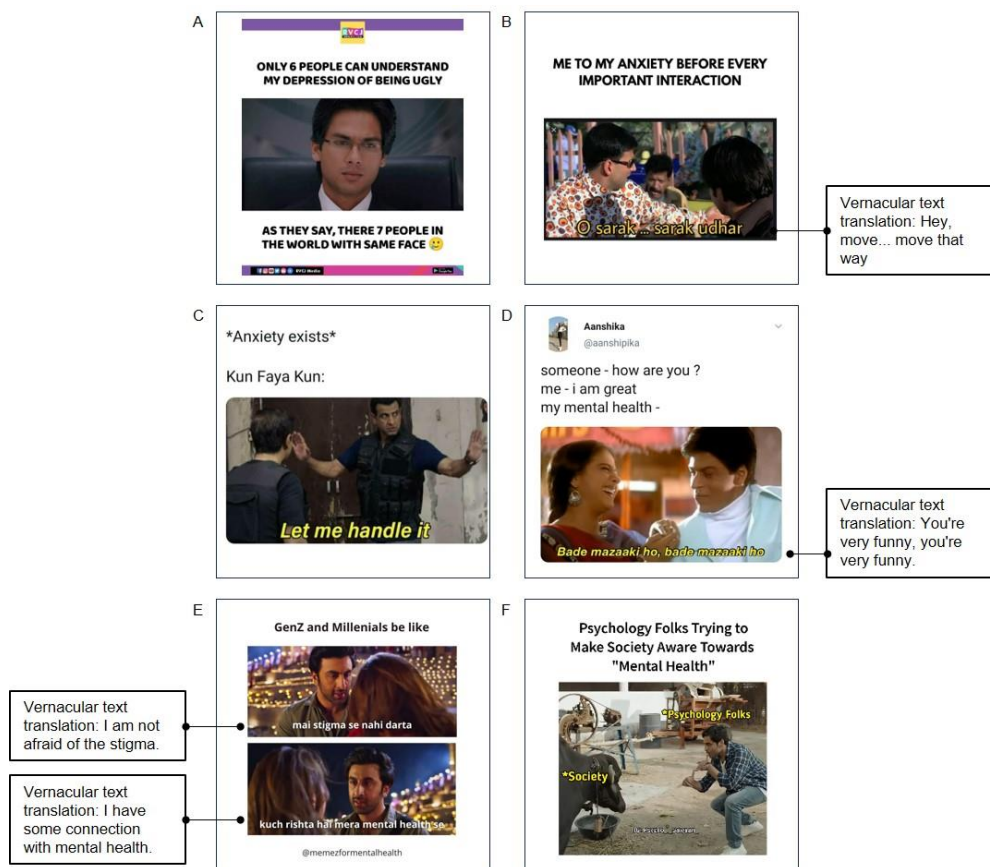


Fig. 3.11 Internet memes related to misconceptions about mental health.

The set of internet memes from Fig. 3.11A-F reflected the concept of misconceptions related to mental health issues. Internet meme A showed the false belief that sadness was connected to looks or other superficial factors, which oversimplifies the complexity of mental health problems; B showed the false belief that anxiety can be easily controlled or gotten rid of with a few

simple steps, which downplays how serious anxiety illnesses are; C supported the false belief that anxiety can be "handled" with strength or a positive attitude, ignoring the need for professional help and more in-depth treatments; D busted the myth that people were always honest about their mental health and showed how shame can make people hide how they really feel; E debunked the idea that talking about mental health was simple and makes the point that younger people were more likely to talk about mental health problems; F pointed out the false belief that society doesn't care about or doesn't care about mental health awareness, showed the gap between attempts to raise awareness and society's response. The subcategory "influenced coping mechanisms" refers to misconceptions where people use simple or culturally popularized mental health treatments, typically inspired by media or entertainment, which may minimize the issues' complexity. We identified internet memes, and they illustrated a widespread societal misconception that easy or superficial activities, frequently driven by entertainment or media, may appropriately handle more serious emotional issues. While these coping methods may bring temporary respite or comfort, they can lead to the mistaken belief that further psychological treatment is unnecessary (Fig. 3.12A-C).



Fig. 3.12 Examples of internet memes related to the subcategory of influenced coping mechanisms under the misconception category.

Solved by a simple action. A few internet memes from the sample related to mental health issues misrepresented mental health by saying that it can be readily fixed without therapy, medication, or professional care. Both internet memes reflect a broader cultural stereotype where complex mental health issues, like depression or anxiety, are oversimplified or dismissed with trivial actions (tea or emojis) (Fig. 3.13A-B).



Fig. 3.13 Examples of internet memes acknowledge mental health issues solved by simple action.

3.3.2 THEME 2: INTERNET MEMES AS TOOLS FOR COPING WITH MENTAL HEALTH CHALLENGES

3.3.2.1 Positivity

This category of internet memes acknowledges mental health difficulties and offers light-hearted, motivating messages to help people cope, centred around the theme of using Internet memes as tools for coping with mental health challenges.

Self-love. Self-love was a key subset of Positivity in a few internet memes present in the sample for mental health. The concept of self-compassion and mental well-being is promoted through the use of humor and relatable scenarios in these internet memes (Fig. 3.14AB). For example, internet meme A emphasized the importance of prioritizing mental health, highlighting it as a wise and mature decision. By framing the response as "intelligent," the internet meme acknowledged that taking care of mental health is something admirable and important, especially in a culture where it is often overlooked. Similarly, in internet meme B, a person looks in the mirror and says, "Mujhko nahi pata tha ki mai itna khoobsurat lagta hu," which translates as, "I didn't know I looked this beautiful." The internet meme humorously depicted the outcome of

practicing self-love—an improved sense of self-appreciation and confidence—and emphasized the idea that when people start caring for themselves and engaging in self-compassion, they can begin to see themselves in a more positive way.



Fig. 3.14 Examples of internet memes present in the sample highlight self-love for mental health.

Gratitude. One of the internet memes in the sample highlighted the emotional relief and gratitude that comes from distancing oneself from negativity. It was about appreciated personal growth and the sense of accomplishment after overcoming difficult circumstances (Fig. 3.15A). Another internet meme promoted gratitude for the mental well-being of others, underscoring the importance of kindness and empathy in daily life. It advocated for treating others with care, as mental health struggles are often hidden (Fig. 3.15B).

Resilience. Resilience refers to the capacity to recover from setbacks, adapt to difficult circumstances, and keep going despite adversity. Both of the internet memes from Fig. 3.15EF focused on resilience, in which one of the internet memes emphasized the importance of mental strength, not just physical endurance. It spoke to the need for emotional resilience in the face of life's challenges. Another internet meme depicted the often-hidden struggle of maintaining composure despite feeling emotionally overwhelmed. It highlighted the resilience people show when trying to keep it together.

Empathy. Empathy is the ability to understand and share the feelings of another person. One of the internet memes highlighted the value of empathy and awareness of our behavior, particularly with regard to how it affects the mental health of others. It denounced people who hurt others without thinking twice

(Fig. 3.15C). Another internet meme humorously depicted how people, particularly those coping with mental health issues, react when depression is brought up. While humorous, it depicted a common experience of dealing with mental health difficulties (Fig. 3.15D).

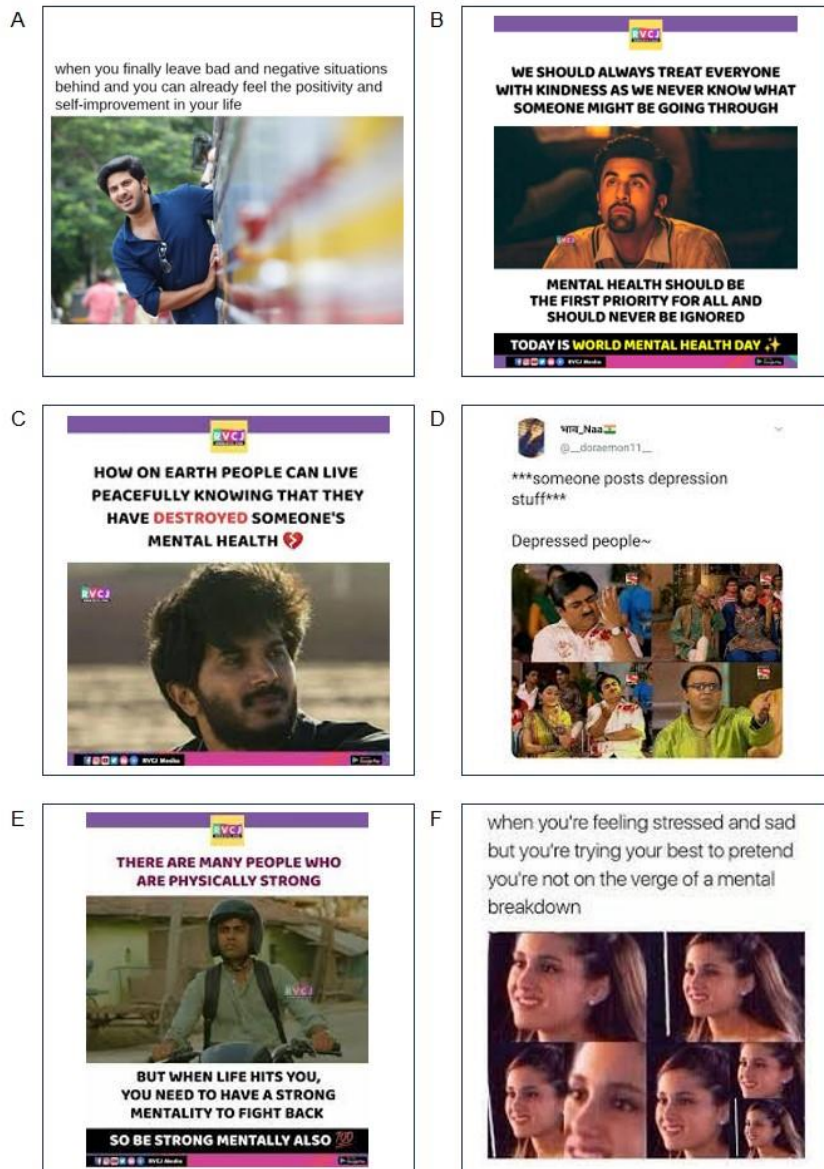


Fig. 3.15 Internet memes that acknowledge gratitude, empathy, and resilience.

Awareness. The memes in this set belong to the sub-category of awareness under the broader theme of positivity. These memes aimed to raise awareness about mental health issues such as anxiety, overthinking, and exhaustion, but in a light-hearted, humorous way. While they touch on serious topics, the primary intent was to create a space for conversation and reflection, encouraging people

to be more open and self-aware about their mental and emotional well-being. Mental health awareness was made approachable and entertaining in these memes, allowing people to reflect on their issues without feeling overwhelmed or alone. The memes might make anxiety, exhaustion, and overthinking simpler to communicate by using cultural references, familiar faces, and casual language (see Fig. 3.16ABC).



Fig. 3.16 Internet memes that acknowledge awareness.

3.3.2.2 Relatability

The category “relatability” under the theme of Internet memes as tools for coping with mental health challenges emphasized the ability of individuals to recognize and connect with certain experiences, feelings, or situations presented in content, such as internet memes.



Fig. 3.17 Internet memes that acknowledge relatability.

Some internet memes in the sample suggested that relatability is at the core of their effectiveness as coping mechanisms for mental health challenges. They

reflected everyday situations that many people face when dealing with anxiety, depression, or stress, making these feelings less isolating. By depicting these challenges in a humorous and exaggerated manner, the memes allow individuals to laugh at their shared struggles, which can provide emotional relief. The format also encouraged dialogue and the exchange of similar experiences, further reducing the stigma surrounding mental health issues and promoting understanding (Fig. 3.17A-D).

3.3.2.3 Seeking support

Seeking support was prevalent in many of the internet memes present in the sample. Seeking support means asking for help, advice, or comfort during emotional, mental, or physical challenges. It involves accepting that some problems or feelings are too overwhelming to bear alone and that trusted friends, family, mental health experts, or communities can offer support, counsel, or encouragement. Some internet memes in the sample (though fewer in number) emphasized "seeking support" in various ways. Famous celebrities and humorous content make mental health discussions more approachable, lessening the stigma of seeking treatment. Each internet meme showed how people can find comfort, humor, and community online and in real life while suffering from mental health issues (Fig. 3.18A-D).



Fig. 3.18 Internet memes that acknowledge seeking support.

3.3.2.4 Self-practices

The category "self-practices" under the theme of Internet memes as tools for coping with mental health challenges emphasized the ways in which individuals employ humor, self-awareness, and familiar cultural references to address their challenges. We identified internet memes that provide a safe space for people to reflect on their own behaviors and attitudes toward mental health, normalizing the conversation and reducing the stigma associated with seeking help or admitting struggles. One internet meme humorously acknowledged retail therapy, a frequent coping mechanism, to demonstrate how memes may portray the ironies of mental health difficulties (Fig. 3.19A). One of the internet memes promoted self-acceptance and reinforced the importance of seeking help without shame (Fig. 3.19B). Another internet meme humorously captured the reality that, despite efforts to engage in positive practices, the presence of depression can feel constant and overwhelming (Fig. 3.19C). One of the internet memes reflected how self-practices sometimes involve understanding one's role in perpetuating stress and using humor to cope with this realization (Fig. 3.19D).

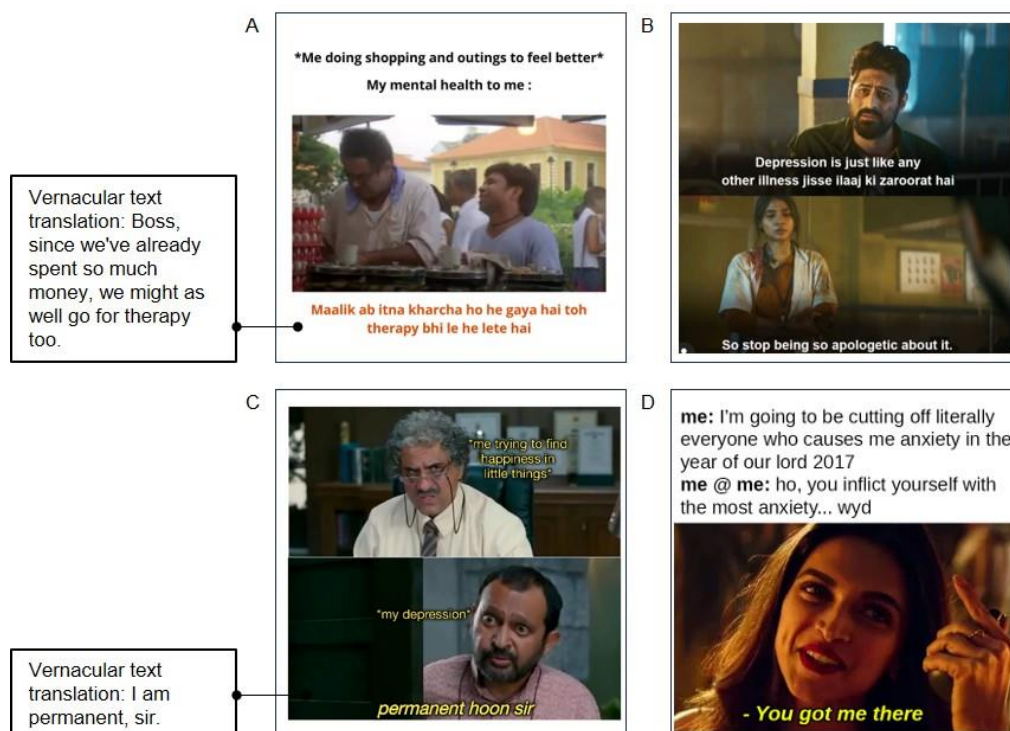


Fig. 3.19 Internet memes that acknowledge self-practices.

3.3.2.5 Humour or light-heartedness



Fig. 3.20 Internet memes position humour or light-heartedness.

Dark humour/self-deprecation. Many internet memes were categorized as dark humor/self-deprecation, a subcategory under the broader genre of humor and light-heartedness. In these internet memes, self-deprecation was intertwined with comedic elements, where individuals mock their own vulnerabilities, especially those related to anxiety, depression, and suicidal thoughts. One of the internet memes sarcastically highlighted the contrast between the perception of Kota as a place of achievement and the tragic realities many students face (Fig. 3.21A). The theme Coping Mechanisms contains internet memes (38.56% of the sample) that are beneficial to mental health discussions and help young people manage and cope with mental health challenges. This theme includes categories such as Positivity, in which subcategories are: self-love, gratitude, resilience, empathy, and awareness; Relatability, Seeking support, Self-care practices, Humour or light-heartedness, in which subcategory is: self-deprecation. These internet memes aim to normalize mental health discussion, foster connections, and promote self-awareness, and they can also offer emotional assistance through their humorous or supportive approach to mental health concerns. Furthermore, internet memes based on this theme allow young people to discuss mental health concerns more openly, reducing loneliness and encouraging healthy mental health. Conversely, on the other hand, the theme of

Stigma contains most of the internet memes (61.44% of the sample) that spread stigma around mental health issues.

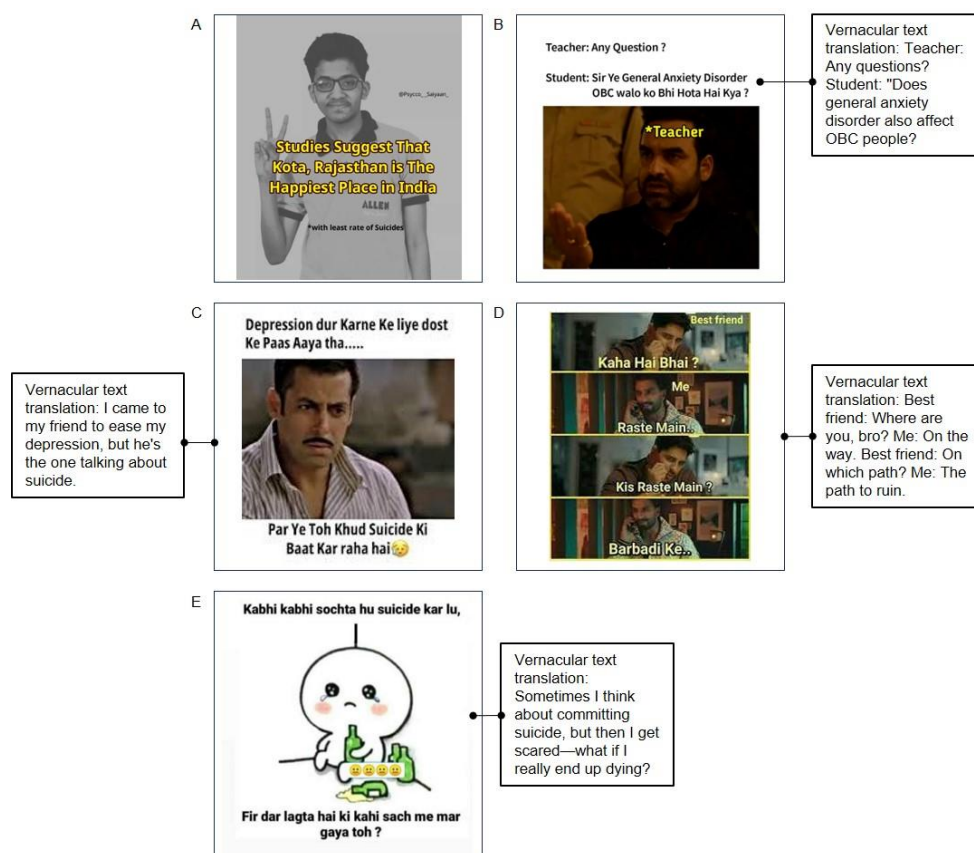


Fig. 3.21 Examples of internet memes related to Dark humour/self-deprecation.

This theme includes internet memes that mock or minimize mental health struggles, reinforce stereotypes, and suggest that mental health issues are of low importance. Internet memes in this category often engage in ridicule or trivialization, reflecting cultural or societal attitudes that may dismiss the seriousness of mental health issues. Such content reinforces negative beliefs, spreading false information, and possibly deterring young adults from getting treatment. In an online setting or on social media platforms where young adults are increasingly looking for knowledge and support for their experiences, these internet memes may be especially problematic because they add to the stigmatization of mental health concerns. The two themes differ significantly in their impact: the 61.44% that perpetuate stigma highlight the ongoing challenge of addressing negative perceptions and harmful stereotypes in online discourse, while 38.56% of the internet memes foster a supportive and open dialogue

around mental health. 38.56% of internet memes that convey positive messages about mental health can be strategically leveraged in awareness campaigns aimed at young people. These campaigns, organizations can capture the attention of young people who may otherwise disengage from traditional mental health messaging. In addition, these internet memes help normalize conversations about mental health. They can encourage individuals to seek help, share their experiences, and support one another, fostering a culture of openness and acceptance. Furthermore, this can empower young people to adopt positive mental health habits and seek support when needed. There is an urgent need for focused interventions, as evidenced by the 61.44% of stigma-related internet memes that propagate negative beliefs about mental health. Since these internet memes spread false information, it is essential to conduct educational initiatives to dispel myths and present correct information. To combat these misconceptions and change public beliefs, awareness programs should combine evidence-based information with positive messages. Further changing perceptions of mental health can be achieved by working with social media influencers to develop relatable counter-narratives. Furthermore, encouraging media literacy in young adults is crucial because it will enable them to assess internet meme content critically and separate positive from negative messages, thereby lessening the impact of stigmatized internet memes.

3.3.3 SYNTACTIC APPROACH

The syntactic approach has been used to understand the formal structure of the meme design and the structural relationship among the different elements. The syntactic approach used to understand the level of visual representation, such as layout design, text appearance, color schemes, and imagery. The text has been explored in various ways, which can be grouped into three major categories;

- 1) Based on the appearance of the text in the meme layout. This category investigates the text in relation to the meme layout.
- 2) Based on the features associated with letterforms. Variables in this category are related to individual letterforms, which basically inquire about the anatomy of letters.

- 3) Use of external elements. It explores the expressiveness achieved in the text design using extra features that are not associated with letters/type.

Appearance of the text, letterform features, and external elements have played a key role in the text design and its expressiveness (Fig. 3.22).

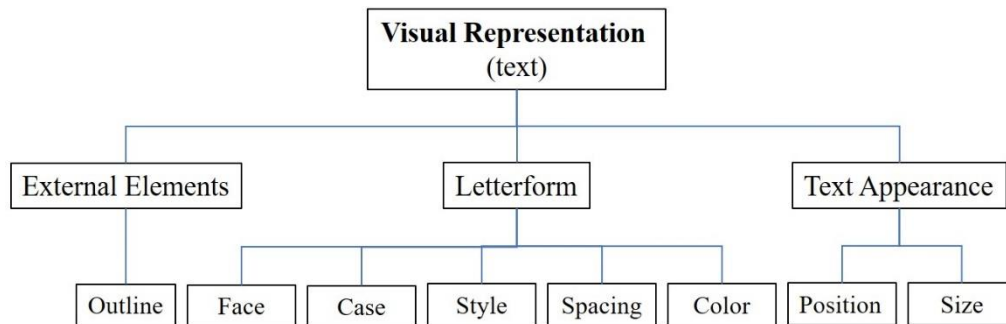


Fig. 3.22 Major features associated with the meme design (text)

3.3.3.1 Position

Position defines the location or placement of the text in the internet meme layout. The dominant and subordinate positions of an element in a composition are achieved by its contrasting characteristics (Carter et al., 2011). The placement of text in an internet meme is crucial for conveying meaning effectively. In internet meme design, the text takes a secondary position with primary emphasis given to the non-textual elements. Therefore, the positions of the text have been decided based on the priority assigned to different design elements in an internet meme layout. As in most cases, visuals or images occupied the major part of the internet meme layout; text mostly appeared top and bottom, or at the top or bottom, or in the centre. Placing text at the top or bottom of the meme can create a punchline effect, while placing text in the middle can create a more narrative feel. Also, text in English is naturally read left to right and top to bottom, so if you're including text in multiple places throughout the meme, the location of the text is important for properly conveying the message. The placement of text, whether it's at the top, bottom, or overlaying the image, affects readability and can influence the viewer's emotional response, making the message more engaging or impactful.

Internet memes are in the form of text, images, or images that contain text. In our corpus of 153 internet memes related to mental health issues, the majority

of the internet memes have images that contain text, and text memes. Further, by analyzing the sample of internet memes for the study, we found that image memes are composed of a single panel and multiple panels, similar to comic book strips.

Single-panel internet memes. Single-panel internet memes are internet memes that are composed of only one image. In a single-panel internet meme, the position of text is vital for effectively conveying the message. Proper placement enhances emphasis, allowing the punchline or key point to stand out. The majority of the internet memes in the sample have text at the top (1/3rd of the upper portion) and bottom (1/3rd of the lower portion) positions as shown in Fig. 3.23. Text that is positioned at the top and bottom of an internet meme typically adheres to the standard meme format, which is “image macro”. Text at the top usually sets the context and gives the viewers a foundation for understanding the image; text at the bottom usually contains the punchline or important message and builds a climax for the viewer. Therefore, the upper portion creates curiosity while the lower portion concludes with the intended message. This arrangement establishes a clear narrative flow and anticipation, enabling the internet meme to effectively communicate a message with humor.



Fig. 3.23 The dominant position (top and bottom) of the text in the internet meme layout

In addition, some of the internet memes have only text included at the top (1/3rd of the upper portion); this provides context for the viewer and sets the tone for the overall message. This positioning highlights the importance of the text, allowing the viewers to get the intended message before analyzing the visual elements (Fig. 3.24).



Fig. 3.24 The dominant position (top) of the text in the internet meme layout

In addition, a few internet memes in the sample have only text included at the bottom ($1/3^{\text{rd}}$ of the lower portion), which usually conveys the punchline or main message after the viewer has taken in the visual elements, as shown in Fig. 3.25. The bottom position can further increase the text's impact because it serves as a conclusion or summary, emphasizing the meme's general topic and creating a lasting impression.

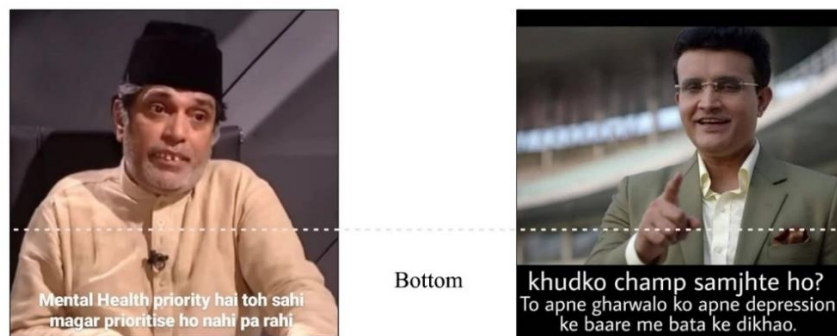


Fig. 3.25 The dominant position (bottom) of the text in the internet meme layout

Furthermore, a few internet memes from the sample feature the text in the centre ($1/3^{\text{rd}}$ portion falling in the centre) over the visual, which establishes a focal point that immediately captures the viewer's attention, as shown in Fig. 3.26. This position emphasizes the text's relevance by making it feel integrated into the visual. Viewers must concurrently connect with the visual and linguistic aspects, which can produce urgency or immediacy. Since it smoothly integrates text and visuals, this arrangement evokes powerful emotions and reinforces the meme's message.

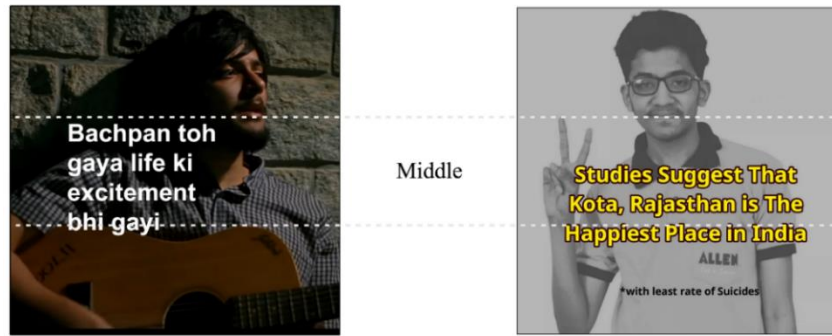


Fig. 3.26 The dominant position (centre) of the text in the internet meme layout

In certain instances, the internet meme layout employs overlying text. Overlaying text directly on an image can create immediacy, making the message feel more urgent and relatable, and also drawing the viewer's attention quickly to the intended reaction as shown in Fig. 3.27.

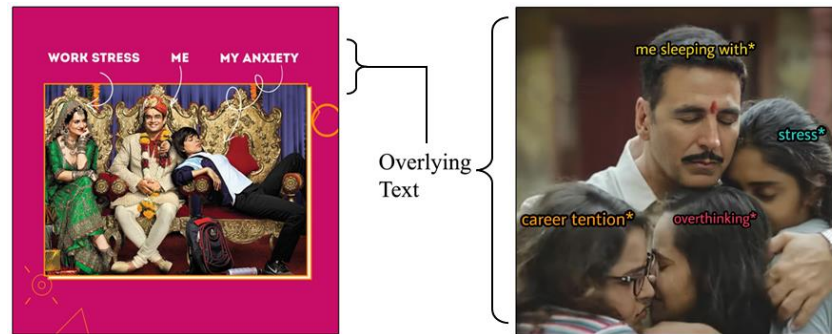


Fig. 3.27 The dominant position (overlay) of the text in the internet meme layout

In our corpus, a few internet memes have text memes- consisting solely of text with no visuals, centering the text becomes crucial for clarity and emphasis. Centered text can create a sense of unity and focus, guiding the viewer's attention directly to the message. Memes use smart wording and impactful phrasing in a centered structure to make them more visible and memorable, ensuring that viewers get the joke or insight (Fig. 3.28).

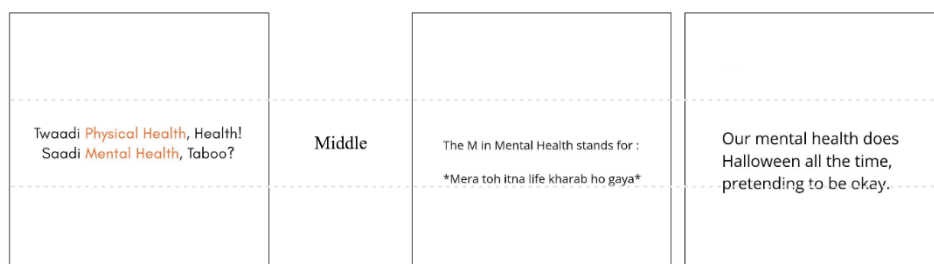


Fig. 3.28 The dominant position (center) of the text in the internet meme layout

Multiple-panel internet memes. Multiple-panel internet memes use separate panels to show progression, visually representing a narrative, reaction, or dialogue. The placement of text in each panel builds the humor or message, guiding the viewer's understanding through both visuals and text.

Some of the internet memes in the sample have the text positioned at the top, below a series of images, as shown in Fig. 3.29. The top text sets the context for the reaction depicted in the images below. The placement helps the viewer first read the situation being described and then immediately see the exaggerated, humorous visual response, enhancing the internet meme's emotional impact.

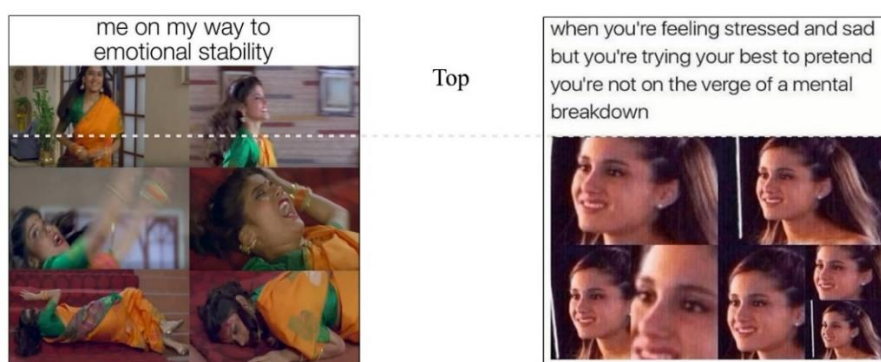


Fig. 3.29 The dominant position (top) of the text in the multiple-panel layout of internet memes

In addition, a few internet memes in the sample feature images and text in four quadrants. The text is placed at the bottom (1/3rd of the lower portion) of each Image, which usually conveys the punchline or main message after the viewer has taken in the visual elements. Each position aligns with the flow of dialogue, using the quadrants to reflect a conversational exchange as shown in Fig. 3.30. Furthermore, split panel internet memes have the placement of text in the upper part at the bottom, creating a contextual backdrop that supports the central figure, providing initial insight or setting the tone. Meanwhile, the lower part's text at the bottom draws attention to the action or main message, creating a direct connection between the visuals and the text. This juxtaposition enhances the narrative, allowing viewers to interpret the relationship between the scenes and the conveyed message more effectively, as shown in Fig. 3.31.

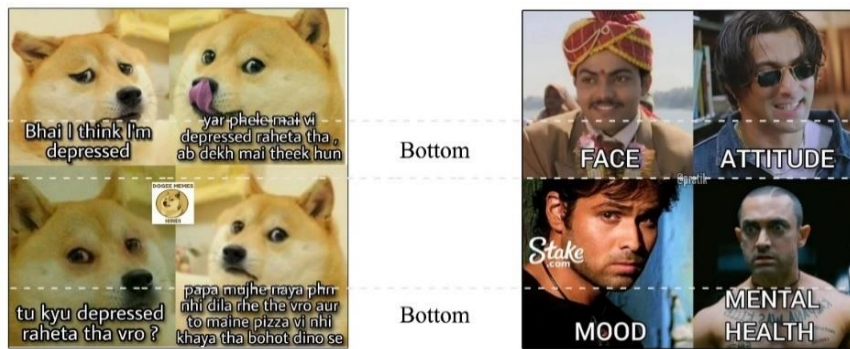


Fig. 3.30 The dominant position (bottom) of the text in the multiple-panel layout of internet memes



Fig. 3.31 The dominant position (bottom) of the text in the split-panel layout of internet memes

Therefore, together, these strategies help viewers understand the internet meme's message and make it more effective.

3.3.3.2 Size

The size of a design element in a graphic space and its relationship with other elements in the composition contribute significantly to creating emphasis (Zelanski & Fisher, 1996). Hence, depending upon the requirement, importance has been given to different design elements in the meme layout. In the case of text design, the use of size is very strategic. It has been explored in three ways: big, medium, and small. Philip B. Meggs (Carter et al., 2011) has already defined size as one of the factors influencing the visual hierarchy. However, depending on the requirement, the title has been used in a bigger size, overshadowing the other elements in the poster layout.

Text size is important in internet memes because it influences readability, viewer experience, and message interpretation. An effective balance of text size used in the layout helps to produce contrast, keep interest or engagement, and regulate the message flow of the internet meme. Larger text used in the internet meme immediately grabs the viewer's attention, often emphasizing the internet meme's most important point, such as the setup of the context or punchline, while smaller text can be used to convey secondary details, like a subtle joke or commentary, often creating a layered comedic effect. Moreover, text size contributes to the overall tone of the internet meme; large and bold texts can make the message feel louder or more urgent, while smaller texts may imply a quieter, more personal tone. Fig. 3.32 shows that both of the internet memes have bold or large text at the top might set the context, while smaller text at the bottom might deliver a humorous twist.



Fig. 3.32 Size variation in meme design (bold or large text at the top, while smaller text at the bottom)

In addition, Fig. 3.33 shows that both the internet memes have the setup of the joke or commentary in smaller text at the top, while the punchline is in bold, large text at the bottom. This contrast emphasizes the humor or key message. In this case, the smaller text builds the context, while the larger text delivers the humor or point of the meme.



Fig. 3.33 Size variation in meme design (smaller text at the top, while larger text at the bottom)

The size difference also helps create anticipation and focus attention on the punchline. This use of varying sizes controls the flow of how the message is read and where attention is drawn, ensuring the joke or message lands effectively.

3.3.3.3 Letterform

In typography, “forms relate to rendered letters. typefaces, words, or logotypes” (Tselentis, 2011). In the text used in the memes, individual letters act as building blocks where their form and style contribute to suggesting the meme theme. Letterforms can show both denotative and connotative properties depending on their form and style. The denotation of individual letters in a word is a straightforward task. Anyone who knows the written language can read and understand the literal meaning of the text. However, constructive meaning can only be generated through the understanding of a hidden message somewhere in the style and structure of the individual letters/ fonts (Van Leeuwen & Jewitt, 2000). Features such as face, case, style, and color have been explored to design a text that supports the meme theme and creates an impact.

Face. It is an attribute given to a particular letter/font. The type classification system broadly categorizes letters/fonts into two groups: serif and sans serif (Lupton, 2010; Tselentis, 2011). Serifs are a “slight projection finishing off a stroke of a letter,” whereas sans serifs are without any such projections (Fig. 3.34). Sans-serif fonts are commonly used in internet memes. Sans serif’s characteristic features, such as simplicity, mono line weight, balanced

proportions, pleasing form, and easily distinguished word pattern, make it more legible and readable (Kibbee, 1948). This might be one reason behind the dominance of sans-serif letters.

SANS-SERIF

Without serifs

Fig. 3.34 Face: sans-serif (without serifs)

For example, the internet meme shown in Fig. 3.35, Arial for the top text and Impact for the bottom text, creates a contrast in tone and emphasis. Arial, being a clean and simple sans-serif font, typically delivers the main message or context in a straightforward way. Meanwhile, Impact, a bolder, thicker font traditionally associated with memes, often delivers the punchline or humorous twist. The use of different fonts adds visual hierarchy, with Impact commanding more attention due to its weight and size, enhancing the comedic effect.



Fig. 3.35 Face: Sans-serif (Arial for the top and Impact for the bottom text)

Using two different typefaces in the top and bottom text of a meme creates a visual hierarchy and emphasizes different parts of the message. The top text often provides context, and a simpler, neutral typeface like Arial helps make it clear and straightforward. The bottom text, frequently containing the punchline or reaction, uses a bolder typeface like Impact to draw more attention and make the message stand out, enhancing its humor or dramatic impact. This contrast

visually separates the two elements, making the meme more engaging and effective.

Case. In Internet memes, various cases—sentence case, uppercase, lowercase, capitalize each word—are employed to convey tone, emphasis, or humor, and they also play a significant role in shaping how the message is perceived (Fig. 3.36).

UPPERCASE	lowercase
Sentence case	Capitalize Each Word

Fig. 3.36 Letter case: uppercase, lowercase, sentence case, capitalize each word

Though lowercase is easier to discriminate and recognize than uppercase (Lonsdale, 2014), uppercase letters have been widely used in internet meme design. It occupies more space in the layout and makes texts wider, which can be easily noticed. In uppercase, all letters are capitalized, and it is often used for emphasis, to convey intensity, making the message appear loud and urgent. This is why you'll often see punchlines in uppercase, giving them more intensity. On the other hand, in lowercase, no letters are capitalized, and letters may make the text feel casual or ironic, often giving off a subtle or understated tone. In sentence case, only the first letter of the first word is capitalized. This feels casual, conversational, and more subdued. It's less emphatic than uppercase but still conveys clarity and straightforwardness. Using "capitalize each word" in memes creates a distinct visual style that can make the text appear more formal, structured, or emphasized. When each word is capitalized, it adds a sense of importance or gravity to the content, regardless of the tone. In internet memes, this style can be used to exaggerate statements or add a dramatic flair to otherwise simple or humorous messages, as shown in Fig. 3.37. The deliberate choice of case in internet memes is therefore not merely aesthetic but a communicative strategy that enhances relatability, humor, and emotional appeal among the audience.



Fig. 3.37 Letter case a design feature in internet memes

Furthermore, in some instances, the top text of an internet meme uses sentence case while the bottom text uses uppercase. This contrast can serve different purposes. The sentence case at the top can introduce the context in a more neutral, conversational tone, while the uppercase at the bottom might deliver a punchline or emphasize a strong reaction, creating a dynamic impact. This variation helps guide the viewer's emotional response, with the change in case visually signifying a shift in tone or intensity (Fig. 3.38). The playful combination of upper and lowercase also helps in garnering more attention (Carter, 1997).



Fig. 3.38 Letter case (the top text of an internet meme uses sentence case, while the bottom text uses uppercase)

Spacing. Spacing is another important variable for exploration in lettering/typography. It refers to the spacing between two letters in a word. Literature suggests its significant impact on legibility (Carter, 1997; Carter et al., 2011). Designers manipulate the space between letters to create beautiful and harmonious yet readable typographic communication. Depending upon individual interest and design requirements, spacing can vary; however, it can be categorized into four major groups: loose, normal, tight, and overlapping, as shown in Fig. 3.39.



Fig. 3.39 Spacing: loose, normal, tight, and overlapping

Spacing is used in the text of internet memes, and it plays a crucial role in ensuring the internet meme's message is clear and visually appealing. Proper spacing between letters, words, and lines makes the text easier to read. It can also affect the tone or feel of the internet meme.

In internet meme text, spacing has been explored in Normal and Tight. Tight spacing may convey urgency or intensity, while looser spacing may create a more relaxed or humorous vibe. Spacing also helps balance the text with the accompanying image, making the overall internet meme more impactful. Examples of internet memes with different letter spacing as shown in Fig. 3.40. In addition, each spacing style plays a crucial role in enhancing the internet meme's overall impact and readability. In addition, line breaks and uneven text alignment are intentionally applied to create pauses, highlight key words, or replicate the rhythm of spoken language. Thus, spacing in internet memes is not random; it functions as a communicative strategy that enhances emotional expression, timing, and overall comedic impact.

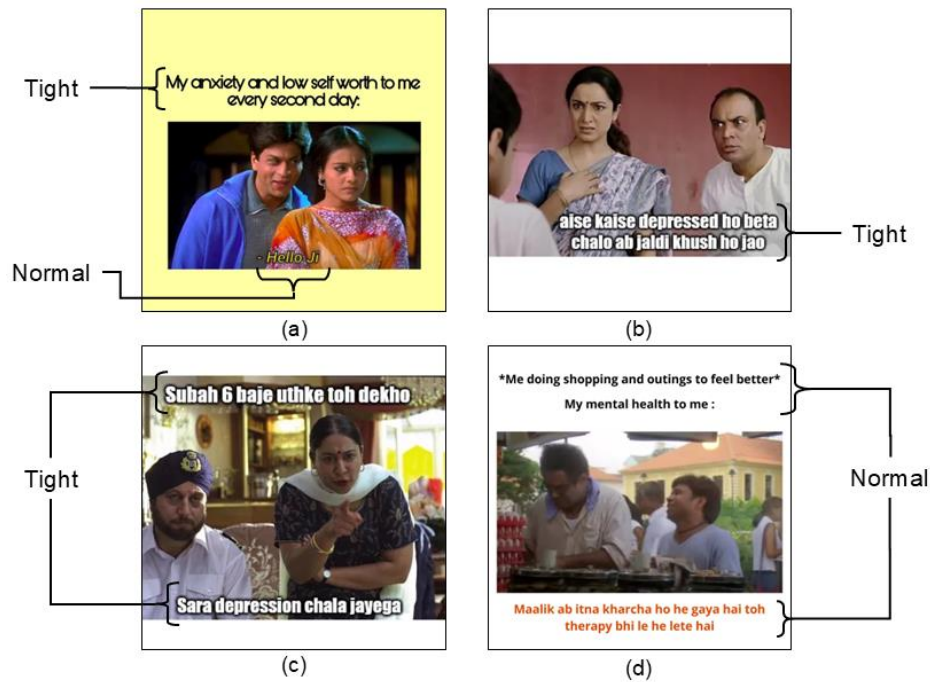


Fig. 3.40 Examples of internet memes with different letter spacing

Color. In internet memes, text color is critical for conveying the intended message effectively. Along with its visibility, its symbolic meaning has been utilized significantly to communicate. High-contrast colors, such as black on white or white on dark backgrounds, enhance readability, ensuring the text stands out (Fig. 3.41a). Bright colors like yellow or red are often used to evoke emotions, emphasizing humor or sarcasm. For instance, yellow text on a dark background can suggest cheerfulness, while red might signal urgency or strong emotion (Fig. 3.41b). As shown in Fig. 3.41c, the use of orange for "physical health" and "mental health" creates emotional contrast, as orange is often associated with energy and urgency, possibly suggesting the importance of these issues. The black text for the remaining letters against a white background establishes attention contrast, making the key terms stand out while ensuring readability. This combination guides viewers to focus on the critical messages regarding physical and mental health. The text in light blue with a black outline enhances visibility and contrast against the background, making the message stand out. The light blue color reflects feelings of calmness, while the black outline adds emphasis and helps in defining the text. This combination effectively conveys the struggles of depression, while the outline creates a

sharper visual impact, drawing the viewer's attention to the humorous yet poignant message about mental health (Fig. 3.41d). Overall, this design choice helps in effectively communicating the meme's theme.

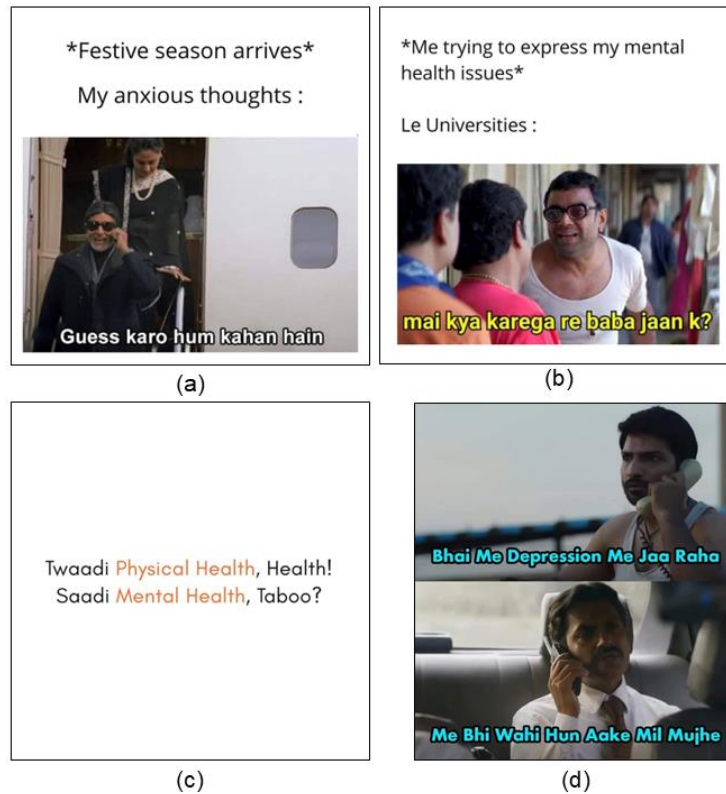


Fig. 3.41 Different color treatment to the meme design based on color context

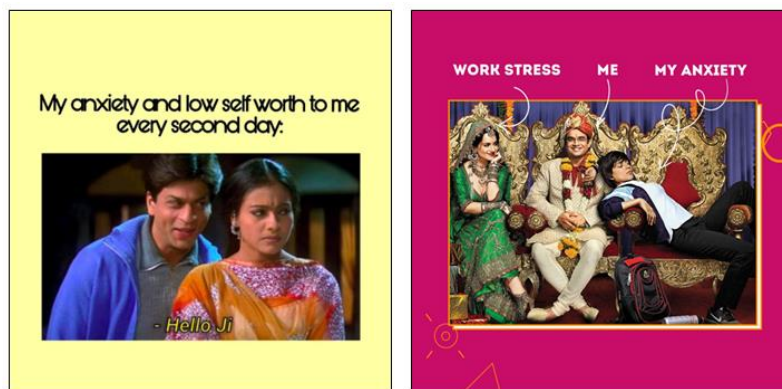


Fig. 3.42 Different color backgrounds for the memes design based on color context

Furthermore, a pink background in internet memes often conveys feelings of warmth, affection, and compassion. It can evoke a sense of playfulness or light-heartedness, making it suitable for themes related to love, friendship, and

positive mental health messages. Pink is also associated with softness and nurturing, which can enhance the overall emotional tone of the internet meme, making it more relatable and inviting to viewers. In addition, a yellow background with black text is an effective combination that enhances readability due to the high contrast. This color scheme often conveys a cheerful, optimistic tone, making it suitable for positive or uplifting messages. The brightness of yellow can evoke feelings of happiness and energy, while the black text ensures clarity and focus on the message (Fig. 3.42). In memes, this pairing can effectively draw attention and engage viewers, particularly when discussing topics like mental health awareness.

3.3.3.4 Text design using external elements- Outline

In internet memes, text design often incorporates external elements like outlines, shadows, or decorative fonts to enhance visibility and impact. Outlines can make text pop against complex backgrounds, improving readability and drawing attention to the message. It is also used to separate letters from the background for better legibility and contrast. For instance, white text with a black outline can stand out against colorful imagery, ensuring the viewer quickly grasps the meme's meaning. These decorative elements not only aid in comprehension but also contribute to the meme's overall aesthetic, making it more engaging and memorable.

Yellow text with a black outline in internet memes serves several purposes. The bright yellow color captures attention and evokes a sense of cheerfulness or energy, while the black outline enhances contrast, improving readability against various backgrounds (Fig. 3.43). This combination can emphasize humor or important messages, making them more impactful. The outlined text adds a visual flair that aligns with the playful and expressive nature of memes, helping to convey emotions or themes effectively while ensuring the text stands out in a busy or colorful context.



Fig. 3.43 Yellow text with a black outline

In addition, light blue text with a black outline in internet memes creates a visually appealing contrast that enhances readability while maintaining a soft, calming aesthetic. The light blue color can evoke feelings of tranquility and trust, aligning with themes related to mental health or positivity. The black outline helps the text stand out against various backgrounds, ensuring that the message is clear and impactful. This combination effectively draws attention to the text while conveying a gentle or humorous tone, depending on the context of the meme (Fig. 3.44).



Fig. 3.44 light blue text with a black outline

3.3.3.5 Layouts

The internet memes chosen for this study have 19 different layouts, with an aspect ratio (size) ranging from 1:1 to 4:5 to 9:16. Single panel: 'a' to 'f' is best suited with an aspect ratio (size) of 1:1, and Multiple panel: 'a' to 'd' is best suited with an aspect ratio (size) of 1:1 as shown in Fig. 3.45 and Fig. 3.46 respectively. Multiple panel: 'a' to 'g' is best suited with an aspect ratio (size)

of 4:5 as shown in Fig. 3.47. In addition, single panel: ‘a’ and ‘b’ is suited either with an aspect ratio (size) of 9:16 as illustrated in Fig. 3.48.

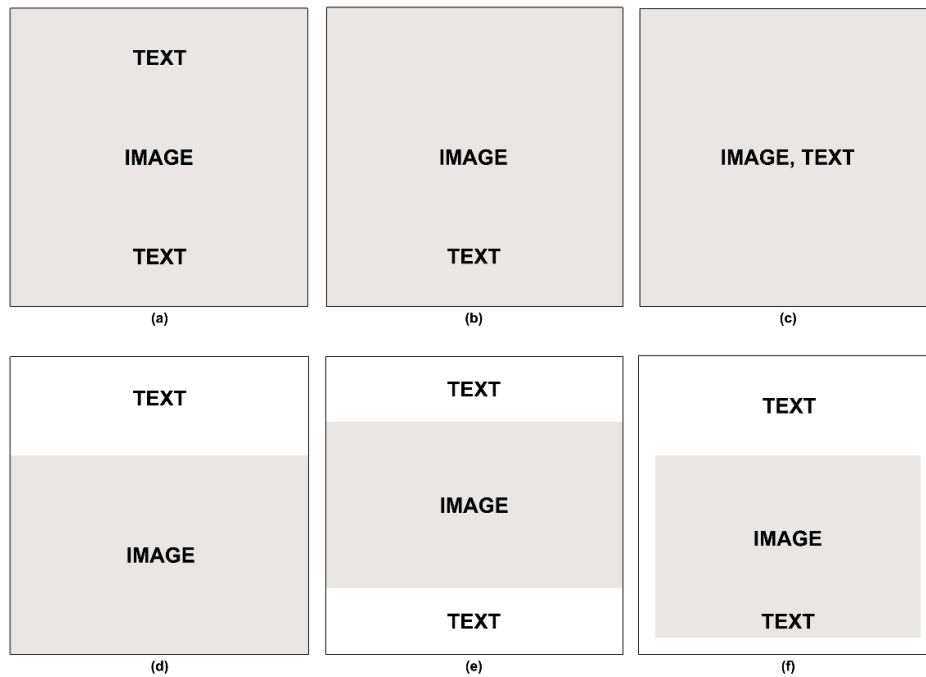


Fig. 3.45 Single panel: ‘a’ to ‘f’ is best suited with an aspect ratio (size) of 1:1

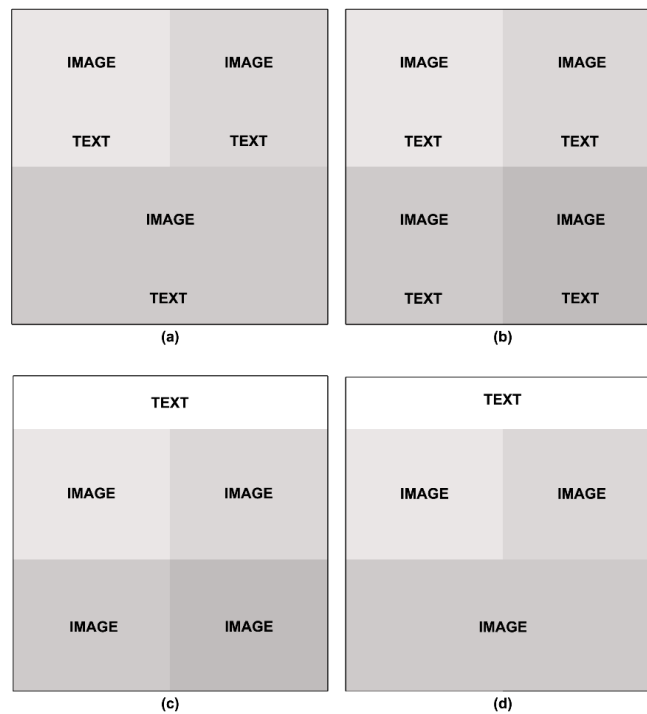


Fig. 3.46 Multiple panel: ‘a’ to ‘d’ is best suited with an aspect ratio (size) of 1:1



Fig. 3.47 Multiple panel: ‘a’ to ‘g’ is best suited with an aspect ratio (size) of 4:5

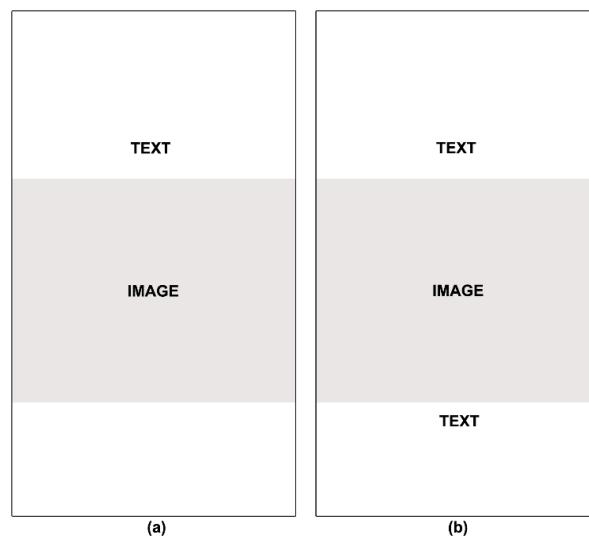


Fig. 3.48 single panel: ‘a’ and ‘b’ are suited either with an aspect ratio (size) of 9:16

Visual and compositional interpretation. For image macro analysis, (Kress & van Leeuwen, 2020) have promoted a systematic process for ‘reading’ or attributing the ‘grammar’ of visual images, or the method in which image components are integrated into meaningful wholes. For interpretation, three patterns were suggested, i.e., patterns of representation, patterns of interaction, and patterns of composition. For the aim of this thesis, the analysis will concentrate on the last two patterns, that is, patterns of interaction and patterns

of composition. The pattern of interaction explains that the images usually have two types of people: The people or things in the picture (called represented participants), and the people looking at the picture (called interactive participants). The way these two groups are shown helps shape how the viewer feels about the image, using things like eye contact, distance, and angles to shape how the viewer feels—whether they feel involved, distant, or just observing.

One of the parameters is Gaze- whether the person in the picture is looking at the viewer. (Kress & van Leeuwen, 2020) say that when people in images look directly at the viewer, it's called a "demand," i.e., they are asking the viewer to connect with them. When they look away, it's an "offer," i.e., the viewer just observes them without interaction. From a total sample of 153 memes, 17 were excluded: 9 text-only memes and 8 that depicted only non-living objects. This left 136 memes for analysis. Of these, 114 memes (83.82%) feature participants who do not make direct eye contact with the viewer. As a result, visual contact is not established, and the images do not directly address the viewer. These are classified as "offer" images, as they present the participants as objects of observation or sources of information. In contrast, 22 memes (16.18%) depict participants who make direct eye contact with the viewer. These are known as "demand" images, as the participants symbolically demand engagement by directly addressing the viewer. Offer gaze is used widely in those memes in which the depicted participant is offered to the receiver for separate observation.

One of the parameters, social distance, explains how close or far the person seems. (Kress & van Leeuwen, 2020) say that the distance between people in real life shows their relationship, and images do the same by showing how close or far the subject appears in the frame. From a sample of 153 memes, 17 were excluded, leaving 136 memes for analysis. Of these, 79 (58.09%) features size of the frame as close shot (Close personal distance), 34 (25%) features medium close shot (Far personal distance), 8 (5.88%) features long shot (Far social distance), 6 (4.41%) features very close shot (Intimate distance), 5 (3.68%) features medium long shot (Close social distance), and 4 (2.94%) features very long shot (Far social distance). Close shot (Close personal

distance) is used widely in image macros as patterns of interaction and composition. One of the parameters, Horizontal angle, explains whether we see the person from the front or side. (Kress & van Leeuwen, 2020) explain that if the person in the image is shown from the front, it feels like they are part of our world. If shown from the side (an angle), it feels like they are in their own world, separate from us. Of these, 120 (88.24%) features oblique angles, and we (the viewers) are not engaged with the performers. We are aligned with them. What we observe here is ‘not part of our world’, while 16 (11.76%) features a frontal angle. The viewer is involved in these memes, and he is not detached from who or what he sees.

One of the parameters, Vertical angle, explains whether we look up at them, down at them, or at eye level. If we look down at someone in an image, it shows we have power over them. If we look up, they seem more powerful. If they are at eye-level, it shows equality—no one has more power than the other. From a sample of 153 memes, 17 were excluded, leaving 136 memes for analysis. Of these, 126 memes (92.65%) feature participants at eye-level, where there is symbolic equality, and no power difference is involved. In 8 memes (5.88%), the represented participant is seen from a low angle, giving them symbolic power over the viewer. In general, low angles give an impression of superiority, exaltation, triumph, and power to the viewer. In two memes (1.47%), the viewer holds symbolic power over the represented participant, as the participant is seen from a high angle.

Overall, the analysis reveals that for Visuals, features such as the absence of direct gaze (contact-offer) made the images appear more realistic, while a social distance, often represented by close shots (close personal distance), was predominant. In terms of horizontal perspective, oblique angles occurred most frequently, and vertically, the images photographed at eye level were the most common compared to other angles. Regarding compositional aspects, the center/margin scheme was the most frequently used information value system, indicating that the most important subjects were positioned centrally, serving as the primary focus and nucleus of information. And for textual features such as positioning, text should appear both at the top and bottom of the meme layout.

Larger font sizes are recommended for delivering the primary context or punchline, while smaller sizes may be used for secondary details or to convey a humorous tone. Regarding letterform, the majority of the memes had sans-serif fonts, normal and tight spacing, bright colors for text, colorful backgrounds, and outlined text.

3.3.4 SEMANTIC AND PRAGMATIC ANALYSIS

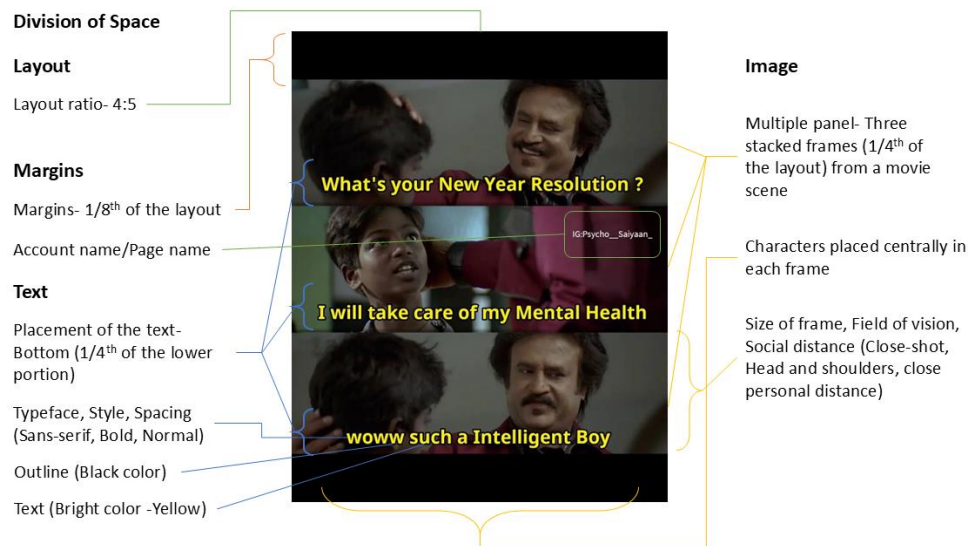


Fig. 3.49 Analysis of Components and Layout in a Meme from the Corpus

Fig. 3.49 shows the analysis of components and layout in an internet meme from the Corpus. The layout, with an aspect ratio (size) for an internet meme, is 4:5. The internet meme layout included margins, with black strips occupying one-eighth of the space at both the top and bottom. The internet meme also featured the account name psycho__saiyaan_ placed within the layout, serving as a form of digital signature or source attribution. The background is muted, helping the bright yellow text stand out. This contrast directs the viewer's attention to the message, ensuring readability and impact. A black outline is used in the text to separate letters from the background for better legibility and contrast. The composition is simple, making it easy for viewers or audiences to follow the sequence of dialogue. In this internet meme, the account name/page provides credit, builds brand visibility, deters content theft, and directs viewers to the original creator's profile.

Table 3.2 Semantic and pragmatic analysis for meme

Semantic analysis of a meme from the corpus	
Denotative meaning	This internet meme features three frames from a popular movie where a character asks a child about their New Year's resolution. The child responds, "I will take care of my mental health," followed by a reaction of exaggerated praise: "Woww, such an intelligent boy."
Connotative meaning	The meme humorously exaggerates how rare or unique prioritizing mental health is perceived in some cultures, subtly critiquing societal norms that undervalue mental health awareness. It reinforces the importance of mental health while mocking the idea that prioritizing it is extraordinary.
Pragmatic analysis of a meme from the corpus	
Contextual influences, Interpretation, Social implications	The message is conveyed pragmatically by combining humor and exaggeration to both normalize and critique the cultural tendency to dismiss mental health awareness. The adult's response implies that caring for mental health is surprisingly "intelligent," which further mocks the societal devaluation of mental well-being.

Overall, the semantic analysis of the memes from the corpus showed that mental health memes, expressed through simplified, culturally relatable language and emotionally charged phrases that reflect a humorous yet authentic portrayal of psychological struggles or issues. And the pragmatic analysis showed that mental health memes function as tools for emotional expression, social bonding, and self-validation, with users (young people) often engaging with them to cope with personal experiences, reduce stigma, or communicate shared struggles through humor and relatability.

3.3.5 COGNITIVE DESIGN ASPECTS IN MENTAL HEALTH MEMES

To illustrate how cognitive parameters operate in mental health memes, one representative meme was analyzed across five dimensions: incongruity and humor, processing fluency, aptness, perceived replicability, and emotional triggers.

Analysis of the Meme: The mental health meme in Fig. 3.50 demonstrates the role of cognitive design principles in shaping how mental health-related content is perceived and engaged with. It employs a familiar Bollywood still, paired with a concise colloquial caption, making it an appropriate case to understand how humor, fluency, and emotional triggers operate within such communicative formats.

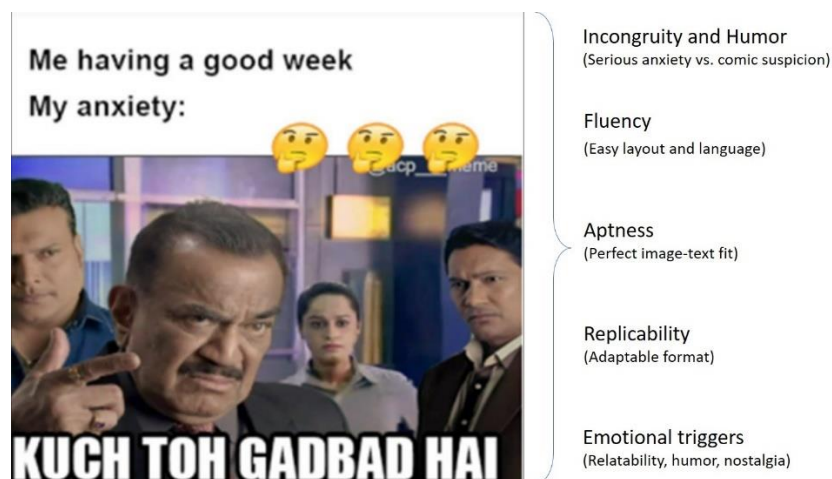


Fig. 3.50 Example of a mental health meme reflecting different cognitive design aspects

1. Incongruity and Humor

- The humor arises from incongruity: anxiety (a serious psychological issue) is depicted through a detective's exaggerated suspicion from the TV show *CID*.
- Viewers (college or university students) resolve this incongruity by mapping it onto the idea that even during good times, anxiety irrationally suspects that "something is wrong."
- This humorous mismatch reduces the heaviness of the mental health theme while keeping it relatable.

2. Processing Fluency

- The layout is simple and direct: one short text setup at the top, text at the bottom usually contains the punchline plus a recognizable reaction image.
- Language is colloquial (“Kuch toh gadbad hai”), ensuring easy comprehension for an Indian audience familiar with the phrase.
- Minimal text plus strong facial expression that explains low cognitive load and quick understanding.

3. Aptness

- The chosen CID image is apt because the character’s iconic, suspicious look aligns perfectly with the way anxiety “over-interprets” situations.
- The text-image combination is contextually appropriate: it translates a complex mental state (hypervigilance, irrational worry) into a culturally familiar expression.
- Aptness makes the meme feel “just right,” strengthening its resonance.

4. Perceived Replicability

- The structure (setup text plus reaction image plus punchline) is a common meme format, making it easily adaptable.
- Other users can swap the caption (e.g., “My mom when I’m quiet” / “Kuch toh gadbad hai”) while retaining recognizability.
- This template-like quality increases its spreadability across contexts, while still being tied to mental health awareness.

5. Emotional Triggers

- Relatability: People with anxiety can emotionally identify with the experience of “good moments being spoiled by worry.”
- Humor: The exaggerated expression of suspicion makes the meme funny, reducing the heaviness of the topic.
- These emotional cues make viewers not only laugh but also feel seen and understood, encouraging sharing.

This meme effectively combines fluency (easy layout and language), incongruity (serious anxiety vs. comic suspicion), aptness (perfect image-text fit), replicability (adaptable format), and emotional triggers (relatability, humor, nostalgia). Together, these cognitive design aspects make the meme both entertaining and meaningful, turning a complex mental health experience into a light yet powerful form of communication.

3.4 CONCLUDING REMARKS

The analysis of mental health memes highlights several key visual and textual features that contribute to their effectiveness as a medium for communication. Features such as layout design, text appearance, color schemes, and imagery play a critical role in capturing attention and conveying messages. Well-structured layouts enhance readability and engagement, while strategic use of colors evokes emotions and reinforces the tone of the content. Text appearance, including font style and size, complements the visual elements, ensuring clarity and impact. Additionally, the semantic and pragmatic analysis of mental health memes reveals deeper layers of meaning and audience interpretation. Furthermore, the content analysis shows that 61.44% of mental health memes focus on stigma, propagate negative beliefs, often spreading false or incorrect information about mental health, while 38.56% address coping by offering emotional support and validation. This highlights the need to prioritize memes that challenge stigma constructively and provide supportive content to promote societal awareness.

In conclusion, the integration of thoughtful design elements and meaningful themes in mental health memes underscores their potential as powerful tools for societal communication and awareness. Building on this foundation, the next chapter explores how exposure to and engagement with such memes influence students' awareness of mental health issues. It examines how interaction with relatable, well-designed meme content can shape perceptions, enhance emotional connection, and contribute to raising awareness of mental health issues among young individuals.

CHAPTER 4

MENTAL HEALTH MEMES AND THEIR ROLE IN RAISING SOCIAL AWARENESS ON MENTAL HEALTH ISSUES AMONG COLLEGE AND UNIVERSITY STUDENTS

4.1 INTRODUCTION

In recent years, internet memes have emerged as a powerful tool for communication on social media platforms, often used to engage people in humorous, relatable, and thought-provoking ways. Internet memes are increasingly utilized to address serious societal issues, including mental health, providing a platform for awareness that resonates with younger people. College and university students, who are some of the most active users of social media, frequently engage with these internet memes, shaping their understanding and attitudes toward mental health issues. Given that mental health challenges like anxiety and depression are prevalent in student populations, this demographic stands to benefit significantly from increased awareness and social support promoted through digital content.

This chapter examines the role of mental health memes in raising social awareness about mental health issues, particularly among college and university students. They offer a unique medium to communicate complex and sensitive topics in a more accessible and less stigmatizing way, making them an effective tool to foster discussions on mental health. By appealing to students' interests and social media habits, mental health memes can facilitate a broader understanding of mental health issues and potentially reduce associated stigma.

4.1.1 LITERATURE REVIEW

The literature review provides an overview of the role of digital platforms in promoting health-related behaviors, the effectiveness of online communication tools like internet memes in raising awareness in a humorous manner, and the mental health issues faced by college and university students.

4.1.1.1 The role of media platforms in mental health awareness campaigns

The section on “The Role of Media Platforms in Mental Health Awareness Campaigns” was covered comprehensively in Chapter 1 and is not repeated here to maintain conciseness.

4.1.1.2 Effectiveness of digital media platforms in promoting health-related behaviours

Previous research has demonstrated that digital platforms, including social media, can be efficient tools for sharing information and promoting health-related behaviors (Saud et al., 2020). Young people regularly use social media accounts to share information and get updates, which helps them become more aware of health conditions and has altered how they behave in daily life toward their health and the health of others. Social media platforms such as Facebook and Instagram have been utilized to promote mental health campaigns since they can quickly reach a large number of people (Latha et al., 2020). These social media platforms have used very interesting ways to promote and raise awareness for mental health issues. One of the studies used Facebook posts to promote awareness about HPV vaccination and discovered that personal stories are more effective in creating impact (Loft et al., 2020). Another study uses Facebook Live to discuss general information and resources for promoting cancer education in the community (Mora et al., 2023). In the same line, one of the studies used Facebook games to raise awareness about breast cancer (Hill & Hayes, 2015). Some studies used Facebook advertising to promote and grow online health communities. Additionally, Facebook advertisements with happy faces attracted more clicks from users to the website than advertisements with sad faces and were more effective than traditional approaches (Horrell et al., 2019; Hui et al., 2015). Furthermore, one of the studies used social media to promote suicide prevention among young people using a YouTube suicide

prevention short film that brought positive perceived changes in the young people's knowledge, attitude, and behaviors toward suicide prevention (Cheng et al., 2019). Similarly, one of the studies used an intervention that is SMS text messaging and role model videos to promote mental wellness for teenagers and young people (Craig Rushing et al., 2021). Another study used a social media intervention to improve online communication about suicidal tendencies towards young people (Sala et al., 2021).

4.1.1.3 Exposure to and engagement with social media in various contexts

Additionally, studies on media exposure from various contexts, including health behavior, the banking sector, and the aviation sector, were discussed. One of the studies investigated the impact of media on people's health behaviour and found that increased media exposure to pandemic news through media channels was positively associated with prevention measures, perceived knowledge, and fear (Melki et al., 2022). Similarly, one more study discovered a significant prevalence of issues of mental health that were positively associated with frequent social media exposure during the COVID-19 period (Gao et al., 2020). In addition, one of the studies found that media helped healthcare workers and the general public obtain up-to-date information, improving knowledge and awareness. Additionally, they found that social media accounted for 33% of pharmacists' information sources, followed by 27% of radio and television, and 22% of newspapers and magazines (Karasneh et al., 2021). In contrast, one of the studies in the banking sector observed that consumers' exposure to electronic banking channels such as ATMs and online banking has a substantial impact on their understanding of e-banking (Inegbedion et al., 2020). In addition, one of the studies in the aviation sector found that hypoxic conditions had a substantial impact on helicopter pilots' awareness of the environment (AoE) (Steinman et al., 2021). In addition, some studies on engagement show that social media users and commenters use the term "engagement" to characterize their activities, such as liking, sharing, and commenting on posts (Dev & Mishra, 2024; Eslami et al., 2022). Furthermore, user engagement on social media can be influenced by various post types such as images, videos, links, the schedule of posts, the

duration between posts, and the emotional appeal of messages as opposed to the informative appeal (Dev & Mishra, 2024; Dhaoui & Webster, 2021; Gkikas et al., 2022).

4.1.1.4 Internet memes

Internet Memes play a crucial role in online participatory culture and digital activism, both of which aim to raise awareness (Anderson & Keehn, 2020; Fraser et al., 2022; Gleeson & Turner, 2019). Internet memes' content tends to be "whimsical" and "playful-serious," and their playful-serious nature can serve as a medium for conveying difficult truths in humorous ways (Editor et al., n.d.). The literature suggests that humour appeal plays a significant role in generating interest and internet meme success, and it is a widely used strategy (Hong & Low, 2024; Knobel & Lankshear, 2007; Lenda et al., 2020; Shifman, 2014). Furthermore, the recipients will like the internet meme if they find it entertaining and emotionally relatable. Additionally, due to their viral nature, internet memes can rapidly spread and facilitate wide-reaching awareness (Malodia et al., 2022). The use of internet memes has spread widely in many spheres of our daily lives. For example, internet memes are utilized in a variety of contexts, including political campaigns, business advertisements, and campaigns (Malodia et al., 2022), civic engagement with environmental issues such as climate change, and to raise awareness of endangered native species, aiding in stress reduction efforts, and cultural education tools. Internet memes are used to communicate political satire, but they do not affect people's voting behavior, political opinions, or ideologies. Memes are thought to have been created for entertainment (Kulkarni, 2017; Shifman, 2011). Climate change memes primarily focus on the risks that animals and humans face as a result of climate change. Individual intentions for online civic engagement in climate change are increased by exposure to climate change memes. As a result, memes have the potential to address both humorous and serious social issues (Zhang & Pinto, 2021). During the pandemic, many popular memes were spread across the internet, and viewing these memes generates psychological responses such as stronger cuteness responses, higher levels of reported humor, more positive emotions, and lower levels of information processing. As a result, memes have

the potential to influence people's COVID-19 stress and coping efficacy (Myrick et al., 2021). Internet memes are typically thought of as humorous and entertaining items in social communication, but they are also used in secondary education to develop social and cultural awareness. In L2 (language 2) teaching, internet memes are used as cultural education tools (Sedliarova & Solovyeva, 2020). Recently, a significant proportion of mental health memes have been seen on pages, groups, and forums dedicated to the dissemination of content related to the symptoms of mental health disorders such as depression, anxiety, suicidal ideation, and stress, and these pages, groups, and forums have a diverse user base including young people (Hong & Low, 2024). Limited exploration has been done in this area. Research suggests that internet memes related to endangered species are effective in generating interest and raising awareness to promote conversation (Lenda et al., 2020). One of the studies examined how the Bird of the Year campaign uses internet memes to raise awareness of endangered wildlife, and the findings show that light-hearted memes can operate for consciousness-raising (Fraser et al., 2022; Lenda et al., 2020). Some studies employ online communication tools, such as mental health memes, to assess sensitivity to mental health issues (Gupta et al., 20121), while others suggest that mental health memes are used as a coping method (Akram & Drabble, 2022; Myrick et al., 2021; Weiser & Alam, 2022), depressive internet memes are more humorous or relatable to those who experiencing these symptoms (Akram et al., 2020, 2021). However, to date, there has been no study conducted on the effectiveness of mental health memes as tools for mental health awareness among college and university students. Further research on the effectiveness of internet memes as tools for mental health awareness is essential.

Based on the literature, the research hypotheses formed are:

1. H₁: There is a significant and positive impact of exposure to mental health memes on awareness related to mental health issues among college and university students.
2. H₂: There is a significant and positive impact of engagement with mental health memes on awareness related to mental health issues among college and university students. Below is the conceptual framework that

was formulated based on the hypotheses that will be tested for this study (Fig. 4.1).

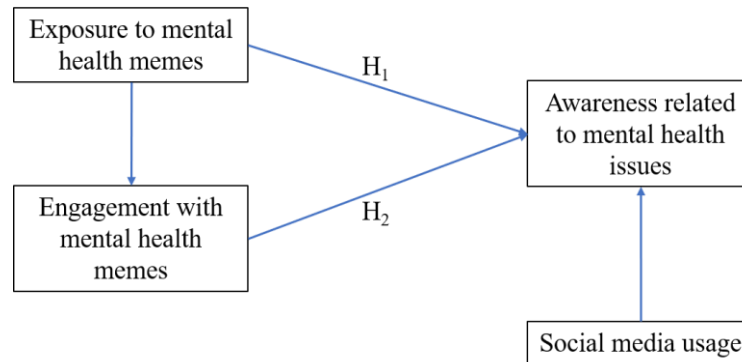


Fig. 4.1 Conceptual framework

4.1.2 OBJECTIVES OF THE STUDY

This study aims to investigate how mental health memes contribute to social awareness of mental health issues among students. To achieve this, the study is divided into two parts:

1. To describe and determine the relationship between the effect of exposure to and engagement with mental health memes on awareness related to mental health issues among college and university students.
2. To evaluate the visual and verbal characteristics, likeability, shareability, and effectiveness in raising awareness of internet memes ($N=20$) related to mental health issues, selected from various categories, among college and university students.

4.2 METHODOLOGY

The study employed two distinct methodologies; each aligned with a specific research objective. The rationale for using separate methodologies lies in the unique analytical focus required by each objective. The methodology adopted in this study is presented as a flow diagram, as shown in Fig. 4.2.

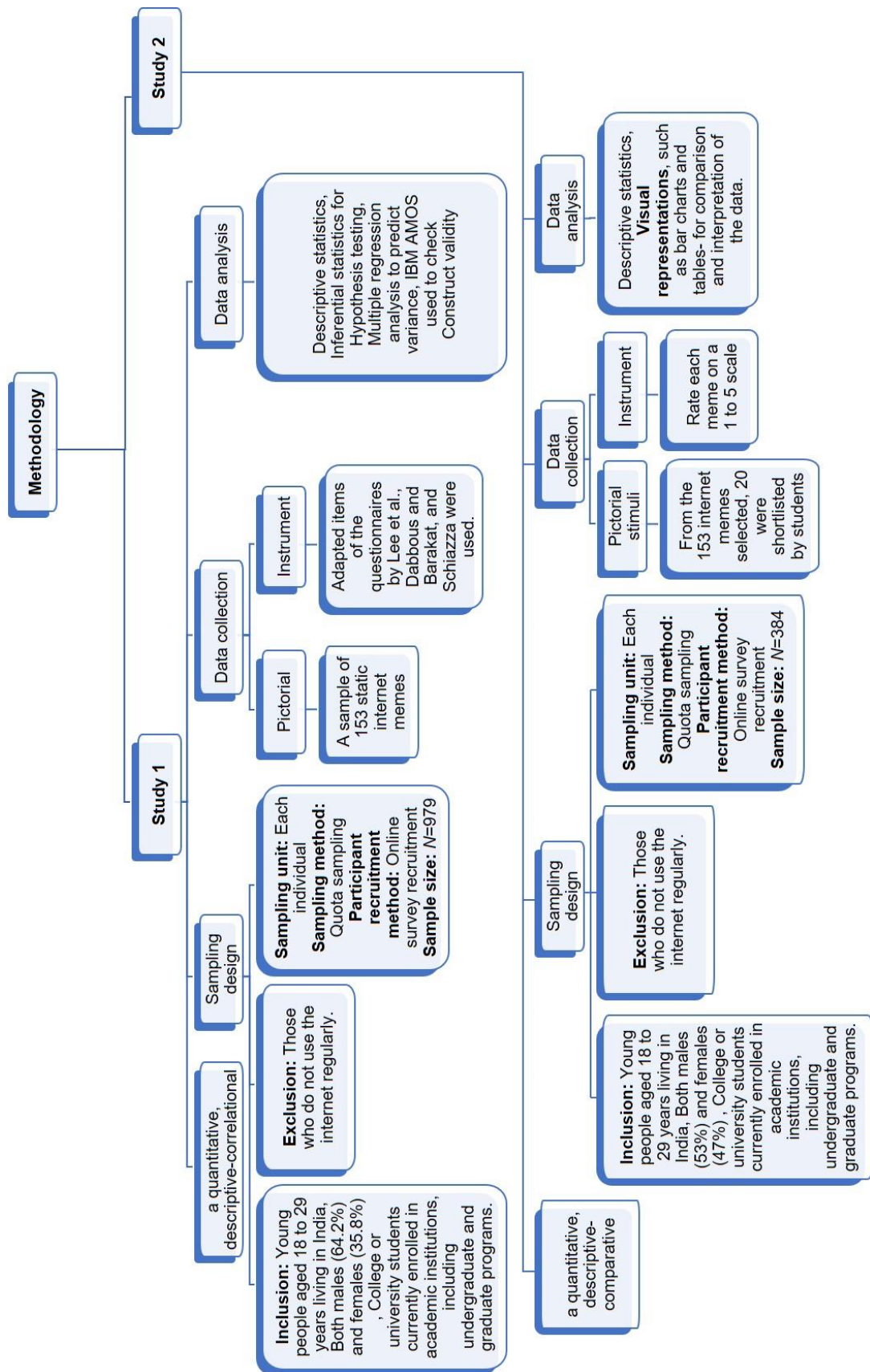


Fig. 4.2 Flow diagram of the methodology used in this study

4.2.1 METHODOLOGY FOR STUDY 1

4.2.1.1 Research design

This research study utilized quantitative research, a descriptive-correlational research design (Acebes-Sánchez et al., 2019; Bailey et al., 2010; Beauvais et al., 2014; Devi, 2023; Isabel Tan et al., 2021) in its attempt to describe and determine the relationship between the effect of exposure to and engagement with mental health memes on awareness related to mental health issues among college and university students.

4.2.1.2 Sampling design

The study includes young people aged 18 to 29 years living in India, both males (64.2%) and females (35.8%) from various socioeconomic backgrounds, who are currently enrolled in college or university academic institutions (public and private), including undergraduate and graduate programs. It excludes those who do not use the internet regularly. The population type is infinite. Quota sampling, a non-probability sampling, was used to select the participants. Since the population is infinite, a sampling frame may not be applicable.

The participants were recruited through an online survey using email, social media, college websites, and student forums. While the survey was open to all regions, a larger proportion of responses were received from northern states, particularly Rajasthan, Haryana, Uttar Pradesh, Bihar, Uttarakhand, and Delhi. This regional concentration may reflect varying levels of internet access, social media reach, or participant engagement across different states, and is acknowledged as a limitation in terms of national representativeness. The total sample size for the study, as determined following the guidelines of Bartlett et al. (2001), comprised 979 participants, ensuring statistical reliability and validity of the findings. The research was conducted over a span of twelve weeks, during which data were systematically collected and analyzed, as depicted in Fig. 4.3.

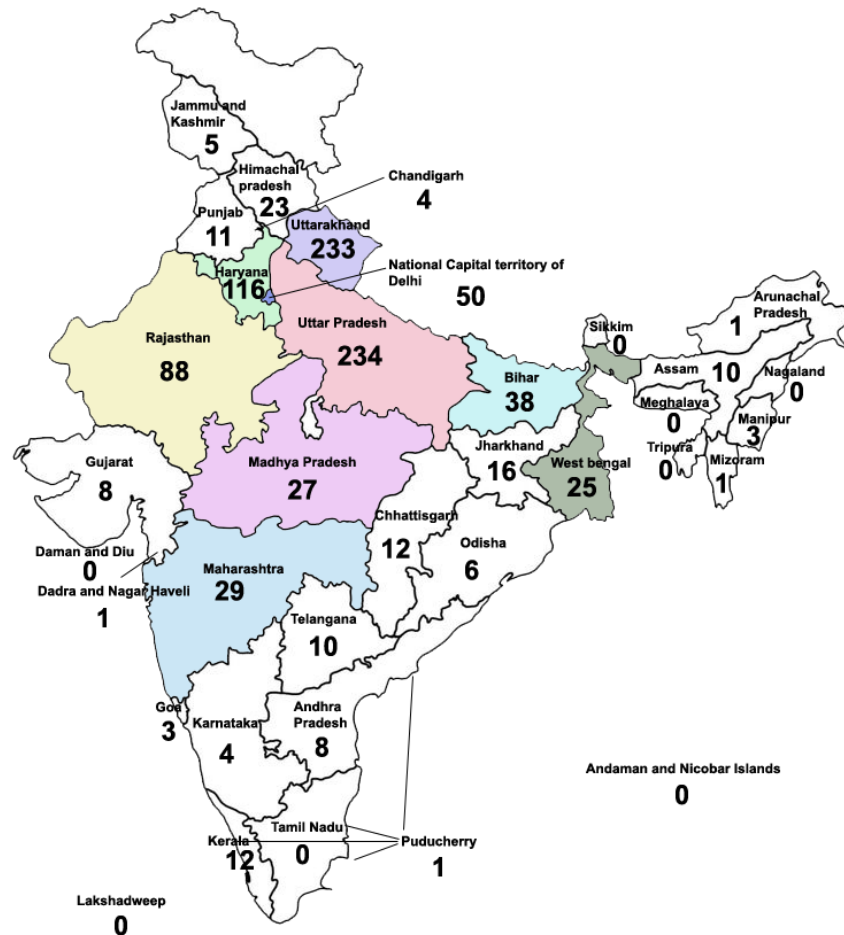


Fig. 4.3 Study site/location

4.2.1.3 Data collection

Pictorial stimuli. Mental health memes, collected as pictorial stimuli in Chapter 3, totaling 153, from 153, with some of them included for the questionnaire, were used in this study (Fig. 4.4).



Fig. 4.4 Sample dataset of mental health memes collected from the Twitter, Facebook, and Instagram accounts on mental health issues

Instrument. In quantitative studies, questionnaires are a common tool (Boeren, 2018). Questionnaires are used for collecting large amounts of quantifiable data (Benyon et al., 2014). This survey research was conducted in three phases. The first one was a pre-study questionnaire, another one was a pilot study, and the last one final questionnaire. In the pre-study and pilot study questionnaire pattern was discussed with research experts and the statistician to focus on the validity and reliability of the survey questionnaire. In the early stages, perfect questionnaire preparation was not possible in any survey study. These pre-study and pilot study stages were really helpful in finding the flaws and weaknesses in identifying variables in constructing a solid questionnaire. For this study, a detailed survey was conducted using a questionnaire as a tool. Due to the lack of a valid and reliable questionnaire for measuring exposure and engagement with internet memes and awareness about mental health issues among college and university students, questionnaires that were used in previous studies (like the use of internet memes in political campaigns, business advertising campaigns, and mental health awareness) was adapted, then reviewed and modified by the researchers, and modified questionnaire was evaluated by its content validity and construct validity. In this respect, the item (Dabbous & Barakat, 2020; Lee et al., 2023; Schiazza, 2023) were used. In total, 18 items were obtained after eliminating overlaps. The content validity (Yusoff, 2019) and construct validity was used to assess the validity of the tool.

Pilot study. The developed questionnaire was administered to 39 subjects for the pilot study. A pilot questionnaire consisting of 24 closed-ended, dichotomous, multiple-choice, checklist-type, and 5-point Likert scale questions was formulated. Quota sampling, a non-probability sampling, is used in this study. It includes young people aged 18 to 29 years living in India, both males and females from various socioeconomic backgrounds, who are currently enrolled in college or university academic institutions (public and private), including undergraduate and graduate programs. It excludes those who do not use the internet regularly. The study used an online survey method. The questionnaires were constructed with the help of Google Forms and posted through Social Networking sites. WhatsApp and Email were the main platforms

to distribute questionnaires. Questionnaires were distributed randomly to the respondents who were social media users. Through the pilot study, the researcher understood the flaws and drawbacks of the variables used in the survey tool. The Results of the Pilot Study that Out of 43 respondents, 39 responses were returned and valid. all participants were very comfortable and interested in participating in an online survey; some respondents felt the questionnaires were lengthy. So, the researcher cut down a few questions; very few respondents could not understand the meaning of the meme used in the survey, some questions posted with grammatical and language errors were corrected, and respondents skipped a few questions. The reason was found and rectified. This pilot study helped to test the reliability of the questionnaire. Unreliable questionnaires were removed. Through effective feedback from the respondents, the final questionnaire was refined and forwarded for data collection to around 979 samples through an online Google survey.

The basic structure of the survey questionnaire. There were 24 closed-ended questions used in the questionnaire. The survey questionnaire was split into two sections: the first section is a 12-item questionnaire covering demographic characteristics, social media usage, awareness about internet memes, and types of internet memes they come across, while the second section contains a questionnaire with 3 domains and 12 items related to exposure, engagement with internet memes, and awareness of mental health issues. The designed tool was based on dichotomous, multiple-choice, checklist-type, and 5-point Likert scale questions. The questionnaire was administered using Google Forms. It is an online software and a component of Google's web application suite. This application is used to create online surveys and statistical reports for questionnaires. This can be used to conduct quantitative analysis. Google Forms includes options for responding to multiple choice questions, checkboxes, paragraphs, short replies, file upload, linear scale, multiple choice grid, check box grid, and a date and time field. The relevant questionnaire is presented in Appendix D.

4.2.1.4 Validity analysis- Content validity

Content validity is the extent to which a measurement tool represents the measured construct, and it is considered essential evidence to support the validity of a measurement tool, such as a questionnaire for research. Creating a content validation form is the first step in the content validation process. Next, an expert review panel was chosen, in which the three subject experts (Polit & Beck, 2006) (experience of more than ten years) in their fields were included the School of Design, the School of Computer Science, and one member who was an independent psychologist. Refer to Appendix A for the content validation form distributed to the experts. After that, content validation is carried out, domains and items are reviewed, scores are assigned to each item, and finally, the CVI (Content Validity Index) is calculated. From Table 4.1, we calculated I-CVI (Item-Content Validity Index) for each item, S-CVI/Ave (Scale-Content Validity Index/Average) = 0.91, S-CVI/UA (Scale-Content Validity Index/Universal Agreement) = 0.83. Based on the above value of I-CVI, S-CVI/Ave, and S-CVI/UA, we can conclude that I-CVI, S-CVI/Ave, and S-CVI/UA meet satisfactory levels, and thus the scale of the questionnaire has achieved a satisfactory level of content validity. The Cronbach's alpha (α) for reliability was determined to be adequate for all subscales (0.84 for exposure, 0.78 for engagement, and 0.87 for awareness). The content validation form for expert evaluation can be found in Appendix E.

Table 4.1 The relevance ratings on the item scale by three experts

Item	Expert 1	Expert 2	Expert 3	Experts in Agreement	I-CVI	UA
Q1	1	1	1	3	1	1
Q2	1	1	1	3	1	1
Q3	1	1	1	3	1	1
Q4	1	1	1	3	1	1
Q5	1	1	1	3	1	1
Q6	1	1	1	3	1	1
Q7	1	1	1	3	1	1
Q8	0	1	1	2	0.7	0
Q9	1	1	1	3	1	1
Q10	1	0	0	1	0.3	0
Q11	1	1	1	3	1	1
Q12	1	1	1	3	1	1
				S-CVI/Ave	0.91	
Proportion relevance	0.91	0.91	0.91	S-CVI/UA		0.83
Average proportion of items judged as relevance across the three experts				0.91		

4.2.1.5 Data analysis

Data from the Questionnaire was analysed with IBM SPSS version 25.0 software. For sociodemographic variables, descriptive statistics were used. To estimate the proportion of variance in awareness related to mental health issues among college and university students that can be accounted for by exposure to and engagement with mental health memes, a standard multiple regression analysis (MRA) was performed. The significance level was set at 0.05. The questionnaire's construct validity has been assessed using AMOS.

4.2.1.6 Ethical consideration

The study was approved by the Institutional Ethics Committee, UPES, Dehradun, India (Registration No. EC/NEW/INST/2022/2820). In the study, the participants' data remained confidential, and informed consent was taken from all participants. A detailed explanation of the research objective was given to the participants.

4.2.2 METHODOLOGY FOR STUDY 2

4.2.2.1 Research design

This research study utilized quantitative research, a descriptive-comparative research design in its attempt to evaluate the visual and verbal characteristics, likeability, shareability, and effectiveness in raising awareness of internet memes ($N=20$) related to mental health issues, selected from various categories, among college and university students.

4.2.2.2 Sampling design

The study includes young people aged 18 to 29 years living in India, both males (53%) and females (47%) from various socioeconomic backgrounds, who are currently enrolled in college or university academic institutions (public and private), including undergraduate and graduate programs. It excludes those who do not use the internet regularly. The population type is infinite. Quota sampling, a non-probability sampling, was used to select the participants. Since the population is infinite, a sampling frame may not be applicable. The participants were recruited through an online survey using email, social media,

college websites, and student forums. The sample size was 384. The study spanned five weeks.

4.2.2.3 Data collection

Pictorial stimuli. From the 153 internet memes selected for main study bases 20 internet memes were shortlisted for this part of the study (Fig. 4.5). Internet memes were shortlisted by a group of student participants because they are not only highly active on digital platforms but also represent a demographic likely to face mental health issues, engaging this demographic effectively can foster social awareness from an early stage, potentially leading to more impactful social awareness campaigns. They were asked to select two internet memes from each category (1) Minimization of mental health issues due to cultural and social concerns, (2) Mockery or ridicule of mental health issues, (3) Stereotypes, (4) Positivity, (5) Relatability, (6) Seeking support (7) Selfcare practices, (8) Humour or light-heartedness.

Instrument. A questionnaire survey was administered to 384 college and university students, who were asked to rate or score each internet meme on a 1 to 5 scale for four parameters: visual and verbal characteristics, likeability, shareability, and awareness-raising potential. The questionnaire used to evaluate the visual and verbal features, likeability, shareability, and effectiveness of selected internet memes ($N=20$) is provided in Appendix F.

4.2.2.4 Data analysis

Descriptive statistics, including mean and standard deviation, were calculated for each parameter, i.e., visual and verbal characteristics, likeability, shareability, and awareness, so as to provide a comprehensive summary of the responses obtained from participants. In addition, the results were also organized and presented through visual representations, such as bar charts and tables, were employed to facilitate comparison across the selected internet memes and to support meaningful interpretation of the data.

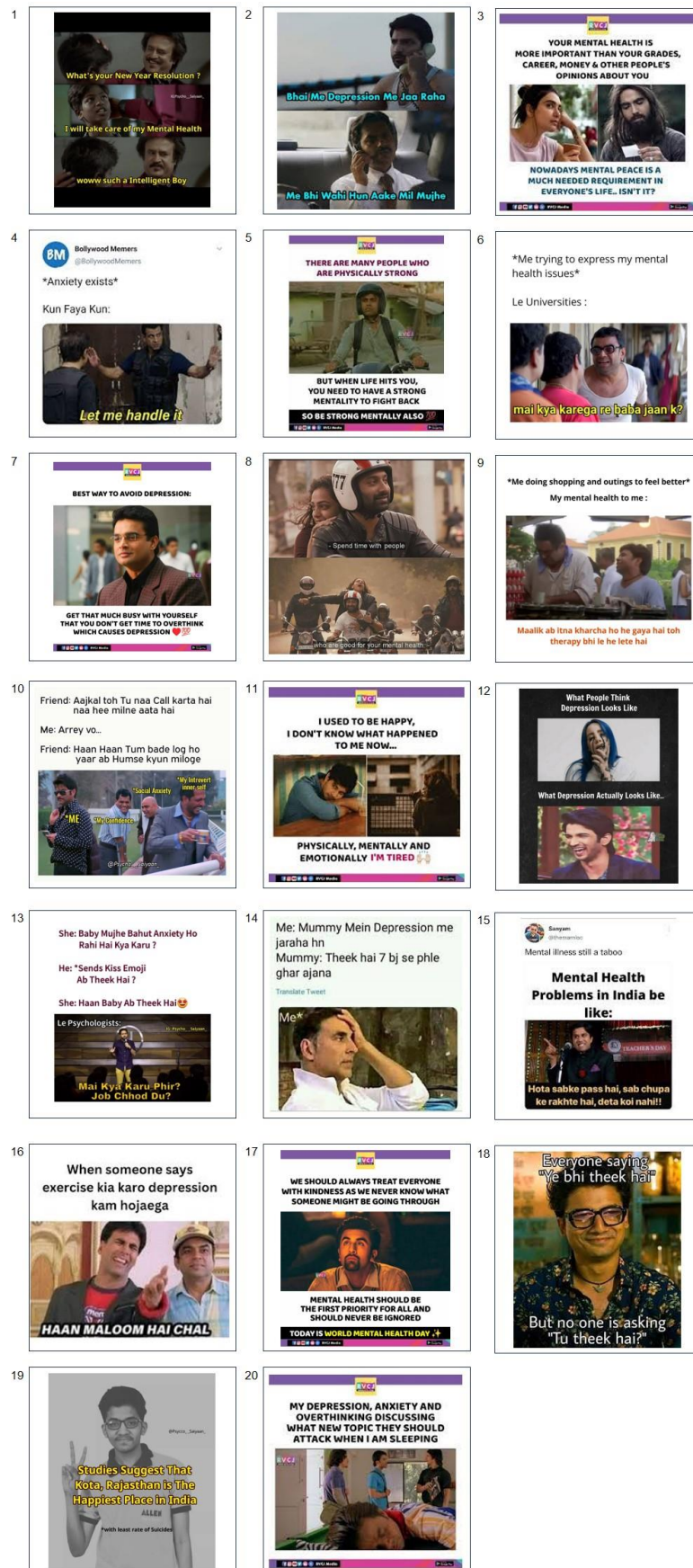


Fig. 4.5 Selection of 20 internet memes from the initial sample of 153 for detailed analysis

4.3 RESULTS AND DISCUSSION

4.3.1 FOR STUDY 1

A total of 979 young people, particularly college and university students, responded to the online survey.

Table 4.2 Demographic Characteristics (N=979)

Sample Characteristics	Frequency (N=979)	Percent (%)
Gender		
Male (M)	629	64.2
Female (F)	350	35.7
Age Group		
18-30	955	97.5
31-44	20	2.0
45-54	3	.3
55 and above	1	.1
Level of Education		
Less than a high school	4	.4
High school (or equivalent)	427	43.6
Undergraduate	469	47.9
Postgraduate	67	6.8
Ph.D. Or higher	12	1.2
Area of Specialization		
Design/ Architecture/ Fine Arts	60	6.1
Commerce, Business, and Management	38	3.9
Applied Sciences	25	2.6
Engineering (Specify: CS, IT, ECE, EE, ME, or other)	659	67.3
Humanities and Social Sciences/ Liberal Studies	6	.6
Environmental Science	2	.2
Law	116	11.8
Medicine and Health Sciences	73	7.5
State		
Uttar Pradesh (UP)	234	23.9
Uttarakhand (UK)	233	23.8
Haryana	116	11.8
Rajasthan (RJ)	88	9.0
Others	308	31.5

The majority of the college and university students were male, aged 18-29 years old, had an undergraduate degree, specialized in Engineering (specifically CS, IT, ECE, EE, ME, or other), and were from Uttar Pradesh, followed by Uttarakhand (Table 4.2).

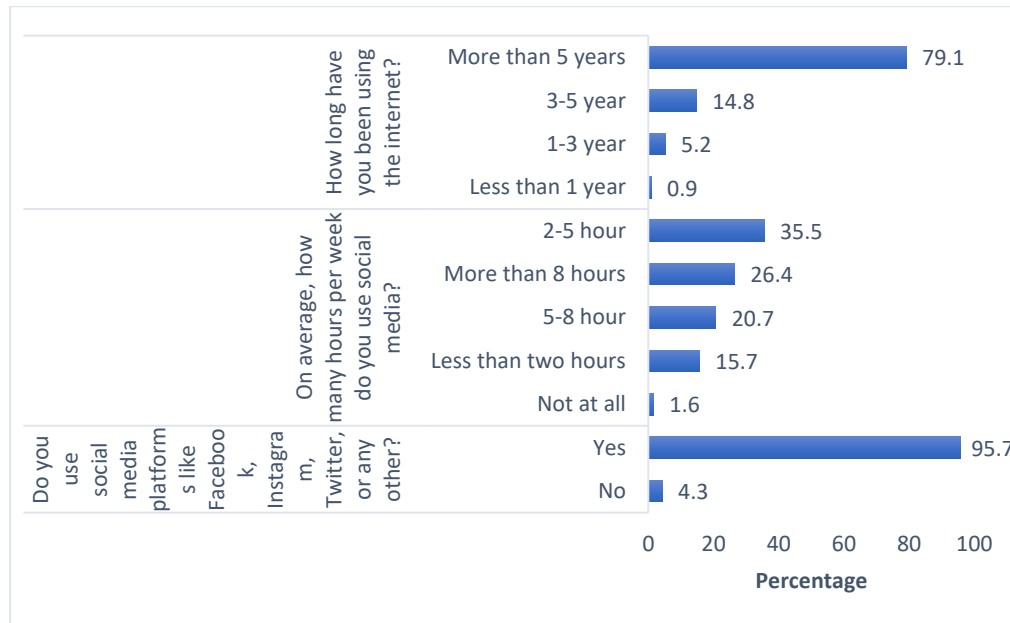


Fig. 4.6 Participants responses to questions regarding their use of social media

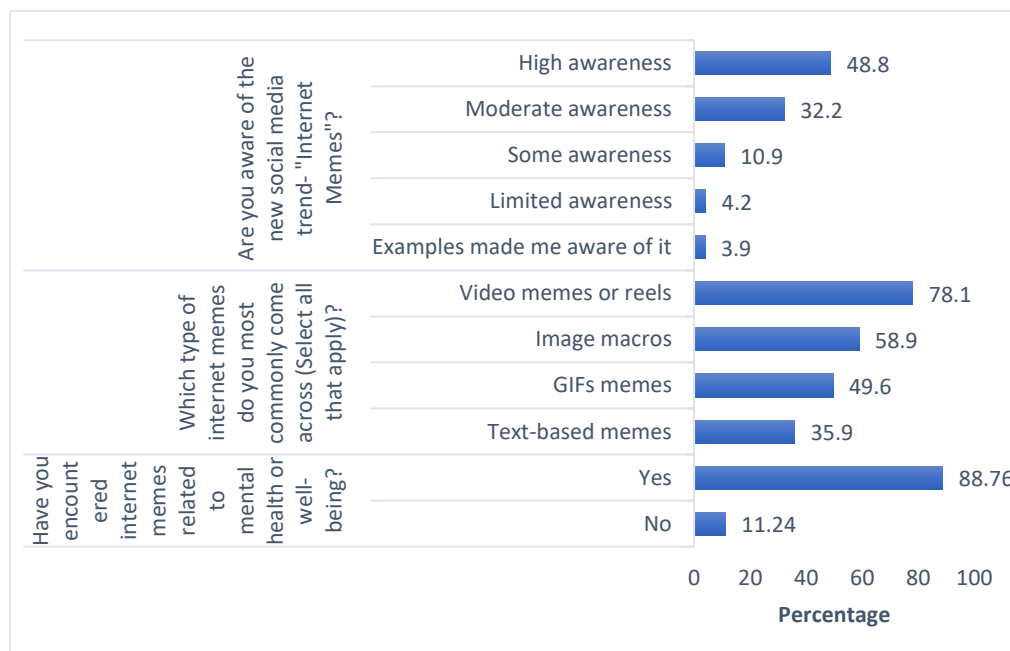


Fig. 4.7 Participants' responses to questions about awareness related to internet memes, and types of internet memes they come across, and encounter internet memes related to mental health

In the introductory section on social media usage, the majority of college and university students reported using the internet for more than five years, spending an average of 2-5 hours per week on social media platforms like Instagram, Twitter, Facebook, and some others, as shown in a clustered bar chart (Fig. 4.6). Furthermore, in terms of internet memes, the majority of college and university students reported that they are aware of new social media trend known as “Internet memes”, video memes, or reels are the types of internet memes that they come across, and 95% of the college and university students encounter internet memes related to mental health issues or well-being, as shown in a clustered bar chart (Fig. 4.7).

To determine the construct validity of the questionnaire, the measurement model using confirmatory factor analysis (CFA) in AMOS was tested (Fig. 4.8).

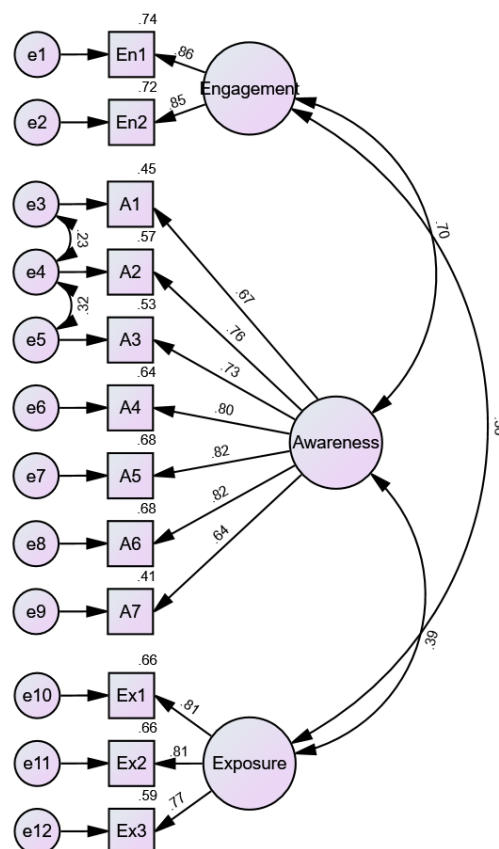


Fig. 4.8 Result of Confirmatory Factor Analysis

Factor loadings (λ) for each item were determined during CFA. The overall goodness of fit of the model was evaluated using the model fit metrics (CMIN/*df*, GFI, TLI, CFI, RMSEA, and SRMR), and all values within their respective common acceptance levels. The three-factor model (Engagement, Awareness, and Exposure) fit the data well: CMIN/*df*= 4.48, GFI=.915, CFI=.974, TLI=.964, SRMR=.041, and RMSEA=.060 (Haddad et al., 2020). The results of composite reliability, convergent validity, and discriminant validity as shown in Table 4.3.

Table 4.3 Validity Analysis

	CR	AVE	MSV	MaxR(H)	Engagement	Awareness	Exposure
Engagement	0.844	0.730	0.487	0.844	0.854		
Awareness	0.900	0.565	0.487	0.909	0.698***	0.752	
Exposure	0.841	0.639	0.156	0.843	0.364***	0.395***	0.799

Note. Significance of Correlations: † $p < 0.100$, * $p < 0.050$, ** $p < 0.010$, *** $p < 0.001$

Before analyzing the MRA results, numerous assumptions were evaluated. To analyse the hypothesis, MRA was employed at a 95% confidence interval. The dependent variable, awareness related to mental health issues among college and university students, was regressed on the predicting variables of exposure to and engagement with mental health memes. The independent variables significantly predict awareness, $F(2, 976) = 513.96$, $p < .001$, which indicates that the two factors under study have a significant impact on awareness. Moreover, the $R^2 = .513$ depicts that the model explains 51.3 % of the variance in awareness. Additionally, coefficients were further assessed to ascertain the influence of each of the factors on the criteria variable awareness. H₁ evaluates whether exposure significant and positive impact on awareness ($\beta = .149$, $t = 6.395$, $p < .001$). Hence, H₁ was supported. H₂ evaluates whether engagement has a significantly positive impact on awareness. The results show that engagement has a significantly positive impact on awareness ($\beta = .658$, $t = 28.165$, $p < .001$). Consequently, H₂ was supported. Regarding the control variables, the results show that we do not have evidence of the effects of gender ($\beta = .016$, $t = .727$, $p < .467$) on exposure to and engagement with mental health memes related to mental health awareness among college and university students. However, we have evidence of the effects of social media usage (hours

per week) ($\beta = -.049$, $t = -2.188$, $p < .029$) on exposure to and engagement with mental health memes related to mental health awareness among college and university students. The results are presented in Table 4.4.

Table 4.4 MRA Results and Hypothesis Testing

Hypothesis	Regression Weights	B	t	p-value	Results
H ₁	Exposure→Awareness	.133	6.395	<.001	Supported
H ₂	Engagement→Awareness	.506	28.165	<.001	Supported
R ²	.513				
F (2, 976)	513.96				

This study demonstrated that both exposure to and engagement with mental health memes significantly increase awareness of mental health issues among college and university students. The regression model indicated that these two factors together explain 51.3% of the variance in awareness ($R^2 = .513$). Specifically, exposure to mental health memes had a positive and significant impact on awareness ($\beta = .149$, $t = 6.395$, $p < .001$), and engagement with these memes had an even stronger positive impact ($\beta = .658$, $t = 28.165$, $p < .001$). This suggests that frequent exposure and engagement with mental health memes are effective ways to raise mental health awareness among college and university students.

The findings of the study are consistent with previous research, which has highlighted the impact of digital media and humour in awareness campaigns. Previous studies have reported that digital platforms, such as social media, can be efficient tools for sharing information and promoting health-related behaviors (Latha et al., 2020; Mora et al., 2023; Sala et al., 2021; Thompson et al., 2020). Humour, in particular, has been identified as an entertaining and memorable method of conveying messages, making complex or sensitive issues more approachable and less difficult (Hong & Low, 2024; Hussain et al., 2024; Lenda et al., 2020; Myrick et al., 2022b). In addition, some studies on media exposure from various contexts are discussed (Gao et al., 2020; Inegbedion et al., 2020; Karasneh et al., 2021; Melki et al., 2022). Some studies on engagement show that social media users and commenters use the term "engagement" to characterize their activities, such as liking, sharing posts (Dev

& Mishra, 2024). Furthermore, user engagement on social media can be influenced by various post types such as images, videos, links, the schedule of posts, the duration between posts, and the emotional appeal of messages as opposed to the informative appeal (Dev & Mishra, 2024; Gkikas et al., 2022). While earlier research has explored the general potential of digital media and increased media exposure and engagement in raising awareness, this study extends that knowledge by focusing specifically on internet memes within the context of mental health awareness among college and university students. Exposure to mental health memes helps students encounter mental health information frequently, which can lead to better recall and understanding of these issues. Frequent exposure to mental health issues can help normalize discussions about them, reduce stigma, and motivate students to get help when they need it. Engaging with mental health memes, such as liking, sharing, or commenting, indicates a deeper level of interaction that reinforces the message. When students engage with these memes, they are not only processing the information more thoroughly but also potentially spreading the awareness to their peers. This peer-to-peer sharing is crucial in creating a more informed and supportive community.

4.3.2 FOR STUDY 2

The average scores for likeability, shareability, awareness, and visual and text elements for each of the 20 internet memes were shown in the bar graph (Fig. 4.9) to facilitate comparison and allow us to identify trends and differences across the sample. These averages provide an overview of how participants generally rated the memes on each parameter. Additionally, Table 4.5 presents descriptive statistics for each meme, showing mean and standard deviation scores for likeability, shareability, and awareness, visual and text elements. The ranking results are based on Likeability, Shareability, Awareness, and visual and text elements for each meme as shown in Table 4.6.

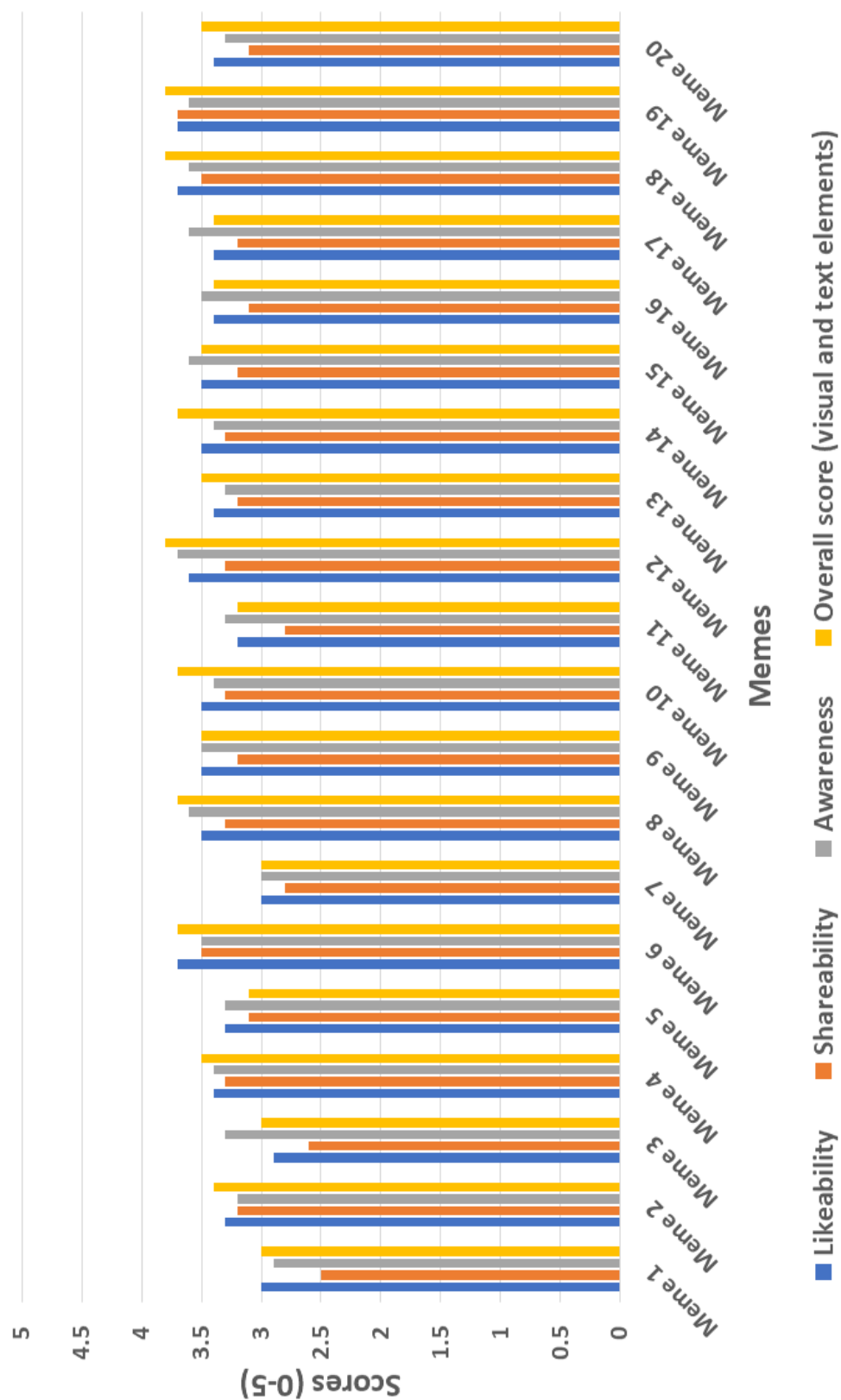


Fig. 4.9 Average scores for likeability, shareability, awareness, and visual and text elements across all internet memes

Table 4.5 Descriptive Statistics for Likeability, Shareability, Awareness, and visual and text elements

Parameter	Mean	Standard deviation
Likeability	3.4	0.26
Shareability	3.1	0.30
Awareness	3.4	0.24
Visual and text elements	3.5	0.27

Table 4.6 Ranking results based on Likeability, Shareability, Awareness, and visual and text elements for each meme.

Top-Performing Memes	Likeability	Memes 19, 18, and 6 have the highest likeability scores (3.7).
	Shareability	Meme 19 (3.7) ranks highest in shareability, followed closely by Memes 18 and 6 (both 3.5).
	Awareness	Meme 12 (3.7) ranks highest for raising awareness, followed by Memes 19, 18, 8, and 17 (all 3.6).
	Visual and text elements	Memes 18, 19, 12 (3.8) rank highest for memes' overall design and content, followed by memes 6, 8, 10, 14 (all 3.7).
Consistently High-Ranking Memes	Meme 19	This meme ranks first in both Likeability and Shareability and is near the top for Awareness (ranked 2nd).
	Meme 18	Similarly, Meme 18 ranks high in Likeability, Shareability, Awareness, and visual and text elements, indicating it resonates well with the audience on multiple levels.
	Meme 12	This meme ranks first in Awareness and fourth in Likeability and Shareability, suggesting it's particularly effective for educational impact, even if it's slightly less likeable than Memes 19 and 18.
Low-Performing Memes	Memes 1 and 3	These memes rank lowest in Likeability, Shareability, Awareness, and visual and text elements.

Furthermore, the Likeability and Awareness scores are similar (mean = 3.4 for both), suggesting that the memes perform equally well in terms of audience enjoyment and effectiveness in raising awareness. In addition, the memes have consistently acceptable to good visual and text elements (mean of 3.5). However, Shareability is slightly lower, which may imply that although the audience appreciates the memes and finds them informative, they may not feel as compelled to share them widely. In addition, the low standard deviation across all four parameters, particularly Awareness, shows that the memes have a relatively consistent impact. This is a positive indicator for a campaign as it means most memes are perceived similarly without large performance fluctuations, which could help in achieving a uniform message or campaign effect. Furthermore, the low standard deviation suggests uniformity in how these elements are perceived, making the dataset reliable for analysis or drawing conclusions. This data might indicate effective design practices, as the elements were consistently rated without much deviation. Since Shareability has the lowest mean (3.1) and the highest standard deviation (0.30), it could be an area for improvement. If the goal is to increase the reach of these memes, focusing on elements that enhance shareability, such as humor, relatability, or a stronger call to action, could be beneficial. In addition, Meme 12 appears to be the best choice for raising mental health awareness, as it ranks highest in Awareness. Also, Memes 19, 18, and 8 could also be included due to their high awareness rankings. Memes 19 and 18, which rank consistently high across Likeability, Shareability, and Awareness, are excellent choices for engaging a broad audience. They are likely to be well-received and widely shared, making them useful in campaigns aiming for both reach and impact. However, Memes 1 and 3 could be reviewed and potentially modified to make them more engaging. Adjustments might involve reworking the humor, message clarity, or visuals to increase their likeability and awareness potential. In addition, the low-performing memes (Meme 1 and Meme 3) fail to engage due to their muted colors, poor visual-text integration, and dull compositions. In contrast, high-performing memes (Meme 12, Meme 18, Meme 19) excel with vibrant visuals, impactful text design, and strong emotional appeal. These factors contribute to their higher scores in engagement and raising awareness.

The findings will offer valuable insights for educators, mental health professionals, and policymakers who are looking for innovative ways to engage college and university students in conversations about mental health. The internet meme-based strategy can be used as an Educational Intervention. Colleges and universities could use internet meme-based content in workshops or mental health initiatives to promote better understanding and reduce stigma related to mental health issues. Additionally, as part of curriculum integration, colleges and universities can use internet memes to make mental health education more relatable and approachable. For online digital mental health awareness campaigns, mental health organizations, professionals, and policymakers can use internet memes as an innovative tool in their social media strategies. Internet memes can engage younger people and raise mental health awareness by being approachable and shareable. These campaigns can explain mental health issues, decrease stigma, and encourage proactive mental health behaviors in an accessible and engaging way by using an informal, visual communication approach. Furthermore, social media platforms can implement strategies or guidelines that give priority to disseminating content that promotes mental health in order to raise awareness and help students. These implications facilitate the conversion of research insights into actionable strategies for enhancing mental health engagement. Future research could explore the long-term effects of meme exposure and engagement on mental health awareness and attitudes, and further consider the Nero design technique-EEG (Mishra & Chowdhury, 2023) to investigate internet meme designs used to raise mental health awareness. One major limitation of the study is that the selection of the respondents uses non-probability sampling. Furthermore, we did not include sufficient independent variables to evaluate the awareness related to mental health issues.

4.4 CONCLUDING REMARKS

This chapter explored the relationship between mental health memes and their potential to raise awareness about mental health issues among young people, especially college and university students. The regression analysis conducted revealed that awareness as a dependent variable is significantly influenced by

exposure to memes and engagement with them as independent variables. The findings underscore that increased exposure and higher engagement levels correlate positively with mental health awareness, contributing to a reported 51.3% awareness rate among college and university students.

Further, quantitative analysis of mental health memes assessed parameters such as likability, shareability, awareness generation, and the effectiveness of visual and verbal characteristics. The findings showed notable differences between memes that performed well and those that did not. Low-performing memes scored poorly across all parameters, failed to effectively balance textual and visual elements, leading to weak relatability and limited shareability. High-performing memes emerged as impactful tools for engagement and awareness generation. Their strong integration of text and visuals made them more relatable and emotionally engaging for the young people. This significantly contributed to their high performance in creating awareness and driving discussions around mental health issues.

Overall, the findings emphasize that internet memes are not merely tools for entertainment but can serve as powerful mediums for social awareness campaigns when designed effectively. The significant performance gap between low and high-performing memes reinforces the importance of focusing on design, content quality, and target audience relatability to maximize their impact. These insights provide a strong foundation for leveraging mental health memes as effective communication tools in mental health awareness initiatives, particularly among young people.

CHAPTER 5

CONCLUSION AND FUTURE SCOPE

The final chapter serves to provide a concise summary of the research study, restating its purpose, objectives, and key findings. It highlights the major contributions and implications of the work, acknowledges its limitations, and suggests directions for future research. This chapter ties together the entire study, offering a reflective and forward-looking perspective on its significance and potential impact.

This study explored the evolving role of internet memes in raising mental health awareness among young people, with a focus on their potential to influence attitudes, reduce stigma, and encourage open conversations about mental health. The literature review gave us an understanding of mental health issues faced by young people and the use of various media platforms to increase knowledge, raise public awareness, reduce stigma, and correct misinformation and stereotypes about these issues. It reveals that digital platforms, including social media, can be efficient tools for sharing information and promoting health-related behaviors. The effectiveness of online communication tools like internet memes has the potential to address both humorous and serious social issues. Previous studies have employed online communication tools, such as mental health memes, to assess sensitivity to mental health issues, while others suggested that mental health memes have been used as a coping method, depressive internet memes are more humorous or relatable to those who are experiencing these symptoms. The unavailability of literature related to the effectiveness of mental health memes as tools for mental health awareness among young people made us focus on them for this study.

To start the enquiry, three objectives and related research questions were raised. The research questions were intended to:

1. How are internet memes currently being used to raise social awareness about societal issues?
2. What are the key characteristic features associated with mental health memes shared on online platforms?
3. What are the emergent themes and categories of internet memes addressing mental health issues?
4. What is the effectiveness of mental health memes in raising social awareness related to mental health issues among college and university students?
5. What is the relationship between exposure to and engagement with mental health memes and the level of awareness about mental health issues among college and university students?

The study uses qualitative and quantitative methods to address all the research questions and realizes all the objectives proposed at the beginning of this research work.

5.1 KEY FINDINGS

Table 5.1 Summarizes the major key findings from this study related to each objective and research question.

Objective 1:

To understand and explore the present scenario of internet memes in social awareness of societal issues.

Research question:

How are internet memes currently being used to raise social awareness about societal issues?

Results:

- Marketers used internet memes to increase customer awareness of their products and services, as well as customer engagement, as discussed in detail in Section 2.2.1.
-

- Political memes were found to be part of political communication and culture. They became one of the propaganda strategies to influence public opinion to gain political support from the public. Internet memes were used as a propaganda tool to raise and strengthen the figure of one party as well as attack and bring down the figure of another party, as discussed in detail in Section 2.2.2.
 - Internet memes were used to raise awareness of social issues. The Uttarakhand police department on their social media platforms used posts to raise awareness on road safety, in which Internet meme posts (incorporating humor or light-hearted elements) were higher reach, impressions, and engagement compared to non-meme posts (focusing solely on providing safety tips and advice without incorporating humor or light-hearted elements), as presented in Section 2.4, where this was discussed in detail.
 - The survey results were based on respondents' self-reported perceptions, not objective or experimental measures, which supports the idea that the Uttarakhand police's "Safety on the roads" campaign using internet memes raised awareness, changed attitudes or behavior toward road safety, and made drivers more responsible on the roads, among the followers of the Uttarakhand police Facebook page. In addition, the study found that the internet meme posts used in the Uttarakhand police's "Safety on the roads" campaign were impactful visual and verbal aspects comparative to non-meme posts, as affirmed by visual experts and respondents as followers of the page. As a result, the visual design, i.e., visual and textual features of internet meme posts, played an important part in communication, capturing the attention and drawing the followers back to the page. The findings suggested that the use of engaging and relatable content in the form of visuals or pictures and text or phrases most likely improved overall message delivery and retention among the followers, as discussed in detail in Section 2.4.
-

Objective 2:

To identify the key characteristic features and emergent themes or categories related to mental health memes on online platforms.

Research question:

What are the key characteristic features associated with mental health memes shared on online platforms?

What are the emergent themes and categories of internet memes addressing mental health issues?

Results:

- As outlined in Section 3.4.3.5, the mental health memes were 19 different layouts, with an aspect ratio (size) ranging from 1:1 to 4:5 to 9:16.
 - Based on the visual semiotics approach, mental health memes were found to have different characteristic features that can be placed into major categories. For Visual: Features such as the absence of direct gaze (contact-offer) made the images appear more realistic, while a social distance, often represented by close shots (close personal distance), was predominant. In terms of horizontal perspective, oblique angles occurred most frequently, and vertically, the images photographed at eye level were the most common compared to other angles. Regarding compositional aspects, the center/margin scheme was the most frequently used information value system, indicated that the most important subjects were positioned centrally, serving as the primary focus and nucleus of information, whereas for textual: Features such as sans-serif fonts, normal and tight spacing, bright colors for text, colorful backgrounds, and outlined text were unique in mental health memes, as discussed in detail in Section 3.4.3.
 - The semantic analysis of mental health memes highlighted their dual function: using relatable visuals and text to normalize mental health discussions while creatively addressing stigma and encouraging awareness, as presented in Section 3.4.4, where this was discussed in detail.
-

- The Qualitative content analysis in Section 3.4 has identified two higher-order themes “Stigmatization of mental health through internet memes (N=94, 61.44% of the sample)”, and “Internet memes as tools for coping with mental health challenges (N=59, 38.56% of the sample)”; eight first-order categories “Humour or light-heartedness”, “Positivity”, “Relatability”, “Seeking support from friends, family, and professionals”, “Self-care practices”, “Stereotypes”, “Minimization of mental health issues due to cultural and social concerns”, and “Mockery or ridicule of mental illness” that underscore the ways in which mental health issues are represented and discussed through memes.

Objective 3:

To examine the effectiveness of mental health memes in raising social awareness related to mental health issues among college and university students.

Research question:

What is the effectiveness of mental health memes in raising social awareness related to mental health issues among college and university students?

What is the relationship between exposure to and engagement with mental health memes and the level of awareness about mental health issues among college and university students?

Results:

- The survey results were based on respondents’ self-reported perceptions, not objective or experimental measures, which supported the idea that when college and university students were exposed to mental health memes and engaged with them, it significantly increased their awareness of mental health issues. The regression model indicated that these two factors together explain 51.3% of the variance in awareness ($R^2 = .513$). This suggested that frequent exposure to and engagement with mental health memes were effective ways to raise mental health awareness among college and university students, as previously outlined in Section 4.4.1.
-

- The survey was conducted with 384 college and university students, and 20 selected from various categories of mental health memes were evaluated based on likeability, shareability, ability to create awareness, and visual and verbal characteristics. The findings revealed that Meme 18 and Meme 19 scored the highest across all categories, demonstrating strong likeability, shareability, and a clear ability to raise awareness about mental health issues. These mental health memes were also highly rated for their visual and verbal appeal. Meme 12, while not as strong in likeability and shareability, stood out particularly for its effectiveness in creating awareness about mental health. The results indicated that mental health memes with a balanced combination of engaging visuals, relatable text, and cultural relevance were more likely to be effective in engaging and raising awareness among college and university students, as presented in Section 4.4.2, where this was discussed in detail.
-

This study proposed a content design framework for designing effective internet memes on mental health issues among young people, especially college and university students. Although meme design lacks a standardized structure and often does not follow fixed rules, such as layout aspect ratio, subject placement, text appearance, etc., this study proposed a design approach informed by the patterns identified in the meme sample analysis and supported by survey responses. The proposed framework does not intend to impose rigid design norms but rather offers strategic guidelines grounded in empirical evidence.

Proposed design for internet memes related to mental health issues for awareness campaigns (Fig. 5.1):

- Regarding layout, a 1:1 aspect ratio is recommended for standard and classic formats, while a 4:5 ratio is suggested for optimal display across most social media platforms like Facebook, Instagram, etc.
- For visuals, it is proposed that subjects should avoid direct gaze, be presented in close-up shots to reflect close personal distance, and be centrally positioned according to the center-margin scheme.

- For textual elements, the proposed framework includes guidelines for text appearance, letterform, and external elements.
 - a. In terms of positioning, text should appear both at the top and bottom of the meme layout. Larger font sizes are recommended for delivering the primary context or punchline, while smaller sizes may be used for secondary details or to convey a humorous tone.
 - b. Regarding letterform, a sans-serif typeface is proposed. For case usage, the top text should appear in sentence case, while the bottom text may be rendered in uppercase for emphasis. Spacing should vary between tight and normal, depending on the visual balance. High-contrast colors such as yellow, blue, orange, and red are suggested for text, with pink and yellow backgrounds recommended for added visibility.
 - c. Finally, a black outline around the text is advised to enhance legibility against diverse backgrounds.
- The proposed framework centers around the theme of using internet memes as tools for coping with mental health challenges. The content is categorized into key areas that align with this objective, including positivity, relatability, seeking support, self-care practices, and humor or light-heartedness. These categories are intended to resonate with young people while promoting mental well-being in an accessible and engaging format.
- Visuals and text should complement each other, with visuals aligned to the meme's context and selected based on relevance to the audience's location and social context, especially for awareness campaigns.
- The placement of logos is proposed to be at either the extreme top-right or bottom-right corner of the meme layout, ensuring visibility without interfering with the main visual or textual elements.
- In addition, the internet meme effectively combines fluency (easy layout and language), incongruity (serious mental health issue vs. comic

suspicion), aptness (perfect image-text fit), replicability (adaptable format), and emotional triggers (relatability, humor). Together, these cognitive design aspects make the meme both entertaining and meaningful, turning a complex mental health experience into a light yet powerful form of communication.

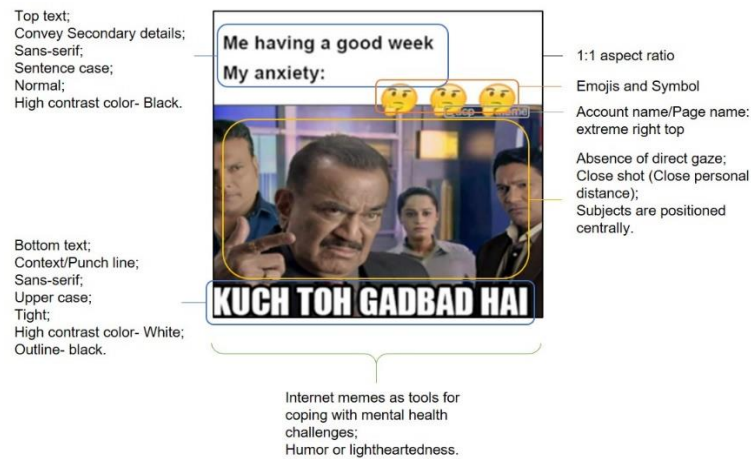


Fig. 5.1 Sample mental health meme collected during the study, illustrating key elements of the proposed content design framework (e.g., visual-text alignment, layout, and thematic relevance).

The proposed design emphasizes a well-balanced integration of visual and verbal elements to evoke emotional engagement and relatable themes to increase shareability and awareness.



Fig. 5.2 Examples of mental health memes created for IEC social media platforms under the National Health Mission, Government of Uttarakhand, aligned with the proposed content design framework.

As part of the implementation of this framework, I designed internet memes related to mental health for IEC (Information, Education, and Communication) social media platforms, National Health Mission, Government of Uttarakhand, India. These memes were made to align with the guidelines outlined in the proposed design, aiming to enhance young people's awareness and foster a deeper connection with mental health topics (Fig. 5.2).

5.2 CONCLUSION

It is clear from looking at internet memes as a communication tool used in a variety of domains, such as marketing and advertising, politics, social issues, and aiding in stress reduction initiatives, that they are particularly effective at drawing attention, engrossing users, and increasing awareness. During this time, internet memes have demonstrated their capacity to communicate ideas in a way that appeals to a wide range of audiences, especially young people who are more engaged with digital culture. This potential is further highlighted by the study on the Uttarakhand police department's "Safety on the roads" campaign, which makes use of internet memes as a communication tool. Police departments have been able to spread important public awareness messages about road safety issues like speeding, drunk driving, and red light jumping by using internet memes on social media. These campaigns show that internet memes, when used strategically, can make serious topics more approachable, relatable, and memorable, ultimately influencing public behavior and raising awareness effectively. Therefore, they are not just tools for humor but are powerful agents for social change when used in awareness campaigns.

Internet meme posts' visual design is crucial to communication; a semiotic analysis of memes on mental health reveals a number of critical textual and visual elements that support the memes' potency as a communication tool. In order to grab readers' attention and deliver messages, elements like layout design, text appearance, color schemes, and graphics are essential. Well-structured layouts, effective text presentation, and thoughtful color choices all contribute to the readability and emotional impact of mental health memes. These visual strategies not only enhance engagement but also reinforce the

intended tone of the content. Moreover, semantic and pragmatic analysis uncovers deeper meanings and reveals how audiences interpret these memes, highlighting their potential as powerful tools for mental health communication and awareness. Additionally, the content analysis reveals that 38.56% of mental health memes target coping by providing emotional support and validation, whereas 61.44% concentrate on stigma, perpetuate negative views, and frequently disseminate inaccurate or misleading information about mental health. This emphasizes how important it is to give preference to memes that constructively combat stigma and offer encouraging material in order to raise public awareness. The incorporation of intelligent design elements and meaningful themes in mental health memes highlights their potential as powerful tools for societal communication and awareness.

Mental health memes and the ability to raise awareness of mental health issues among young people, particularly college and university students, have a significant relationship. The regression analysis confirmed that both exposure to and engagement with memes significantly influence mental health awareness, with a notable 51.3% awareness rate observed. Moreover, low-performing memes scored poorly across all parameters, failed to effectively balance textual and visual elements, leading to weak relatability and limited shareability. High-performing memes emerged as impactful tools for engagement and awareness generation. Their strong integration of text and visuals made them more relatable and emotionally engaging for the young people. This significantly contributed to their high performance in creating awareness and driving discussions around mental health issues.

The study suggests that mental health memes, with their unique blend of humor, relatability, and visual storytelling, can effectively communicate and raise awareness about mental health issues faced by young people in an accessible and engaging manner. The findings contribute to the growing body of literature on digital communication, highlighting the significance of internet memes in modern media landscapes. By providing a framework for understanding the impact of mental health memes, this offers valuable insights for researchers, mental health advocates, and content creators.

It can be concluded that internet memes are not just a fleeting trend; they are powerful tools for social change. As the digital world continues to shape public discourse, internet memes will remain an important medium for raising awareness, challenging stigma, and promoting mental well-being. This study lays the foundation for future research and offers a blueprint for utilizing internet memes in mental health advocacy, providing both theoretical insights and practical applications in the ever-evolving digital age.

5.3 MAJOR CONTRIBUTION OF THE STUDY

- The study has developed a body of literature highlighting the importance of human communication, social media, and internet memes. It explores the concept of memes, their evolution into internet memes, the role of internet memes as a communication tool, and their connection to mental health awareness. Additionally, it provides an overview of the evolution and impact of internet memes in promoting mental health awareness and fostering meaningful dialogue.
- A contribution of the study is its exploration of the current role of internet memes in the digital space, highlighting their diverse applications in advertising, political propaganda, and societal issues. The study underscores internet memes' effective utilization by organizations, such as Indian police departments, to raise awareness on societal matters like road safety, cybercrime, health, and women's consent. This insight demonstrates the evolving potential of internet memes as a powerful communication tool for social change and public education.
- The study has identified the dual impact of mental health memes on mental health, both positive and negative. It highlights that 38.56% of memes can be used effectively in awareness campaigns to foster openness and support, while 61.44% perpetuate stigma and misinformation. The study emphasizes the need for educational interventions and media literacy programs to address these negative influences. This research offers valuable insights for designing more

effective mental health campaigns and combating stigma in the digital space.

- The study has proposed a collection of distinct characteristics and features of mental health memes that can assist designers and media professionals in creating persuasive and impactful content, effectively using visual storytelling and humor to promote mental health awareness.
- The findings will offer valuable insights for educators who are looking for innovative ways to engage college and university students in conversations about mental health. The internet meme-based strategy can be used as an Educational Intervention. Colleges and universities could use internet meme-based content in workshops or mental health initiatives to promote better understanding and reduce stigma related to mental health issues. Additionally, as part of curriculum integration, colleges and universities can use internet memes to make mental health education more relatable and approachable.
- For online digital mental health awareness campaigns, mental health organizations, professionals, and policymakers can use internet memes as an innovative tool in their social media strategies. Internet memes can engage young people and raise mental health awareness by being approachable and shareable. These campaigns can explain mental health issues, decrease stigma, and encourage proactive mental health behaviors in an accessible and engaging way by using an informal, visual communication approach. Furthermore, social media platforms can implement strategies or guidelines that give priority to disseminating content that promotes mental health to raise awareness and help students. These implications facilitate the conversion of research insights into actionable strategies for enhancing mental health engagement.
- The study provides a useful framework and detailed research design, including methods and data, which other researchers can use, adapt, or build upon for similar studies or to validate existing knowledge.

5.4 LIMITATIONS OF THIS STUDY

We have adopted an exhaustive approach in this study. However, there are a few limitations:

- The sample of internet memes selected for the study may have been drawn from specific platforms that possess unique meme cultures and audiences. This could influence the generalizability of the findings, as internet memes that resonate with users on one platform may not have the same impact on another.
- The study used a cross-sectional design and did not employ a pre-post or experimental approach, which means that claims of attitude or behavior change are based on respondents' perceptions rather than measured change over time.
- This study relied on self-reported data, which may be influenced by social desirability bias.
- The use of nonprobability sampling for respondent selection, effective selection of respondents in future research is crucial to ensure that all members, including those in all age groups of the population, have an opportunity to participate in the survey.
- One of this study's limitations is that it only looks at likes, shares, and comments as an engagement indicator, ignoring other variables that affect post- and page-level reach and engagement.
- Furthermore, due to limitations in the free version of exportcomments.com, only 100 comments were exported, potentially restricting the depth of sentiment analysis.
- Furthermore, we did not include sufficient independent variables to evaluate the awareness related to mental health issues.

5.5 POSSIBILITIES FOR FUTURE RESEARCH

The study has ample scope for expansion. It opens up many research possibilities that can be taken up for future research.

- Future research could expand the sample by including mental health memes from diverse social media pages and accounts to better understand their impact on young adults in social awareness.
- Future research can focus on understanding how different ages, genders, or cultural backgrounds respond to mental health memes, helping to identify effective messaging strategies tailored to each group.
- Future studies could expand the sample of respondents from each site to gain a broader perspective on how mental health memes are perceived across different platforms and audiences.
- Future studies can examine innovative design techniques and formats, such as animated memes or interactive features, to enhance the effectiveness of mental health memes in delivering complex messages.
- Neuro design techniques such as EEG and Eye-tracking (visual attention) analysis can be employed to investigate meme designs used for social awareness.
- Future studies can take a more targeted approach by investigating the potential of mental health memes in awareness campaigns, such as anxiety memes and depression memes, to address specific conditions and evaluate their effectiveness in different contexts.

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<https://doi.org/10.1176/APPL.AJP.2007.06101757/ASSET/IMAGES/S318T2.JPEG>

LIST OF PUBLICATIONS

Name- Bhaskar Mishra

ORCID ID- 0000-0002-1995-3050

Peer-Reviewed Journal Articles:

1. Mishra, B., and Dev, S. (2025). Unveiling mental health memes: Impact on employees' well-being amid workload and occupational stress. *International Journal of Occupational Safety and Health (IJOSH)*, 15(2), 298-307. <https://doi.org/10.3126/ijosh.v15i2.63493>
2. Mishra, B., and Dev, S. (2025). Road safety awareness using internet meme posts: The role of visual design in effective communication. *Journal of Road Safety (JRS)*, 36(3), 15-26. <https://doi.org/10.33492/JRS-D-25-3-2702152>

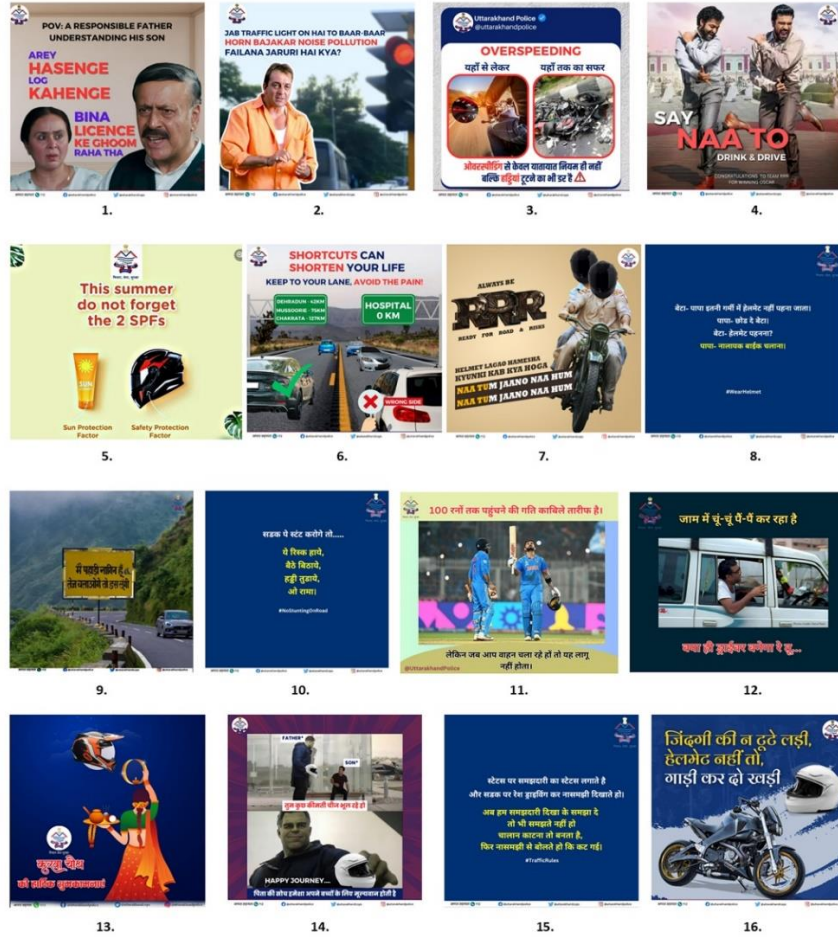
Paper in peer-reviewed conference proceedings:

3. Mishra, B., and Dev, S. (2024). Enhancing public engagement and awareness: An analysis of internet meme posts usage by Indian police departments on Instagram. In Ho, A.G. (Eds.), *Human Factors in Communication of Design* (Vol. 136). AHFE Open Access, AHFE International, USA. <http://doi.org/10.54941/ahfe1004974>
4. Mishra, B., and Dev, S. (2024). Internet memes for a safer road: Evaluating the impact of Uttarakhand police's Facebook posts on road safety awareness. *Injury Prevention*, 30(Suppl 1), A144. <https://doi.org/10.1136/injuryprev-2024-SAFETY.344>
5. Mishra, B., & Chowdhury, A. (2024). Internet memes are impacting society: Perspectives from brand communication to world peace promotion. In S. Karmakar, P. C. Kalita, U. R. Salve, & S. Banerjee (Eds.), *Innovative design for societal needs (NERC 2022)*, (pp.33–48). Springer. https://doi.org/10.1007/978-981-99-6468-0_3

Appendix- A: Internet meme posts and non-meme posts for study

These are the pictorial stimuli used in the study as meme posts and non-meme posts, which were used in the “safety on the roads” campaign run by the Uttarakhand police department.

Internet meme posts (16)



Non-meme posts (09)



Appendix- B: Questionnaire used to assess the effectiveness of the “Safety on the roads” campaign run by the Uttarakhand police department.

The questionnaire used to assess the effectiveness of the “safety on the roads” campaign run by the Uttarakhand police department evaluated the impact of visual and verbal elements, and awareness, of meme posts and non-meme posts, which were used in the campaign among page followers.

1. What is your full name?

2. Do you want to participate in the survey?

Yes

No

Thank you for your participation.

Questionnaire to assess the effectiveness of the road safety campaign by the Uttarakhand police department as a social communication tool, evaluating awareness and the impact of visual and verbal elements in memes among page followers.

3. What gender do you identify as?

Male

Female

Other. _____

4. What is your age?

Under 15

15-29 Years Old

30-44 Years Old

45-54 Years Old

55 and above

5. What is the highest level of education you have received?

Less than a high school degree

High school degree (or equivalent)

Under graduate

Post graduate

Ph.D. or higher

Other. _____

6. Occupation

Student

Employed

Self-employed

Unemployed

Other. _____

7. Mode of transport you use to commute.

Two-wheeler

Four-wheeler

Both (a two-wheeler, and a four-wheeler)

Public transport

I do not drive

8. Have you ever faced any accidents while driving?

Yes

No

9. Do you think the road safety campaign initiated by the Uttarakhand police through internet memes creates awareness related to road safety?



Yes

No

10. Has this campaign changed your attitude or behavior towards road safety?

Yes

No

11. Do you believe the campaign has made you more responsible while driving on the road?

Yes

No

12. On a scale of 1-5, do you think the images used in the internet memes for road safety awareness are effective?

Strongly agree Disagree Neither agree nor disagree Agree Strongly agree

13. On a scale of 1-5, do you think the texts or phrases used in the internet memes for road safety awareness are effective?

Strongly agree Disagree Neither agree nor disagree Agree Strongly agree

14. On a scale of 1-5, do you think the overall composition used for the internet memes for road safety awareness is effective?

Strongly agree Disagree Neither agree nor disagree Agree Strongly agree

15. Do you share these posts (internet memes related to road safety) with friends or on your social media network?

Yes

No

Appendix- C: Questionnaire used to assess the visual perceptions of meme vs. non-meme posts on the “Safety on the roads” campaign by the Uttarakhand police on Facebook.

The questionnaire used to assess the Visual Perceptions of Meme vs. Non-Meme Posts on the "Safety on the roads" campaign by the Uttarakhand Police on Facebook, by visual professionals (with over 10 years of experience), examined the top five meme posts and five non-memes.

1. What is your full name?

2. Do you want to participate in the survey?

Yes

No

Thank you for your participation.

3. Job Title

4. Years of experience in the field.

5. Relevant Qualification

Questionnaire to assess the Visual Perceptions of Meme vs. Non-Meme Posts on Road Safety by the Uttarakhand Police on Facebook by visual professionals (with over 10 years of experience) examined the top five meme posts and five non-memes on the internet.

6. On a scale from 1 to 5 (with five being the highest score), how would you rate the visual features, including composition, colors, general visual form, and the relationship between visual and text images of Meme Post 1?



Parameters	Score				
Visual idea of the meme	1 ●	2 ●	3 ●	4 ●	5 ●
Choice of composition	1 ●	2 ●	3 ●	4 ●	5 ●
Choice of colors	1 ●	2 ●	3 ●	4 ●	5 ●
Visual form of the meme in general	1 ●	2 ●	3 ●	4 ●	5 ●

Relationship between visual and text images of the meme	1 ●	2 ●	3 ●	4 ●	5 ●
Overall score (Visual and text elements)	1 ●	2 ●	3 ●	4 ●	5 ●

7. For Meme Post 1 provide a detailed description of visual features (including the visual idea, choice of composition and colors, general visual form, and the relationship between the visual and text images).

The questions are the same for all 09 internet memes. Here are the 09 internet memes.



Appendix- D: Questionnaire used to assess the impact of exposure to and engagement with mental health memes on awareness

The questionnaire used to assess the impact of exposure to and engagement with mental health memes on awareness related to mental health issues among young people, particularly college and university students.

1. What is your full name?

2. Do you want to participate in the survey?
Yes
No
Thank you for your participation.
3. What gender do you identify as?
Male
Female
Other. _____
4. What is your age?

5. What is the highest level of education you have received?
Less than a high school degree
High school degree (or equivalent)
Under graduate
Post graduate
Ph.D. or higher
Other. _____
6. What is your native state or domicile?

7. What is your native city?

8. What is your current field of study or area of specialization?
Design/ Architecture/ Fine Arts
Commerce, Business and Management
Applied Sciences
Engineering (Specify: CS, IT, ECE, EE, ME, or other)
Humanities and Social Sciences/ Liberal Studies
Environmental Science
Agriculture
Law
Medicine and Health Sciences
9. How long have you been using the internet?

Less than 1 year
 1-3 year
 3-5 year
 More than 5 years

10. Do you use social media platforms like Facebook, Instagram, Twitter, or any other?

Yes

No

11. On average, how many hours per week do you use social media?

Less than two hours

2-5 hour

5-8 hour

More than 8 hours

Not at all

12. Are you aware of the new social media trend- "Internet Memes"?



High awareness

Moderate awareness

Some awareness

Limited awareness

Above examples made me aware of it

13. Which type of internet memes do you most commonly come across (Select all that apply)?

GIFs memes

Video memes or reels

Text-based memes

Image macros (text superimposed on an image)

14. Have you encountered internet memes related to mental health or well-being of the following nature before, for example?



Yes

No

15. I frequently come across internet memes related to mental health issues (e.g., anxiety, depression) while browsing social media platforms or websites.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
16. I often come across internet memes about mental health even when I'm not actively searching for them.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
17. Internet memes about mental health are a frequent part of my online experience.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
18. I find these internet meme captures my attention.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
19. I find these internet meme helps me understand information about mental well-being.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
20. I find these internet memes to be informative.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
21. I find these Internet memes conveys a serious message in a light-hearted or humorous way.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
22. I find these internet memes relatable to my own experiences.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
23. I find these internet meme helps to reduce stigma.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
24. I find these internet memes to be sensitive towards individuals with mental health challenges.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
25. I like these internet memes.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree
26. I share these internet memes with my friends or on social media platforms.
Strongly agree Disagree Neither agree nor disagree Agree Strongly agree

Appendix- E: Content validation form for expert evaluation

Content Validation Form for Expert Evaluation

Dear Experts,

Thank you for agreeing to participate in this critical evaluation of content validity. Your expertise and insights are invaluable in ensuring the relevance of the items.

Background:

I am Bhaskar Mishra, pursuing a Ph.D. at UPES, Dehradun, India, focusing on internet memes i.e., the humorous, captioned images prevalent on social media. However, beyond their entertainment value, internet memes serve a more profound purpose. You have likely encountered these internet memes online, but what you may not realize is their potential as a tool for spreading awareness and initiating discussions on mental well-being. This is where my research comes in. My research explores how internet memes function as a medium for mental health communication, assessing their visual and verbal effectiveness in engaging young people. This study aims to validate their role as tools for spreading awareness and promoting mental well-being.

Purpose:

This content validation form serves to evaluate the content validity concerning exposure, engagement, and awareness of internet memes related to mental health. Your thorough evaluation will help us ensure that the items accurately capture the essential aspects of the domain under consideration.

Instruction:

This form consists of three domains related to exposure, engagement with internet memes, and awareness related to mental health. It includes a total of 12 items for evaluation. We need your expert judgment on the degree of relevance of each item to the measured domains. Your review should be based on the definition and relevant terminologies that are provided to you.

For this study, we are considering the following definitions:

Mental health memes are the memes that are for everything that could fall into the bracket of 'mental health' 'depression', 'anxiety', 'isolation', 'hopelessness', and other mental health issues with relevant hashtags in a humorous manner.

Mental health awareness: "Mental health awareness refers to having recognition, knowledge, and understanding of mental health."

Exposure: "Media exposure is the degree to which the audiences come across specific messages or media content."

Engagement: "Engagement embodies a sense of involvement and of being connected with something...stems from experiencing something like a magazine or TV program in a certain way."

Please be as objective and constructive as possible in your review and use the following rating scale and offer constructive comments, if necessary:

Degree of relevance:

- 1 = the item is not relevant to the measured domain
- 2 = the item is somewhat relevant to the measured domain
- 3 = the item is quite relevant to the measured domain
- 4 = the item is highly relevant to the measured domain

I humbly request you to validate the content within three weeks of receiving the document.

Please provide the following demographic details:

Name: _____

Job Title: _____

Years of Experience in the Field: _____

Relevant Qualifications: _____

Thank you for your participation in this evaluation. Your feedback is highly appreciated and will contribute significantly to the enhancement of content validity. For any further inquiries, please contact +91-8107523XXX.

Sincerely,

Bhaskar Mishra

SAP ID: 500099835

500099835@stu.upes.ac.in

School of Design (SoD),

UPES, Dehradun, Uttarakhand 248007, India

Comments (if needed): _____

Content validity

Domain 1: Exposure				
Definition: "Media exposure is the degree to which the audiences come across specific messages or media content."				
TESTED ITEMS	RELEVANCE			
1. I frequently come across internet memes related to mental health issues (e.g., anxiety, depression) while browsing social media platforms or websites.	1 ●	2 ●	3 ●	4 ●
2. I often come across internet memes about mental health even when I'm not actively searching for them.	1 ●	2 ●	3 ●	4 ●

3. Internet memes about mental health are a frequent part of my online experience.	1 ●	2 ●	3 ●	4 ●
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Domain 2: Awareness

Definition: "Mental health awareness refers to having recognition, knowledge, and understanding of mental health."

TESTED ITEMS	RELEVANCE			
1. I find this internet meme captures my attention.	1 ●	2 ●	3 ●	4 ●
2. I find this internet meme helps me understand information about mental well-being.	1 ●	2 ●	3 ●	4 ●
3. I find this internet meme to be informative.	1 ●	2 ●	3 ●	4 ●
4. I find this Internet meme conveys a serious message in a light-hearted or humorous way.	1 ●	2 ●	3 ●	4 ●
5. I find this internet meme relatable to my own experiences.	1 ●	2 ●	3 ●	4 ●
6. I find this internet meme helps to reduce stigma.	1 ●	2 ●	3 ●	4 ●
7. I find this internet meme to be sensitive towards individuals with mental health challenges.	1 ●	2 ●	3 ●	4 ●

Domain 3: Engagement

Definition: "embodies a sense of involvement and of being connected with something...stems from experiencing something like a magazine or TV program in a certain way".

TESTED ITEMS	RELEVANCE			
1. I like this internet meme.	1 ●	2 ●	3 ●	4 ●
2. I share this internet meme with my friends or on social media platforms.	1 ●	2 ●	3 ●	4 ●

Appendix- F: Questionnaire used to evaluate the visual and verbal features, likeability, shareability, and effectiveness in raising awareness of internet memes (N=20)

The questionnaire used to evaluate the visual and verbal characteristics, likeability, shareability, and effectiveness in raising awareness of internet memes (N=20) related to mental health issues, selected from various categories, among college and university students.

1. Do you want to participate in the survey?

Yes

No

Thank you for your participation.

2. What gender do you identify as?

Male

Female

Other. _____

3. What is your age?

4. What is the highest level of education you have received?

Less than a high school degree

High school degree (or equivalent)

Under graduate

Post graduate

Ph.D. or higher

Other. _____

5. What is your native state or domicile?

6. What is your native city?

Parameters	Score 1 (Lowest Score), 5 (Highest Score)				
7. Visual idea of the meme	1 ●	2 ●	3 ●	4 ●	5 ●
8. Choice of composition	1 ●	2 ●	3 ●	4 ●	5 ●
9. Choice of colors	1 ●	2 ●	3 ●	4 ●	5 ●
10. Visual form of the meme in general	1 ●	2 ●	3 ●	4 ●	5 ●

11. Relationship between visual and text images of the meme	1 ●	2 ●	3 ●	4 ●	5 ●
12. Overall score (Visual and text elements)	1 ●	2 ●	3 ●	4 ●	5 ●

13. I like this internet meme.

Strongly agree Disagree Neither agree nor disagree Agree Strongly agree

14. I share this internet meme on social media.

Strongly agree Disagree Neither agree nor disagree Agree Strongly agree

15. Does this internet meme raise awareness about mental health issues.

Strongly agree Disagree Neither agree nor disagree Agree Strongly agree

Internet memes 1 to 20.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

SIMILARITY INDEX



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