

# Perspectives in Social Work

College of Social Work (Autonomous),  
Nirmala Niketan  
Mumbai

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- Build cadre of young, competent professionals having a global perspective and a strong value base of compassion, personal integrity, moderation, tolerance and self-respect.

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## **EDITORIAL**

As 2024 comes to an end, we reflect on the evolving landscape of social work and its continued role in addressing some of society's most pressing issues. The field of social work continues to evolve in response to an ever-changing social, political, and technological environment. The resilience, adaptability, and dedication of social workers in navigating complex systems to create lasting change is truly commendable. This reflection highlights the diverse perspectives shaping our profession and encourages us to consider what lies ahead. This issue of *Perspectives in Social Work* explores key themes that have defined the year and offers insights into emerging challenges and opportunities.

The first article by Joseph Xavier, K., Dr. Sethuramalingam, V. & Dr. Nirmala, D on the topic A Study on The Factors Influencing the Quality of Life of Persons With Alcohol Use Disorder in Tirupattur Block of Sivagangai District Tamil Nadu. Alcohol Use Disorder (AUD) continues to pose significant challenges to individuals, families, and communities in India, particularly in rural areas where access to resources and support systems is limited. In Tamil Nadu, regions like Tirupattur Block in Sivagangai District are witnessing the severe social and health consequences of alcohol misuse, making it critical to understand the factors influencing the quality of life (QoL) for individuals affected by AUD.

The second article Anu Singh & Dr. Md. Saifur Rahman on the topic Effect of Concept Mapping Approach on Scientific Attitude and Achievement in Science among students with Learning Disability. Students with learning disabilities (LD) often face challenges in science education due to difficulties in processing complex information, retaining concepts, and developing a scientific mind-set. These challenges can result in lower achievement and diminished interest in scientific subjects.

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Traditional teaching methods may not effectively address the needs of these students. Consequently, there is a growing interest in employing innovative instructional strategies, such as the Concept Mapping Approach (CMA), to facilitate learning and enhance scientific attitudes.

The Third article by Megha Rathore & Dr. Bigi Thomas on the topic Systematic Review of Cyber Victimization in Emerging Young Adults. The rapid growth of digital technology and the widespread use of social media platforms have significantly transformed how emerging young adults communicate, form relationships, and engage with the world. However, with these technological advancements comes the pervasive issue of cyber victimization - a phenomenon involving harassment, intimidation, or harm through digital means such as social media, messaging apps, and online platforms. Emerging young adults (typically defined as individuals aged 18–25) are particularly vulnerable to cyber victimization due to their extensive digital engagement, developmental stage, and transitional life phase.

The fourth article by B.Chibbymuthu & Mr. Benet Rajadurai, on the topic the challenges in field data collection: Leading to fabrication issues among social work researchers. Field data collection is a cornerstone of social work research, providing critical insights into human behaviour, social conditions, and community dynamics. This study explores the various challenges faced by social work researchers during field data collection and examines how these challenges contribute to data fabrication. The paper also discusses the implications of fabrication on research outcomes, ethical standards, and professional practice, and offers strategies to mitigate these risks.

The fifth article by G. Dhanalakshmi & P.B. Shankar Narayan on the topic, Marital Intention, Attitude and Social Support of Young Women with Disabilities. Marriage continues to be an important social institution, influencing identity, status, and social integration in many societies. Cultural norms, societal attitudes,

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and personal aspirations all intersect with the experiences of disability, shaping marital intentions and attitudes toward marriage. Additionally, social support systems play a pivotal role in determining the pathways and choices available to these women.

The final article by Debashree Kashyap & Archana Sharma on the topic Changes in household expenditure on education and its Position in the household budget in Assam. The study highlights a growing trend of increased household expenditure on education in Assam, which reflects both aspirations for better educational outcomes and the challenges posed by rising costs and inequalities. Addressing these issues through policy reforms, financial support mechanisms, and community initiatives is crucial to ensuring that all families can invest in education without jeopardizing their overall well-being. Equitable access to quality education can pave the way for sustainable social and economic development in the region.

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**A STUDY ON THE FACTORS INFLUENCING  
THE QUALITY OF LIFE OF PERSONS WITH  
ALCOHOL USE DISORDER IN TIRUPATTUR  
BLOCK OF SIVAGANGAI DISTRICT  
TAMIL NADU**

Joseph Xavier, K.<sup>1</sup>, Dr. Sethuramalingam<sup>2</sup>, and Dr. Nirmala, D.<sup>3</sup>

**Abstract**

**Objectives:** This study explores the socio-demographic background and factors influencing the quality of life of individuals with alcohol use disorders. **Method:** Data was collected from 306 participants in Tamil Nadu using a stratified simple random sampling method. **Results:** The average current age of the participants was 39.6 years, with alcohol use starting at 19.3 years. Weekly consumption averaged 1,170 ml; the mean annual family income was Rs. 205,697. All participants reported a family history of alcohol use, with peer influence as a key factor. Regression analysis revealed that higher depression, anxiety, stress scores, prolonged alcohol use, and larger family size significantly reduced quality of life, with higher depression, anxiety, and stress scores being the strongest predictors. The model fit analysis confirmed good alignment with the data. **Conclusion:** Strategies like abstinence, de-addiction therapy, counselling, and mental health education could enhance the quality of life for individuals with alcohol use disorders.

**Key Words:** - Alcohol Use- Stigma - Mental Health - Quality of Life

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## **1. Introduction**

Alcohol is a harmful psychoactive substance that can lead to dependence (WHO, 2024). Previously, terms such as "alcoholism," "alcohol addiction," and "alcohol abuse" were used to describe the most severe forms of hazardous drinking, characterised by an intense and often uncontrollable craving for alcohol. However, in the ICD-10, these terms were replaced with "harmful or hazardous alcohol use" and "alcohol dependence" to align with the WHO's mental health classification system (WHO, 1992; National Institutes of Health, 2011; National Health Service, 2022). Similarly, the DSM-V consolidated harmful or hazardous alcohol use and alcohol dependence into a single condition known as alcohol use disorders (AUDs). AUDs significantly impact physical and mental health, often leading to severe challenges in social and occupational functioning (National Institutes of Health, 2021; National Cancer Institute, 2024).

### **1.1. Global Scenario**

In 2018, the average alcohol consumption worldwide for individuals aged 15 and older was 6.2 litres of pure alcohol per capita (WHO, 2024a). Spirits comprised 44.8% of global consumption, followed by beer at 34.3% and wine at 11.7% (WHO, 2018). Alcohol-related issues account for approximately 5% of the worldwide burden of illness and injury, which includes over 200 disorders. According to the World Health Organisation, alcohol is responsible for around 3.3 million deaths annually, representing 5.9% of total global mortality. Among individuals aged 20 to 39, 13.5% of deaths can be attributed to alcohol consumption. Additionally, alcohol use leads to significant social and economic challenges for both individuals and society as a whole (WHO, 2022).

### **1.2. Indian Scenario**

India is the third-largest alcohol market globally, following China and Russia (WHO, 2018). In 2020, alcohol consumption in India



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was approximately 5 billion litres, projected to rise to 6.21 billion litres by 2024 (Minhas, 2023). In 2019, one in seven Indians aged 10 to 75 reported consuming alcohol, with a per capita consumption of 5.5 litres annually (WHO, 2024a). This equates to around 160 million individuals, or 14.6% of the population, with 5.2% exhibiting signs of alcohol dependency (Government of India, 2020). In rural areas, 21.5% of people aged 15 and older consume alcohol, compared to 17.1% in urban regions, resulting in a national average of 19.3% across all genders. Arunachal Pradesh reports the highest alcohol consumption rates, with 52.7% of males and 24.2% of females drinking alcohol (Government of India, 2021; The Indian Express, 2022). The southern states 'Andhra Pradesh, Telangana, Tamil Nadu, Karnataka, and Kerala' account for approximately 45% of India's total alcohol consumption. Furthermore, twelve states, including these southern states and Delhi, Punjab, Uttar Pradesh, West Bengal, Madhya Pradesh, and Rajasthan, collectively represent 75% of national alcohol consumption (The Economic Times, 2020). In the fiscal year ending 31 March 2024, the government of Tamil Nadu generated Rs. 45,855.67 crore from alcohol sales, marking a 2% increase from the previous year (Prakash, 2024).

### **1.2. Significance of the study**

Families of individuals with AUDs, particularly women and children, face profound challenges, including an increased risk of domestic violence and poverty. Those with AUDs often endure severe physical and mental health issues, such as anxiety, stress, depression, and suicidal tendencies. The consumption of spurious or illicit alcohol further compounds these difficulties, not only intensifying families' socio-economic struggles but also leading to loss of life. Beyond personal responsibility, broader factors such as family dynamics, social environments, and government policies such as regulating liquor outlets also play a critical role in exacerbating or mitigating these issues. This research seeks to uncover the determinants affecting socioeconomic conditions, mental health and quality of life, correlate the results with a suggested model, and provide effective intervention measures to avert AUDs.

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## **2. Review of Literature**

Several studies have been conducted on the QOL of persons with AUDs, both in India and internationally. The researcher reviewed several earlier studies related to the current research issue to comprehensively understand existing knowledge and strengthen the study with a solid academic foundation. Below are the key findings from these investigations.

Gillet et al. (1991) found that the average age of women with alcohol dependency was 40.6 years. Among these women, 62% were married, one-third were employed and 53.3% had a family history of alcohol use. Their study also revealed that quality of life improved with either abstinence from alcohol or moderate consumption. Similarly, Foster et al. (1999) indicated that alcohol dependency significantly reduces quality of life, but that quality can improve with abstinence, regulated drinking, or limited intake. They noted that psychiatric comorbidities, social environment, and disrupted sleep had a significant impact on quality of life. Johnson et al. (2010) conducted research in Bangalore and its surroundings, which showed that the average age at which individuals began consuming alcohol was 21.39 years. The average age at which dependency onset occurred was 27.8 years.

### **2.1. Research Gap and Research Questions**

The data given in the earlier sections highlights a concerning rise in alcoholism across the country, with Tamil Nadu being particularly affected. Marginalised segments of society are especially vulnerable and often suffer the consequences of illegal alcohol production, which poses significant health risks. Additionally, a review of the existing literature reveals a lack of research on the QOL for persons with AUDs. Relevant factors in this context include socioeconomic status, the stigma surrounding alcohol use, and mental health issues such as anxiety, stress, and depression. This research examines persons with AUDs in various villages in a specific district in Tamil Nadu state. In this context, the researcher aims to explore the following critical

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inquiries: (1) what are the socioeconomic backgrounds of persons with AUDs? (2) what are the levels of stigma, depression, anxiety, stress (DAS) and quality of life (QoL) scores of persons with AUDs? Furthermore, (4) what factors influence the quality of life of persons with AUDs? and (5) does the proposed model (shown in Figure 1) align with the sample data?

### **3. Methodology**

#### **3.1. Objectives**

Based on the research questions, the following objectives were framed: The are: (i) to understand the socio-demographic characteristics and factors related to alcohol use among adult regular drinkers and (ii) to identify the principal factors that are associated with quality of life among persons with AUDs.

#### **3.2. Theoretical Framework of the Study**

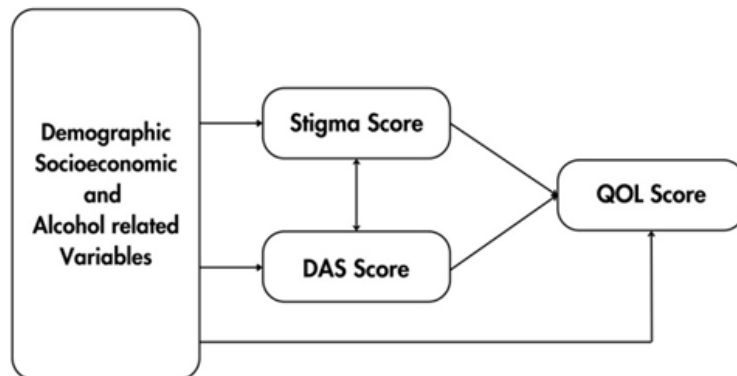
Research on alcohol use disorders frequently explores the connections between stigma, mental health, and quality of life through various theoretical frameworks. One primary framework used in this investigation is 'Social Cognitive Theory'. This theory highlights the intricate impact of stigma on mental health and quality of life, illustrating the interconnected dynamics among DAS and QOL. This theory suggests that stigma reduces self-efficacy and discourages individuals from seeking help due to fears of criticism or discrimination (perceived stigma). This avoidance can exacerbate untreated mental health issues, further diminishing quality of life and creating significant barriers to adopt healthier behaviours (Bandura, 1986; Schomerus et al., 2011).

#### **3.3. Conceptual framework/model of the study**

Using the previously described Social Cognitive Theory, the researchers developed the following model to conduct the current investigation. Figure 1 presents the conceptual framework/model of the investigation. This model indicates that stigma, DAS, and QOL scores are treated as dependent variables, while the

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respondents' background characteristics are considered independent variables. Conversely, when viewing the QOL score as the dependent variable, the background characteristics, stigma, and DAS scores function as independent variables.



**Figure 1: Conceptual Framework of the Quality of Life of Alcohol Dependents**

### **3.4. Study Area, Sample Frame and Sample Estimation**

Sivagangai is one of the 38 districts in Tamil Nadu, India. It is classified as one of the 250 most backward districts in the country (Census of India, 2011; Government of Tamil Nadu, 2024). Additionally, the researcher has prior experience with development projects in this region of Tamil Nadu and has, therefore, purposively selected the Sivagangai district as the study area.

In the Sivagangai district, there were 12 community development blocks, out of which the researcher selected the Tirupattur block using the lottery method. The Tirupattur block comprises 40 revenue villages. However, due to time and money constraints, the researchers selected ten revenue villages using a lottery method. This selection process formed part of a multi-stage sampling procedure to determine the research area. Thus, a multi-stage sampling procedure was adopted to select the research area.

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Due to the non-availability of official records on the number of alcohol users in the designated district/block, a baseline survey was conducted using the Alcohol Use Disorders Identification Test (AUDIT) scale (Babor et al., 2001) in the selected villages to identify individuals who consume alcohol.

The survey revealed that 7,197 adult individuals reported consuming alcohol. Among them, 5,700 were classified as adult social drinkers, scoring seven or below on the AUDIT scale, indicating low-risk consumption. In contrast, 1,497 individuals were identified as adult regular drinkers or persons with Alcohol Use Disorders (AUDs), encompassing both harmful alcohol use and alcohol dependence.

As a result, the study focused on only 1,497 adult regular drinkers (aged 18 and older) who consumed 15 or more drinks per week and scored eight or higher on the AUDIT scale, forming the universe for this study.

Krejcie and Morgan's (1970) formula was used to determine the appropriate sample size for these adult regular drinkers, resulting in a sample size 306. These regular drinkers were selected using a stratified proportionate random sampling procedure to ensure equitable representation from the 10 selected villages involved in the study. Individual samples of regular drinkers were then chosen using a simple random sampling method based on Tippet's (1927) random numbers table.

### **3.5. Research Design**

A simple descriptive research design was adopted, with data collected using a survey method to describe the characteristics (Chew, 2010) of persons with AUDs in the selected villages. As the aim of the study was to understand the background characteristics, stigma, DAS, and QoL of the

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sample respondents, a descriptive design was deemed appropriate. Additionally, a correlational design was employed, as the study's primary objective was to establish a relationship between background characteristics, stigma, DAS, and QoL using advanced statistical techniques such as multiple regression and path analysis. The research is also cross-sectional, as data were collected at a single point in time to assess the background characteristics, stigma, DAS, and QoL of the sample respondents. In summary, the study utilised a descriptive design based on survey method, with a cross-sectional approach, and employed correlational analysis to draw statistical inferences related to the variables studied. It is also important to note that, in this research, variables are identified through observation and measured accordingly.

### **3.6. Tools of Data Collection and Pre-Test**

A semi-structured interview schedule was developed for this study to collect data on socio-demographic characteristics and factors related to alcohol consumption. A self-constructed 20-item, five-point Likert scale was used to assess the stigma perceived by persons with AUDs, where higher scores indicate a greater level of stigma. The face validity of the scale was confirmed. The Depression, Anxiety, and Stress Scale (DASS-21), developed by Lovibond and Lovibond (1995), was utilised to evaluate levels of DAS, with higher scores signifying more severe symptoms of each condition. Additionally, the WHOQOL-BREF Scale (WHO, 1996, 2004) was employed to assess the QoL of persons with AUDs, with higher scores reflecting better QoL. The alpha coefficients for the stigma, DAS, and QoL Scales were 0.967, 0.943, and 0.971, respectively, indicating strong reliability. A pre-test was conducted to identify potential issues with the interview schedule, and it was determined that translating the interview schedule into the local language would enhance respondents' comprehension.

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### 3.7. Methods of Data Collection and Analysis

The required data was gathered through face-to-face interviews after obtaining the participants' informed consent. Data collection spanned approximately five months, from April to August 2022. The data were analysed using SPSS-AMOS software (IBM Corp., 2017) for Windows. Simple frequency, mean, and standard deviations were calculated to fulfil the study's objectives. Multiple linear regression analysis was employed to identify the factors influencing the QoL of individuals with AUDs. Ten continuous variables, viz; current age, number of family members (family size), education, annual family income, age at first alcohol use, age at onset of alcohol dependence, duration and quantity of alcohol use, stigma and DAS scores, were used as independent variables. Model fit analyses were also performed to examine the variance and covariance patterns among the variables, providing a comprehensive data analysis.

## 4. Results

### 4.1. Socio-demographic Characteristics of the Respondents

This study section (Table 1) examined the demographic and socioeconomic characteristics of persons with AUDs.

**Table 1: Distribution of the Respondents by their Socio-Economic Characteristics**

Socio-demographic Characteristics of the Respondents	Frequency	Per cent
<b>1. Current Age (in Years)</b>		
35 or less	96	31.4
36– 45	130	42.5
46 +	80	26.1
Mean – 39.55±8.272	Min. - 21	Max. -60

<b>2. Marital Status</b>		
Unmarried	30	9.8
Married	251	82.0
Widowed	25	8.2
<b>3. No. of Family Members</b>		
3	91	29.7
4	160	52.3
5+& Above	55	18.0
Mean – 3.88±0.756      Min. - 2      Max. -6		
<b>4. Type of Family</b>		
Nuclear Family	190	62.1
Joint Family	116	37.9
<b>5. Social Standing (Caste)</b>		
Scheduled Cates / Tribes	58	19.0
Most Backward Cates	117	38.2
Backward Cates	131	42.8
<b>6. Education</b>		
Primary School	57	18.6
Middle School	56	18.3
High School	68	22.2
Higher Secondary School	60	19.6
Collegiate & Above	65	21.2
Mean.10.22    Min.4    Max.18		
<b>7. Occupation</b>		
Wage Labourers	35	11.4
Semiskilled	46	15.0
Petty Business	42	13.7
Agriculture	88	28.8
Employees	95	31.0
<b>8. Annual Family Income (in Rs.)</b>		
1,89,999 or less	98	32.0
1,90,000 – 2,19,999	114	37.3
2,20,000 +	94	30.7
Mean –2, 05,697±34,295    Min. -1, 19,000    Max. -3,30,000		
<b>Total</b>	<b>306</b>	<b>100.0</b>



The average current age of participants was 39.6 years, ranging from 21 to 60 years. Most (82%) of them were married, with an average family size of 3.9. The majority (62%) of them lived in nuclear families. In terms of caste distribution, 43% belonged to Backward Castes, 38% to Most Backward Castes, and 19% to Scheduled Castes/Tribes. All participants were literate, with an average education of 10 years, ranging from elementary school (4<sup>th</sup> Std) to postgraduate level (18 years of education). Less than one-third (31%) were employed in government or private organisations, and 29% were landowners involved in agriculture. Their average annual family income was Rs.2,05,697, ranging from Rs.1,19,000 to Rs.3,30,000.

#### 4.2. Alcohol-Related Aspects of Persons with AUDs

This section of the study (Table 2) examined the alcohol-related behaviours of persons with AUDs.

**Table 2: Distribution of the Respondents by Alcohol Use and Related Aspects**

Alcohol-Related Aspects of the Respondents	Frequency	Per cent
1. Age at First Use of Alcohol (in Years)		
17 & below	100	32.7
18 – 20	124	40.5
21 & above	82	26.8
<i>Mean –19.25±3.67 Min. - 12 Max. - 30</i>		
2. Age of Onset of Alcohol Dependence (in Years)		
25 & below	87	28.4
26 – 30	130	42.5
31 & above	89	29.1
<i>Mean –28.96±5.39 Min. - 20 Max. - 45</i>		
3. Years of Alcohol Use (in Years)		
15 & below	110	35.9
16 – 25	127	41.5
26 & above	69	22.5
<i>Mean –20.31±8.76 Min. - 3 Max. -45</i>		
4. Person who Influence to Use Alcohol		
Peers	190	62.1
Family Members (Grand Father / Father)	116	37.9

5. Family History of Alcohol		
Father	191	62.4
Other Family Members	115	37.6
6. Usual Time to Have Alcohol		
Night Only	77	25.2
Afternoon or Evening	194	63.4
Morning & Evening	35	11.4
7. Type of Alcohol Use to Have		
Brandy	244	79.7
Rum	41	13.4
Whisky	21	6.9
8. No. of Days Use to Have Alcohol in a Week		
4 days	77	25.2
5 days	132	43.1
6 days	63	20.6
7 days	34	11.1
Mean -5.2±0.94    Min. - 4    Max. -7		
9. Quantity of Alcohol Use per Week (in ml.)		
1000 or less	105	34.3
1001 – 1500	75	24.5
1501 +	126	41.2
Mean -1170.0±530.0    Min. - 450    Max. -2100		
10. Percentage of Expenditure on Alcohol in Personal Income		
25.0 & less	107	35.0
25.1 – 50.0	140	45.8
51.0 & above	59	19.3
Mean -35.6±21.1    Min. - 8.7    Max. -136.0		
11. Reasons for Drinking Alcohol		
Work Influence (Body pain / Strain)	142	46.5
Pleasure & Desire	80	26.1
Family Disputes	65	21.2
Psychological Factors (Stress / Depression, etc.)	19	6.2
12. Diseases from which Suffered / Suffering		
No Disease	34	11.1
Blood Pressure	133	43.6
Nervous Problem	60	19.6
Ulcer / Stomach Pain	38	12.4
Liver Diseases (including Jaundice)	42	13.3
Total	306	100.0

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The results showed that 41% of respondents first tasted alcohol between the ages of 18 and 20, with an average initiation age of 19.3 years, ranging from 12 to 30 years. The average age of onset of alcohol dependency was 29 years. On average, participants had been consuming alcohol for 20.3 years, with durations ranging from 3 to 45 years. All participants acknowledged a family history of alcohol use. However, they identified peer influence (62.1%) as the primary factor driving their alcohol addiction while also recognising the significant influence of family members also. The typical time for drinking was in the afternoon or evening, though 11% reported consuming alcohol in both the morning and evening. The study also found that 80% of respondents preferred brandy. On average, they drank alcohol 5.2 days per week, with a range of 4 to 7 days. Nearly 43% drank on five days, 25% on four days, and 21% on six days, while 11% consumed alcohol every day of the week. The average weekly per capita alcohol consumption was around 1,170 ml (50.1 units of pure alcohol) ranging from 450 ml to 2100 ml (19.3 to 89.9 units of pure alcohol) accounting for 35.6% of their income. Common reasons for regular alcohol use included work strain (46.5%), pleasure and desire (26.1%), family disputes (21.2%), and psychological issues such as stress and depression (6.2%). Regular alcohol use was associated with several health issues, with 44% experiencing blood pressure, 20% nerve disorders, 13% liver diseases and 12% reporting stomach discomforts.

#### **4.3. Mean Scores of Stigma, DAS, and QOL of Persons with AUDs**

Descriptive statistics for Stigma, DAS, and QoL were calculated. The results indicated that the mean scores for total Stigma, DAS, and QoL were 64.30, 47.48, and 52.30, respectively.

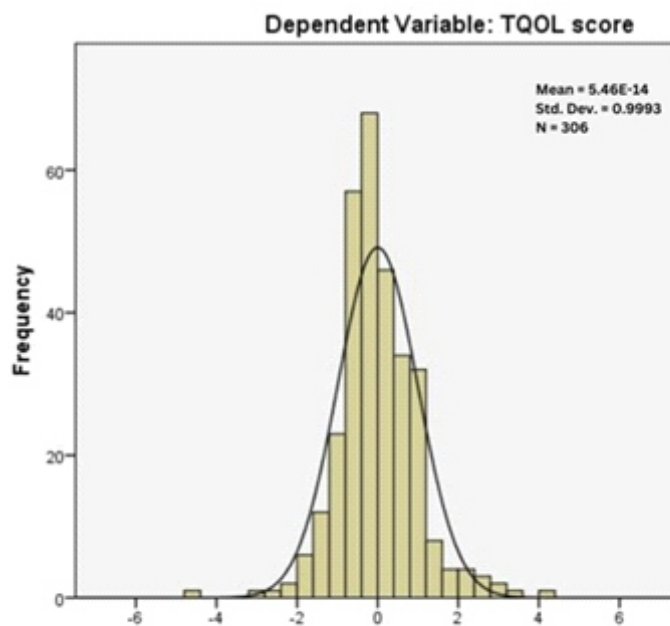
#### **4.4. Stepwise Multiple Linear Regression Analysis**

##### **4.4.1. Normality and Linearity of Residual Tests**

The histogram and P-P plot were used to assess the linearity and

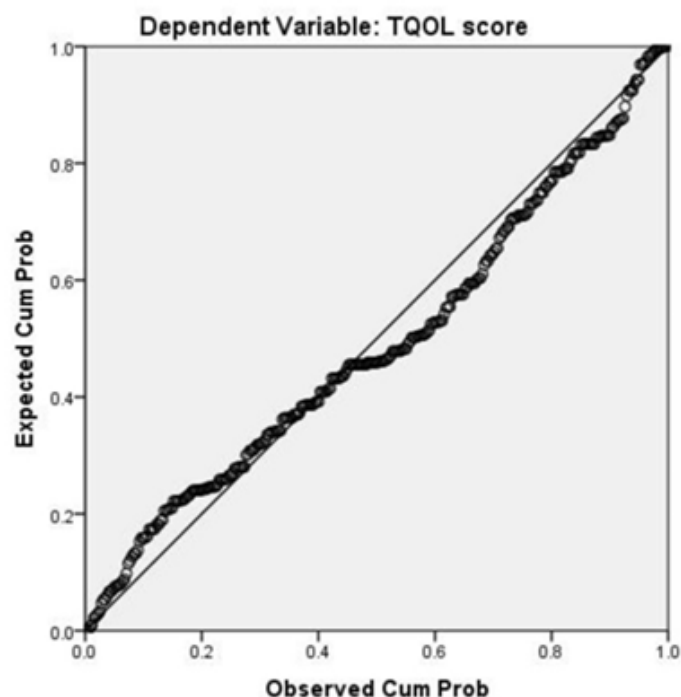
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normality of the residuals in the multiple linear regression analysis. The histogram in Figure 2 indicated that the residuals approximated a normal distribution. It further showed that in linear regression analysis, the error terms exhibited no specific tendency (Field, 2009).



**Figure 2: Histogram of Regression Standardised Residual**

Figure 3 displayed a P-P plot, which was used to assess whether the residuals adhered to a normal distribution. The residuals should have been closely aligned along the straight dashed line (Kim, 2015). Figure 3 mirrored the histogram in Figure 2, with all the data points closely clustered around the 'ideal' diagonal line, showing no significant deviations (Field, 2009).



**Figure 3: P-P Plot of Regression Standardised Residual**

#### **4.4.2. Major Factors Influencing the Quality of Life of Persons with AUDs**

Table 3 presents a stepwise regression analysis. Model 1 (shown in Column 2) included only the DAS score as a predictor, yielding an  $R^2$  value in Column 4. This indicates that the DAS score alone accounted for 92.5% of the variation in QOL among persons with AUDs. In the subsequent models, this variance increased to 94.2%, 94.8%, and 95.4% for models 2, 3, and 4, respectively. As a result, the additional variables in models 2, 3, and 4 of Table 3 explained an extra 1.7%, 0.6%, and 0.6% of the variation in the QoL of individuals with alcohol use disorders.

The unstandardised beta (b) values (in Column 6 of Table 3) showed the relationship between the QOL score and each

predictor variable. A positive *b* value indicated a positive relationship, while a negative *b* value indicated a negative relationship (Field, 2009). In this analysis (model 4 in Column 6), predictors such as the DAS (-0.225), stigma (-0.164), and duration of alcohol consumption (-0.109) showed a negative relationship with QOL. Conversely, the number of family members (family size) (0.873) showed a positive relationship, meaning that increased family size led to a higher QOL.

**Table 3: Results Based on Stepwise Regression Analysis on Quality of Life of the Persons with AUDs**

Model	Predictors	R	R <sup>2</sup> x100	Δ R <sup>2</sup> X 100	b	β	t	p
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Dependent Variable: Quality of Life score</i>								
1	(Constant)	.962	92.5%	92.5%	70.053		218.789	.000
	DAS Score				-.374	-.962	-61.161	.000
2	(Constant)	.971	94.2%	1.7%	76.954		99.011	.000
	DAS Score				-.217	-.558	-12.504	.000
	Stigma Score				-.223	-.425	-9.525	.000
3	(Constant)	.974	94.8%	0.6%	76.337		102.797	.000
	DAS Score				-.221	-.567	-13.431	.000
	Stigma Score				-.176	-.334	-7.465	.000
	Duration of C.A.				-.111	-.113	-6.029	.000
4	(Constant)	.977	95.4%	0.6%	72.334		75.226	.000
	DAS Score				-.225	-.578	-14.466	.000
	Stigma Score				-.164	-.312	-7.331	.000
	Duration of C.A.				-.109	-.111	-6.255	.000
	No. of F.M.				.873	.077	6.090	.000

Note: C.A.- consuming alcohol, F.M. – Family Members

The standardised beta ( $\beta$ ) values (in model 4 in Column 8) provided better insight into the importance of the predictors in the models under study. Of these four variables, the DAS score emerged as the most influential factor affecting the QOL of persons with AUDs. Specifically, the DAS score ( $\beta = -0.578$ ;  $p < 0.001$ ), stigma score ( $\beta = -0.312$ ;  $p < 0.001$ ), and duration of alcohol consumption ( $\beta = -0.111$ ;  $p < 0.001$ ) were identified as primary factors negatively impacting QOL. A negative coefficient suggested that as the independent variables (DAS and stigma scores and duration of alcohol consumption) increased, the dependent variable (QOL) tended to decrease. On the other hand, it was found that the number of family members (family size) had

a notable impact on increasing their quality of life ( $\beta = 0.077$ ;  $p < 0.001$ ), indicating that an increase in the number of family members appeared to enhance the QOL among the sample of persons with AUDs.

#### 4.5. Model Fit Analysis

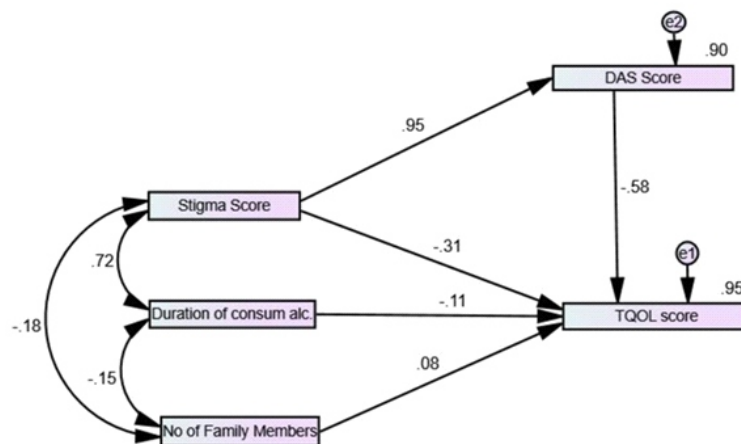


Figure 4: Model Fit: Graphic output for Modified Standardised Path Analysis

The model fit (shown in Figure 4) assessed the degree of similarity between the dependent and independent variables using path analysis derived from the sample data. The model fit results include the following indices: Chi-Square (CMIN), p-value, CMIN/DF, CFI, TLI, SRMR, RMSEA, and PClose (Hu & Bentler, 1999; Gaskin & Lim, 2016). Figure 4 and Table 10 present the standardised path analysis output. In the present model, the DAS and QOL scores acted as dependent variables and stigma score, duration of alcohol consumption and number of family members acted as independent variables. Figure 4 explained that when the DAS score was treated as the dependent variable, the stigma score ( $\beta = 0.95$ ) alone was treated as the independent variable, explaining 90% of the variance. On the other hand, when the QoL score was treated as the dependent variable, the stigma score ( $\beta = -0.31$ ), duration of alcohol consumption ( $\beta = -0.11$ ),

number of family members ( $\beta = 0.08$ ), and DAS score ( $\beta = -0.58$ ) were treated as independent variables, accounting for 95% of the variance.

**Table 4: Model fitness indices of Modified path analysis**

Measure	Estimate	Threshold	Interpretation
CMIN	1.031		--
DF	2	--	--
p-value	0.597	<b>&gt;0.05</b>	Model fits well
CMIN/DF	0.516	<b>= 3</b>	Excellent
CFI	1.000	>0.95	Excellent
TLI	1.003	> 0.96	Perfect fit
SRMR	0.006	<0.08	Excellent
RMSEA	0.000	<0.06	Excellent
PClose	0.776	>0.05	Excellent

The model fit analysis (Table 4) yielded a chi-square value (CMIN) of 1.031, with 2 degrees of freedom (DF) and a p-value of 0.597. Since the p-value exceeded 0.05, this indicated a good model fit. A p-value greater than 0.05 suggests that the model does not significantly deviate from the observed data (Kline, 1998). Additionally, the ratio of chi-square to degrees of freedom (CMIN/DF) was 0.516, a value less than 3, generally indicating a good fit, with lower values within this range often considered better. Since 0.516 was below 1, this provided an excellent indication that the model fit the data well. The Tucker-Lewis coefficient (TLI) and Comparative Fit Index (CFI) values above 0.95 indicated a good fit, with values closer to 1 representing an excellent fit. In this case, values of 1.000 and 1.003 for TLI and CFI suggested a perfect, exceptionally strong model fit. Standardised Root Mean Squared Residual (SRMR) values below 0.08 indicated a good model fit, with values as low as 0.006 reflecting an excellent fit and minimal residual error. Root Mean



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Square Error of Approximation (RMSEA) values below 0.06 were considered good, with lower values signifying a better fit; an RMSEA of 0.000 was ideal, suggesting nearly no error in approximation. PClose values above 0.05 also indicated a good fit, and a value of 0.776 was notably high, providing strong support for the model's fit (Hu & Bentler, 1999; Gaskin & Lim, 2016). This indicated that the model closely matched the observed data (CMIN/DF = 0.516 < 3, CFI = 1.000 > 0.95, TLI = 1.003 > 0.96, SRMR = 0.006 < 0.08, RMSEA = 0.000 < 0.06, and PClose = 0.776 > 0.05), suggesting that no significant adjustments were needed. Overall, each fit index met or surpassed the excellent fit threshold, demonstrating an exceptionally well-fitting model.

### **5. Discussions and Suggestions**

In the present research, the mean age of persons with AUDs was 39.6 years, slightly lower than in previous studies. Olickal et al. (2021) reported a mean age of 45.2 years, Sivaraman et al. (2023) found 43.98 years, and Gillet et al. (1991) noted 40.6 years. This variation may reflect differences in sample demographics, geographic regions, or study periods, highlighting the need for age-tailored therapies and support services for those with AUDs.

The study findings indicated that the average age of first alcohol use was 19.3 years, with a range from 12 to 30 years. This average is significantly below the legal drinking age in several Indian states, such as Maharashtra, Delhi, and Punjab (25 years), Kerala (23 years), and Andhra Pradesh, Tamil Nadu (21 years). However, it is slightly above the legal drinking age in Goa, Himachal Pradesh, Karnataka, Sikkim, and Puducherry, where the limit is set at 18 years (The Government of Maharashtra, 2012; The Hindu, 2017; Indian National Bar Association, 2018).

The findings of this study underscore a significant concern regarding underage drinking, with the average age of first alcohol use falling below the legal limit in many states. The fact that some individuals begin drinking as early as 12 is particularly troubling. Early alcohol use is associated with an increased risk of

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dependency, poorer academic performance, and engagement in risky antisocial behaviours. These findings highlight the urgent need for preventative education programmes and strict legal drinking age law enforcement. Coordinated efforts by parents, non-government and government organisations could help mitigate the risks of early alcohol use.

The present study found that the average age of onset for alcohol addiction is 28.96 years, ranging from 20 to 45 years. This aligns closely with Johnson et al. (2010), who reported a mean onset age of 27.8 years, indicating a consistent pattern in the age of onset for alcohol dependency across studies. Recognising this trend is vital for developing early intervention and prevention strategies targeting individuals at risk of alcohol dependency.

The study findings show a mean daily alcohol consumption of 1170 ml (50.1 units of pure alcohol) per person, ranging from 450 ml to 2100 ml (19.3 to 89.9 units of pure alcohol). This exceeds previous reports by Gillet et al. (1991) and Sivaraman et al. (2023), who found daily averages of 19.7 and 16.37 units, respectively. Differences in study duration, geographic location, or sample characteristics may explain these discrepancies.

The present study found a mean QoL score of 52.30 for persons with AUDs, slightly higher than the 50.7 reported by Olickal et al. (2021) for alcohol users. This minor difference suggests that while alcohol dependency typically lowers QoL, the impact can vary based on individual and contextual factors. The study also identified several variables influencing QoL, including DAS and stigma scores, duration of alcohol consumption, and family size. Figure 4 explained that when the DAS score was treated as the dependent variable, the stigma score ( $\beta = 0.95$ ) alone was treated as the independent variable, explaining 90% of the variance. On the other hand, when the QoL score was treated as the dependent variable, the stigma score ( $\beta = -0.31$ ), duration of alcohol consumption ( $\beta = -0.11$ ), number of family members ( $\beta = 0.08$ ),

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and DAS score ( $\beta = -0.58$ ) were treated as independent variables, accounting for 95% of the variance. These findings suggest that the stigma scores associated with alcohol use disorders (AUDs) have an independent effect on depression, anxiety, and stress (DAS) scores. Additionally, the quality of life (QoL) for individuals with AUDs is significantly impacted by their DAS scores, stigma scores, duration of alcohol use, and family size. Foster et al. (1999) emphasised the significant effects of mental comorbidity, social context, and disrupted sleep on QOL. Additionally, Ishak et al. (2011) found that anxiety and impulsivity are strong predictors of health-related QoL. These findings highlight the complex interaction of social and behavioural factors affecting persons with AUDs. Understanding these elements is crucial for developing comprehensive interventions and support strategies to improve QOL in this group.

## **6. Conclusion**

The study concludes that the average age of respondents was 39.6 years. Most of them were married and belonged to a family with an average size of 3.9, primarily from Backward Castes and Most Backward Castes. Factors such as peer influence and family history play a vital role in the use of alcohol. Brandy is the preferred beverage. The research also reveals that four variables - DAS and stigma scores, duration of alcohol consumption, and family size, significantly impact the QOL of persons with AUDs. The DAS score is the most influential factor affecting the QOL of persons with AUDs. The CMIN/DF, CFI, and SRMR values indicate a good fit between the model and the data. A low RMSEA value, along with a non-significant Chi-square (CMIN) result, supports this conclusion, demonstrating that the data aligns well with the expected or hypothesized model (as shown in Figure 1). Research highlights the understanding of alcohol intake patterns to prevent mental health issues and promote responsible drinking behaviours, including abstinence, addiction therapies, counselling, and mental health education.

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**EFFECT OF CONCEPT MAPPING APPROACH  
ON SCIENTIFIC ATTITUDE AND  
ACHIEVEMENT IN SCIENCE AMONG  
STUDENTS WITH LEARNING DISABILITY**

Anu Singh<sup>1</sup> and Dr. Md. Saifur Rahman<sup>2</sup>

**Abstract:** Students with Learning Disability must be equipped with means to develop their metacognitive capacities especially the “learning to learn” skills for effective lifelong learning. Concept Mapping is one such strategy and this study aims to determine the effectiveness of this approach on Scientific Attitude and Achievement in Science among students with Learning Disability. A two group, pre-test/post-test, quasi-experimental design was employed, where 35 students with learning disability of VIII standard studying in Govt. Schools of Chandigarh were selected and randomly assigned to control and experimental groups. The Control Group (18 students, 10 Boys + 8 Girls) received Conventional teaching whereas the experimental group (17 students, 8 Boys + 9 Girls) received teaching via Concept Mapping Approach for a period of 20 days. Their scores were measured on SAS-KAGS by Kaur and Gakhar and SAT by the researcher herself. Analysis of pre and post test data revealed that the Concept Mapping Approach is more effective in improving achievement in science, scientific attitude as well as retention of learned knowledge among students with learning disability as compared to Conventional Teaching Method.

**Keywords:** Concept Mapping, Scientific Attitude, Achievement in science, Learning Disability

**1. Introduction:**

An extensive range of scientific concepts, held at the core of science curriculum, helps to identify science as a conceptual subject. These concepts of science are also related to concepts and sub-concepts in other subjects and our daily life too.

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Hence poor performance in the subject of science may be connected to poor grades overall, that is why science education is given immense importance in school education. Teaching of science emphasises on inculcating a scientific attitude and arousing interest in science among the learners (Dani, 1989). The National Education Policy (NEP 2020) also stresses that science curriculum must incorporate scientific methods in order to develop scientific attitude among students to encourage meaningful learning instead of rote learning. Fostering scientific attitude among students further encourages achievement in science. In fact many researches have proved the relationship between achievement in science and scientific attitude (Bettaswamy, 2012; Olasehinde & Olatoye, 2014; Singh V, Singh A & Giri, 2016; Ahuja, 2017).

Meaningful science education is seen as a vehicle for training the child to think logically, reason and analyse systematically, nurture the natural curiosity and to cultivate objectivity and scientific attitude in the students (Panditrao & Panditrao, 2020). Nurturing scientific attitude helps in developing scientific mind which in turn is essential for achievement in science. But sadly we have failed badly in achieving the aims of science education proposed by our education policies. This is evident from previous educational surveys such as the Hoshangabad Science Teaching Programme's (1972 -2002) 30 year review. The report mentioned that science education in the country paints a dismal picture as there is mainly emphasis on textbook based rote learning with no scope for experimentation and exploration (Mukund, 1988). Also a similar scenario is noticeable in recent educational surveys such as the National Achievement Survey (NAS) 2021 Report showing that the overall average performance of the students in science at primary, elementary, as well as secondary level, is the lowest among all other subjects with a score of 228 (in scaled scores out of 500). This lag in achievement in science can be attributed to factors related to students such as lack of scientific attitude, motivation, etc., or even presence of invisible disabilities like learning disability.

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Specific Learning Disability (SLD) is a developmental disorder, manifesting as difficulty in reading, writing, comprehending or using language, calculations, wherein the child has normal intelligence and conventional schooling, adequate motivation and opportunity, and intact hearing and visual capacity (Singh et al., 2017). Around 5-15% of school going children have this disability (Karande, Bhosrekar, Kulkarni & Thakker, 2009), out of which dyslexia is the most common, followed by dysgraphia and dyscalculia. Science is a part of the curriculum that can be particularly challenging to students with learning disability because of the diverse demands it places on cognitive performance (Brigham, Scruggs, & Mastropieri, 2011). Researchers revealed that children with special needs tend to show magnificently lower achievement in science than their peer groups (Steele, 2007; Bell R. & Bell L., 2002; Scruggs, Mastropieri, & Boon, 1998).

Continuing use of poor teaching methods is one of the major causes of poor performance in science subjects (Tandog & Bucayong, 2019), hence science teachers must be equipped with scientific teaching-learning strategies to involve the different intelligences and explore the maximum potential of students in an inclusive setup. Concept mapping strategy is one such metacognitive tool which helps to inculcate high order thinking and learning skills in the students, which in turn promotes development of scientific temperament and sound intellect. It presents knowledge in a systematic and hierarchical manner which specially helps the students with learning disability as they are more comfortable when information follows some structured pattern. Also concept maps helps to reduce the cognitive load by removing the clutter of conventional textbooks and notes (Hwang, Kuo, Chen & Ho, 2014). Thus this tool can be of immense value for the students with learning disabilities helping them to construct causal-effect connections between concepts and to think about their own thinking or if put in the words of Novak, “learning how to learn” (Novak & Gowin, 1984). Concept maps act as a learning tool which facilitates the organization and retrieval of information with a graphic alternative to the written text. They enhance

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cognitive abilities even in the presence of learning disorders (Oliva & Antonietta, 2012).

Concept maps were first developed in 1972 by Joseph Novak and have since been utilized by special educators and curriculum designers around the world as they act as a blueprint to maximize the learning environment through multiple representations of concepts (Kachhap, Devi & Mane, 2021). Although this strategy has been studied by Indian researchers under mainstream education domain like (Thomas & Thakur, 2011; Cheema & Mirza, 2013; Aziz & Rahman, 2014; Chawla & Singh, 2015; Marutirau & Dr. Patnakar, 2016; Kumar & Singh J., 2017; Hazare, 2018) as well as in special education like visual disability (Kachhap & Mane, 2019), diverse learning needs (Kachhap, Devi & Mane, 2021) and children with disabilities (Madan & Sharma, 2013). Its potential is not fully tapped in the area of students with learning disability in Indian scenario. Hence the researcher got motivated to study the use of concept mapping in developing scientific attitude and improving achievement in science among students with learning disability.

## **2. Review Of Related Literature**

**Concept Mapping and Learning Disability:** Studies show that concept mapping strategy can help improving reading performance of students with reading difficulties (Undalok and Salbabro, 2022) and expository text comprehension in students with learning disability (Hendi, 2015; Calvin, 2022) as well as in poor readers (Morfidi, Mikropoulos, & Rogdaki, 2018). It helps in achieving accurate acquisition of science content among the students with learning disability by making use of computer based concept maps (Ciullo, Falcomata, and Vaughn, 2015) or concept maps based evaluation sheets (Vlachos & Zamfirov, 2017) and better acquisition of factual knowledge (Sperling, Grünke, and Cöppicus, 2019).

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**Concept Mapping and Achievement in Science:** Studies reveal that concept mapping helps in improving achievement as well as retention in subject areas that are closely related to the natural or exact sciences such as physics (Agube, Ntibi & Neji, 2021); social studies (Singh A. & Bajwa, 2017); genetics (John, Sani, Ranccas & Maskawa, 2019); science (Hazare, 2018; Aziz & Rahman, 2014, Thomas K & Thakur R, 2011); chemistry (Jack, 2013) and biology (Marutirao & Dr. Patnakar, 2016). Some other studies confirmed the positive effect of concept maps on achievement among low performance cases (Kumar & Singh J., 2017) and even low achievement motivation cases (Chawla & Singh G., 2015).

Thus it can be inferred that concept mapping strategy can be utilized to cater to the heterogeneity presented by the diverse group of learners especially the ones presenting with learning disabilities across all the science subjects including biology, physics or genetics etc. Also the strategy has varied applications covering different areas of education including teaching, learning and retention of knowledge as well as for evaluation.

**Justification of the Problem:** Teaching via concept mapping strategy enhances meta-cognitive skills among students and help to reduce the cognitive load on students which can be extremely helpful for students with learning disabilities as they gain immensely when knowledge is self-constructed by them. This is especially true if the information is created independently under the supervision of a special educator. Concept maps constructed by the students with learning disability should be able to provide them with a valuable tool in science learning by removing the clutter of conventional textbooks as science is a conceptual subject. Hence it has been used extensively in research works for special education across the world but the same cannot be said about the studies in Indian context where its potential is not tapped completely. Although this approach has been used nationwide in the area of mainstream education, and some in other disability areas such as children with visual disability (Kachhap & Mane, 2019), diverse learning needs ( Kachhap, Devi & Mane, 2021) and children with

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disabilities (Madan & Sharma, 2013), there is a dearth of research where this strategy has been used for students with learning disability. Hence the proposed study appears to be fully justified in assessing the effect of Concept Mapping Approach on scientific attitude and achievement in science among students with learning disability.

### **3. Objectives:**

1. To compare the effect of Concept Mapping Approach and Conventional Teaching Method on Scientific Attitude of VIII standard students with Learning Disability.
2. To compare the effect of Concept Mapping Approach and Conventional Teaching Method on Achievement in Science of VIII standard students with Learning Disability.
3. To compare the effect of Concept Mapping Approach and Conventional Teaching Method on retention of Achievement in Science of VIII standard students with Learning Disability.

### **4. Hypotheses:**

1. There will be no significant difference in the effect of Concept Mapping Approach and Conventional Teaching Method on Scientific Attitude of VIII standard students with Learning Disability.
2. There will be no significant difference in the effect of Concept Mapping Approach and Conventional Teaching Method on Achievement in Science of VIII standard students with Learning Disability.
3. There will be no significant difference in the effect of Concept Mapping Approach and Conventional Teaching Method on retention of achievement in science among VIII standard students with Learning Disability.

**5. Tools of the study:** Two tools were used for the present study, namely



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- A) **Scientific Attitude Scale (SAS-KAGS)** by Kaur and Gakhar (2004, 2014): A standardized tool to measure the scientific attitude of the students.
- B) **Science Achievement Test (SAT)**: Constructed by the researcher herself to measure the achievement in science among the students. A preliminary draft of SAT consisting of 240 items was constructed in accordance with the blue print framed after considering the weightage for content, objectives and difficulty level. This draft was tried out for item analysis in which only 120 items having difficulty value in the range of 20% - 80%, and discrimination index ranging from 0.3 to 0.6 were selected for the final SAT.

**Validity of SAT** was established by a panel of experts consisting of pedagogy experts, CWSN in charge as well as the resource teachers who took active participation in the decisions regarding the objectives of the test, distribution of weightage given to objectives and content areas. Their suggestions were incorporated and thus content validity was established for SAT.

**Reliability of SAT** was established by test-retest method. The final SAT was administered twice on 60 students of IX class within a gap of 20 days. The scores of test retest method were tested by applying *Pearson Correlation*. The “r” value came out to be 0.75 (N=240) which was significant at 0.01 level of significance.

## **6. Variables of the Present Study**

There were two teaching strategies used in the present study i.e. teaching via conventional teaching strategy and teaching via concept mapping strategy which serve as the independent variables in this study, whereas Scientific Attitude Scores and Achievement in Science were the two dependent variables. The mean gain scores for the dependent variables on the Science Achievement Test (SAT) and Scientific Attitude Scale (SAS), were used to evaluate the effectiveness of the two teaching strategies.

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**Control:**

To keep the “noise” in the data to a minimum, control was exercised for extraneous variables by holding them constant for both the groups such as, age (14-16 years), grade (VIII), Disability (Learning Disability), Testing and learning environment (Govt. schools), subject and topics covered (5 units of science), duration of intervention (20 days) as well as the objectives of intervention were same for both the groups. Also the instructor, evaluator and examiner bias were reduced as the researcher herself played all the roles. In order to counteract the impact of pre-existing subject knowledge, the evaluation was conducted on the gain scores.

**7. Method and Procedure:**

For the present study a two group, pre-test/ post-test, Quasi-experimental, explanatory research design was adopted. The study was conducted in six phases explained below:

**Phase I (Construction of Lesson Plans):**

**For Experimental Group:** Lesson plans with concept maps were constructed following the rules laid down by Joseph Novak himself (Novak & Cañas, 2009). A total of 5 units were chosen as content for instructions, which were further divided into 10 topics (2 from each unit) for maximum coverage. Hence a total of 10 lesson plans with concept maps were constructed, revised and referred to the panel of experts for content validation.

**For Control Group:** Keeping the content of instructions same, 10 lesson plans without concept maps were constructed by following Herbartian approach which were again revised and referred to the panel of experts for long with an opinionnaire for content validation.

**Phase II (Sampling):**

The inclusion criteria for sampling was set forth and only those Govt. schools in Chandigarh were included in the study where there were 5 or more students with learning disabilities enrolled in VIII standard for the academic session 2022-23. The details of

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Govt. schools in Chandigarh were obtained from the Assistant Project Coordinator, Inclusive Education SSA, U.T. Chandigarh. There were only 06 such Govt. Schools who fulfilled the inclusion criteria as other schools had less than 5 students with Learning Disability enrolled in VIII standard. So the final sample consisted of 35 students (18 Boys + 17 Girls) which were then randomly grouped into Experimental (N= 17, 8 Boys + 9 Girls) and Control Groups (N= 18, 10 Boys + 8 Girls).

**Phase III (Pre-test Phase):**

The SAT and SAS were administered to both the groups to procure baseline measurements for their level of scientific attitude and achievement in science with the help of pre-test scores.

**Phase IV (Intervention Phase):**

Orientation was given to both the groups before starting intervention, which was different for each group

**Experimental Group:** Students were introduced to the concept of concept mapping, its advantages as well as the construction process by help of some simple concept maps in the orientation phase. Students were provided with the materials required to draw maps by the researcher. Thereafter lectures were conducted where the students made concept maps of all the topics under the guidance of the researcher who explained the concepts, links and the overall structure of the map to the students. The content of the lectures was recapitulated at the end of every lecture.

**Control Group:** Lectures were conducted for the students using the lesson plans constructed with the help of Herbartian Approach by the researcher herself. NCERT Science Text book for VIII standard was used to read and explain all the topics, although the students were given the same recapitulation exercises at the end of every lecture as the other group.

Thus a total of 450 minutes/ 7.5 hours of instructions were delivered to each group at the rate of 45 minutes for each lesson plan.

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**Phase V (Post-Test I Phase):**

Measurements (Post-Test I scores) were taken immediately after the intervention phase and the mean gain scores of the two dependent variables, served as a numerical index employed to compare the success rates of two teaching methods.

**Phase VI (Post-Test II Phase):**

In the last phase of the study, the students were again tested for achievement in science scores (post-test II scores) after a gap of six weeks to measure their information retention.

**8. Results and Discussion:** Statistical tests were applied to both pre-test data as well as post-test data

**(A) Pre-test data**

The two groups were tested with the help of independent t-test to establish their equivalence in terms of level of scientific attitude and science achievement scores of students before the intervention. The results are depicted in the table 1 given below:

**Table1:** Matching the groups on the basis of pre-test scores

Variable	Group	N	Mean	SD	t-value	p-value
Scientific Attitude	Control	18	178.94	4.929	0.206	0.838
	Experimental	17	179.29	5.133	(N.S.)	
Science Achievement	Control	18	63.94	6.476	0.001	0.999
	Experimental	17	63.94	6.759	(N.S.)	

Table1 reveals that mean scores and standard deviation of the Control and Experimental group for Scientific Attitude before intervention were 178.94, 4.929 and 179.29, 5.133 respectively. The t value came out to be 0.206 which is non-significant ( $p > 0.05$ ). Also the mean scores and standard deviation of the Control and Experimental group for Science Achievement before intervention were 63.94, 6.476 and 63.94, 6.759 respectively. The t value came out to be 0.001 which is non-significant ( $p > 0.05$ ).

**Interpretation: Thus before the intervention, both the groups were equivalent with respect to level of scientific attitude of students as well as achievement in science.**

**(B) Post-test data**

**(I) Hypothesis 1: There will be no significant difference in the effect of Concept Mapping Approach and Conventional Teaching Method on Scientific Attitude of VIII standard students with Learning Disability.**

To test this hypothesis, paired t-test was utilized on the mean gain scores of scientific attitude attained by the students of Experimental and Control groups. The results are shown below in table 2.

Table 2: Comparison of the two groups for mean gain scores in level of scientific attitude

Variable	Group	N	Mean Gain	SD	t-value	p-value
Scientific Attitude	Control	18	2.78	1.59	30.823	0.000**
	Experimental	17	15.71	0.77		

**Figure 1: Graphical representation of the Mean Gain Scores of Students in Scientific Attitude for Control and Experimental Group**

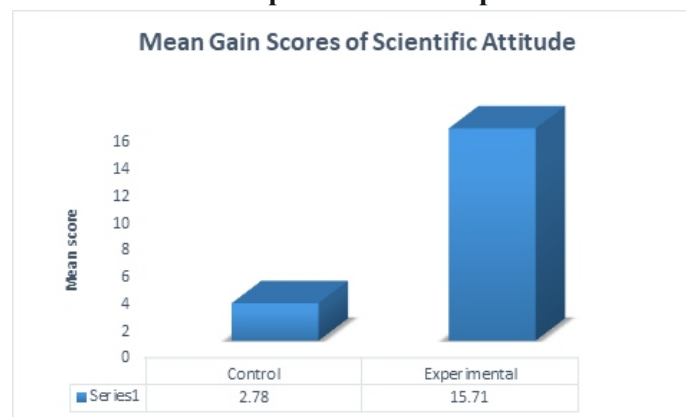


Table 2 and the figure 1 reveals that the mean gain scores of students in scientific attitude for control and experimental groups comes out to be 2.78 and 15.71 respectively and the 't'-value is 30.823 which is significant at 0.01 level of significance. This implies that there exists a statistically significant difference among the two approaches in improving scientific attitude among student with learning disability. Thus **hypothesis 1 stands rejected**.

**Interpretation:** This implies that the **Concept Mapping Approach is better than the Conventional Teaching Method in improving the scientific attitude of students with learning disability.**

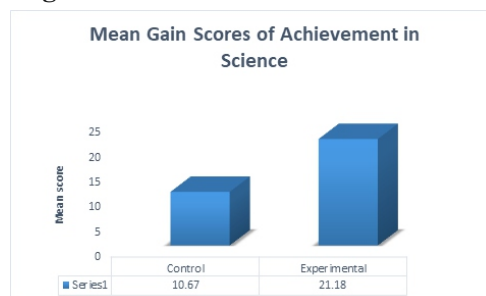
**(ii) Hypothesis 2: There will be no significant difference in the effect of Concept Mapping Approach and Conventional Teaching Method on Achievement in Science of VIII standard students with Learning Disability.**

To test this hypothesis, paired t-test was utilized on the mean gain scores of Achievement in Science attained by the students of Experimental and Control groups. The results are shown below in table 3.

Table 3: Comparison of the two groups for mean gain scores in Achievement in Science

Variable	Group	N	Mean Gain	SD	t-value	p-value
Achievement in Science	Control	18	10.67	4.19	7.788	0.000**
	Experimental	17	21.18	3.80		

**\*'p' value significant at 0.01 level**



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Table 3 and the figure 2 reveals that the mean values of gain score of achievement in science for control and experimental groups are 10.67 and 21.18. The reported 't'-value is 7.788 which is significant at 0.001 level. This implies that there exists a statistically significant difference among the two approaches in improving Achievement in Science among student with learning disability. Thus the **hypothesis 2 stands rejected**.

**Interpretation: This implies that Concept Mapping Approach is better than the Conventional Teaching Method in improving the achievement in science of students with learning disability.**

**(iii) Hypothesis 3: There will be no significant difference in the effect of Concept Mapping Approach and Conventional Teaching Method on retention of achievement in science among VIII standard students with Learning Disability.**

To test this hypothesis the mean gain scores (retention) were calculated by deducting the pre-test scores of achievement in science from the post-test II scores (delayed post test scores) for all the students. These scores then underwent paired t test in order to find the significance of difference between the two groups. The values are as shown in the table 4 below

**Table 4:** Comparison of the two groups for Mean gain (Retention) Scores of Students

Groups	N	Mean gain (Retention) (Post test II – Pre test)	SD	t-value	p-value
Control	18	6.44	3.99	9.110	.000*
Experimental	17	19.59	4.54		

**\*'p' value significant at 0.01 level**

**Figure 3: Graphical representation of Mean gain scores (retention) of Students on Achievement in Science for Control and Experimental Group**

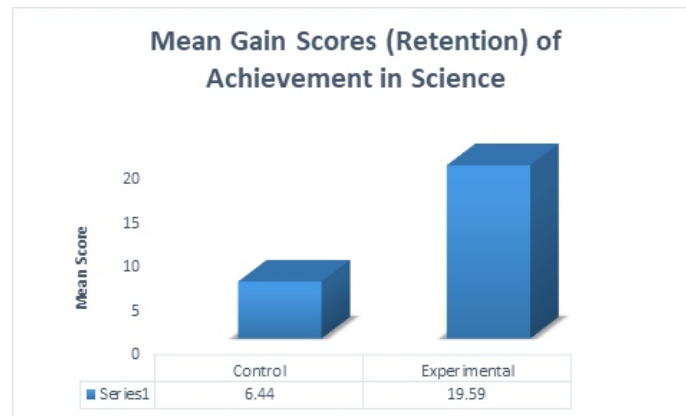


Table 4 and the figure 3 reveals that the mean scores of students on retention of learned information for control and experimental groups comes out to be 6.44 and 19.59 respectively and the 't'-value is 9.11 which is significant at 0.01 level of significance. This implies that there was statistically significant difference in the effect of both the approaches on retention of learned knowledge. Thus, the **hypothesis 3 stands rejected**.

**Interpretation:** This implies that **Concept Mapping Approach is better than the Conventional Teaching Method in terms of retention of learned information among students with learning disability.**

**Discussion:**

The purpose of this study was to compare the effectiveness of the **Conventional Teaching Methods** against the **Concept Mapping Approach** for teaching science to students with learning disabilities. On analysing the data collected pre and post-test, it was found out that the students in the experimental group (concept mapping) have gained significantly higher scientific attitude scores than those who were in the control group (conventional teaching). This finding is analogous with formerly done study conducted in 2018 by Jatmiko et al where they found an



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improvement in students' scientific attitudes through the Reading-Concept Map Think Pair Share model. The study was conducted to junior high school students by employing Quasi-experimental research design. Another study carried out in West Bengal, India by Bera & Mohalik in 2016 to study effectiveness of concept mapping strategy on cognitive processes in science at secondary level also supported this finding. They even recommended that concept mapping should be used in science teaching for the development of student's higher order thinking level.

A similar analysis was drawn out of the post-test data for achievement in science among the students. It showed that students who were taught via concept mapping strategy have gained significantly higher scores in the Science Achievement Test (SAT) than those students who were taught via Conventional Teaching Method. This finding syncs with the conclusions made by Thomas & Thakur in 2011, where they found out that concept mapping has a noticeable impact on VIII standard student achievement in science education. Another study done on VII standard students revealed similar conclusions (Cheema & Mirza, 2013)

On analysing the post-test II scores of achievement in science for both the groups it was learned that again the students in the experimental group were remarkably better than the control group. Singh A. & Bajwa (2017) reported similar findings when they used concept mapping strategy on IX standard students for the subject of social studies, in relation to their intelligence and study habits. The experimental study was conducted on 80 students of IX standard. The pre & post intervention scores were analysed to conclude that concept mapping strategy were significantly superior to traditional method in teaching retention of Social Studies. Likewise a pretest, post-test, non-equivalent control groups quasi-experimental research done by Agube, Ntibi & Neji (2021), showed similar results for achievement in physics. They concluded that that the adoption of concept mapping strategy in teaching and learning aid retention knowledge.

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### **9. Conclusion:**

Thus it can be concluded that teaching via Concept Mapping Approach is more effective in enhancing achievement in science as well as scientific attitude among students with learning disability as compared to Conventional Teaching Method.

In other terms it can be said that those students with learning disability who received teaching instructions via Concept Mapping Approach gained significantly more than those students with learning disability who were taught via traditional method of teaching in terms of scientific attitude, achievement in science as well as retaining the learned information. Consequently, the efficacy of the Concept Mapping Approach in teaching science to students with learning disability can be determined (Aziz & Rahman, 2014; Chawla & Singh, 2015; Marutirau & Dr. Patnakar, 2016). Also supporting evidence is found claiming improvement in scientific attitude with the use of Concept Mapping Approach for teaching (Jatmiko et al, 2018; Khan, Shah, Mahmood & Zareen, 2012; Agnafia, Anfa, & Rizkia, 2022). Concept Mapping Approach leads to more meaningful learning of difficult concepts and hence enhances retention (Jack, 2013), also construction of maps helps the students to retain more knowledge as they are in control of their thought process involved in connecting the working memory with the long term memory as new knowledge is being received (Anderson, 1992).

### **10. Educational Implications of the study:**

Results of the present study supported that students with learning disability can benefit tremendously from the Concept Mapping Approach as it helps in reduces the burden of language by reducing wordiness and organising the content to be learned in a pattern following a hierarchical structure. Also incorporating concept maps in classroom settings encourage critical thinking and development of scientific attitude among students with learning disability. Hence this approach is strongly recommended for teaching science to students with learning disability.

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## **SYSTEMATIC REVIEW OF CYBER VICTIMIZATION IN EMERGING YOUNG ADULTS**

Megha Rathore<sup>1</sup> and Dr. Bigi Thomas<sup>2</sup>

### **Abstract:**

This review paper studies the incidence and prevalence of cyber victimization in Emerging Young Adults (18-29 years).

**Objectives:** To investigate the types and effects of cyber victimization among emerging young adults, including studying mediating/moderating factors and gender differences. **Method:**

25 empirical studies were selected from three databases based on

inclusion/exclusion criteria. **Results:** The age group between 18-

25 is most vulnerable to cyberbullying. Prevalence is higher and

associated with factors like personality traits, beliefs about

anonymity, online content, social support, social media use, and

emotional responses. Females are more subjected to cyber

victimization than males. The impact is emotional and

psychological distress, anxiety, cyber aggression, and depression.

**Conclusion:** Suggestions include variety in sampling, cross-

country collaborations, studies on emerging forms of cyber-

attacks, empowering women to fight cyber victimization, and

solution-driven participatory research.

**Keywords:** Emerging Young Adults; Cyber Victimization; social media; Impacts; Gender

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## **Introduction:**

Due to cybercrime's widespread prevalence, there are substantial dangers of victimization. In recent years, the victimization of cybercrime has become a critical research area. (van der Wagen & Pieters, 2020) According to (Langos, 2012) "Cyber victimization (CV) refers to the process of getting victimized in the cyber world. The term cyber refers to broader meaning when referring to victimization i.e., any victimization generated through technology". The study conducted by (Näsi et al., 2015) found that cybercrime victimization can affect not only individuals but also institutions, highlighting the wide-ranging impact of such incidents.

In the past years, various aspects of cyber victimization on individuals have been investigated by researchers including the degree to which it occurs (Whitty & Buchanan, 2012); its causes and indicators (Abdullah & Jahan, 2020); (Kirwan et al., 2018); (Saad et al., 2018); (Näsi et al., 2015); (Jahankhani, 2013); (Reyns et al., 2013); its relationship with the social networking sites "(Seng et al., 2018); (Algarni et al., 2017); (Benson et al., 2015). To investigate the trends and new problems regarding various facets of cyber victimization, numerous Systematic Reviews have also been conducted by numerous researchers (Stevens et al., 2021); (Akhter, 2020); (Jenaro et al., 2018). A notable commonality observed among previous studies is their predominant focus on adolescent populations, which highlights the prominent emphasis on this age group in the research conducted thus far. (Dermani & Perdikaris, 2022); (Abaido, 2020); (Gassó et al., 2019); – (Olenik-Shemesh & Heiman, 2017); "(Gardella et al., 2017); (Van Geel et al., 2014); ""(Zweig et al., 2014); (Badaly et al., 2013); (Moore et al., 2012).

Recent studies on internet use and social media presence suggest that the highest number of users are the populations of teens and emerging young adults (Auxier & Anderson, 2021); (Anderson &

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Jiang, 2018); –(Perrin, 2015). Many studies have been done to study their online behaviours and their associations with other life events and parameters —(Cellini et al., 2020); '(Willoughby, 2019); (Hausmann et al., 2017); ——(Vannucci et al., 2017); (Rice et al., 2016); (Shensa et al., 2016); "(Drouin et al., 2015); (Xenos et al., 2014). This leads to another fact that this population's increasing use of cyberspaces will also invite the dangers of Cyber victimization in various forms, leaving the population with deep-rooted impacts and repercussions. The current systematic Review paper sheds some light on the efforts made and critically examines the cyber victimization of the young emerging adult population (18-29 years) between the period of 2011 – 2021.

For better analysis and understanding, the following research aims to serve as the framework for the current paper:

**RO 1:** To look into the most typical forms of cyber-victimization among emerging young adults:

The following examination becomes necessary because past research has been largely varied, on various forms of cyber victimization with different focus points centered, but what largely is used to victimize this section of the population becomes a question to be researched upon.

**RO 2:** To investigate how emerging young adults are affected by cyber victimization:

Given that the population under study is primarily made up of young people who are not only among the most frequent users of online spaces but also significant contributors to the process of nation-building, carefully taking the repercussions associated with the kind of victimization that occurs online.

**RO 3:** To examine other mediating and moderating factors used and correlated by the authors to study cyber victimization among emerging young adults:

Understanding the other associated factors plays a major role in

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either accelerating or mitigating the impacts of online cyber victimization on emerging young adults.

**RO 4:** To examine the prevalent gender differences among emerging young adults regarding cyber victimization:

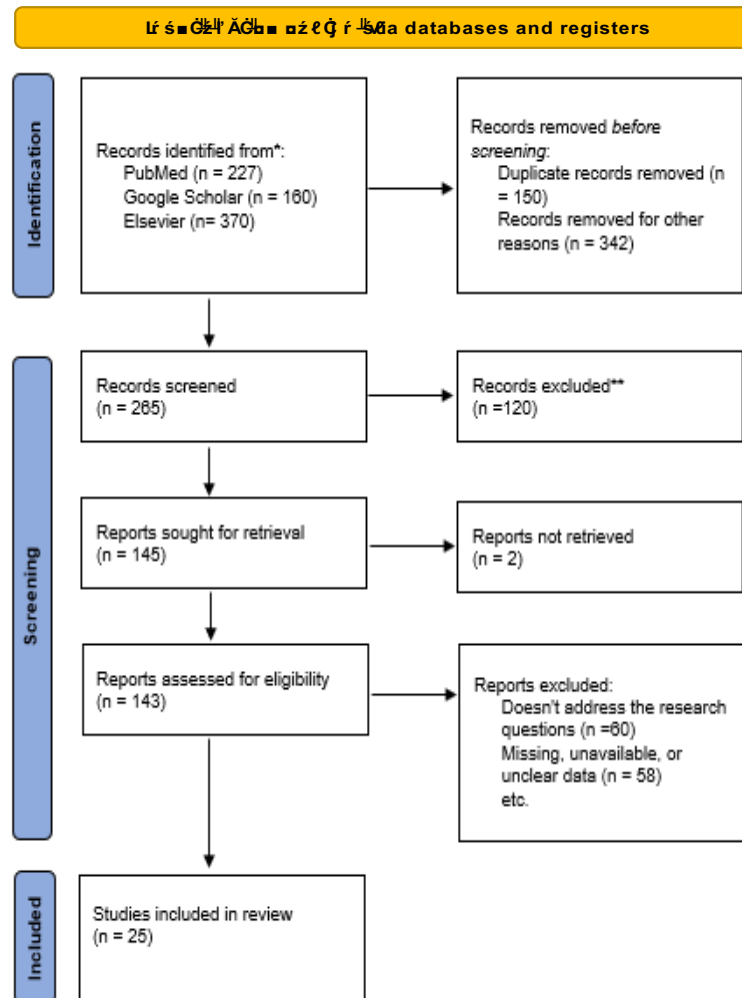
Over time gender is used as an important variable to study cyber victimization, and it plays a significant role in the situation. The gender roles are automatically assigned the roles of bystanders, victims, or offenders which may always not be the case.

**Methodology:**

The information was gathered from three databases. i.e., Google Scholar, PubMed, & Elsevier. Searching for studies by entering specific keywords provided the results of 757 studies. 25 primary empirical researches were included in the review's final selection, selected based on the population match under study and the current paper's objectives along with the number of citations it received over the years. The search keywords used for retrieving the papers were "Cyber Victimization", "Young Emerging Adults", "Cyber Bullying", "College Students", "Social Media", "Gender", "Impacts" etc. The final selection of 25 empirical studies was done that were examined based on four research objectives of types examined, differences of gender discussed, results shown, mediating and moderating factors, and suggestive measures discussed. The inclusion criteria for the bibliographic search were: a) articles published between the year 2011-2021 b) empirical studies (quantitative and qualitative methodologies), c) studies with young adults (of the specified age), and d) English-language studies. The following studies were excluded from consideration: a) meta-analyses and review articles b) papers that excluded young adults, c) case studies with a small sample size, and d) articles written in languages other than English. The number of citations received by the selected papers over the years was also taken into consideration.

The diagram below depicts the procedure adopted to retrieve the final 25 studies for the current review.

**Figure 1** depicts the flow diagram for the current paper.



Source: Figure by Author

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**Results:**

In the current review paper, 20 out of 25 research pieces were cross-sectional studies, while the remaining 5 were longitudinal (Barlett et al., 2017); (Benson et al., 2015); (Feinstein et al., 2014); (Wright, 2013); (Wright & Li, 2012). These researches highlighted that examining varied samples with diverse attributes such as nationality, age, and gender to draw unbiased and relevant conclusions about cyber victimization. Cross-sectional analysis, which provides a snapshot of the phenomenon at a single point in time, has been the preferred approach among researchers. Nevertheless, the absence of longitudinal studies, which are crucial for comprehending the enduring consequences of cyber victimization on young adults, represents a notable gap in the existing research. To bridge this knowledge gap, further investigation is necessary to gain a more comprehensive understanding of the long-term effects of cyber victimization on this specific age group.

Analysis of the country of origin revealed that most of the studies on cyber victimization came from the USA (n=12). Other countries included Turkey, Finland, Australia, the United Kingdom, Hungary, Myanmar & Japan. These findings indicate that cyber victimization is a global issue, with significant research conducted in the USA. This could be due to the nation's current relevance, or the presence of a substantial research community interested in the subject.

***Table 1: Age of the Respondents******Source: The Author***

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<b>Age Range</b>	<b>Name of the Study (Ref.)</b>
15-30	(Douglass et al., 2018) ; (Kaakinen et al., 2018) ; (Näsi et al., 2015)
18-24	(Reyns et al., 2013) ; (Tennant et al., 2015) ; (Lindsay et al., 2016); (Barlett et al., 2017);(Walker et al., 2011)
18-25	(Kircaburun et al., 2020); (Abaido, 2020); (Lee et al., 2015); (Selkie et al., 2015); (Wright, 2013); (Wright & Li, 2012)
NA	(Çimke & Cerit, 2021); (Peluchette et al., 2015); (Benson et al., 2015)
<b>Age Range</b>	<b>Name of the Study (Ref.)</b>
15-30	(Douglass et al., 2018) ; (Kaakinen et al., 2018) ; (Näsi et al., 2015)
18-24	(Reyns et al., 2013) ; (Tennant et al., 2015) ; (Lindsay et al., 2016); (Barlett et al., 2017);(Walker et al., 2011)
18-25	(Kircaburun et al., 2020); (Abaido, 2020); (Lee et al., 2015); (Selkie et al., 2015); (Wright, 2013); (Wright & Li, 2012)
NA	(Çimke & Cerit, 2021); (Peluchette et al., 2015); (Benson et al., 2015)

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Based on the analyzed papers, it was found that the highest age group among the respondents was between **18-25** years in 6 papers, followed by 18-24 years in 5 papers. Three papers included the age range of 15-30 years –(Kaakinen et al., 2018); (Douglass et al., 2018); (Näsi et al., 2015). Three other papers did not specify age ranges but had mean ages between 18-29 years and were considered for this study (Çimke & Cerit, 2021); (Peluchette et al., 2015); (Benson et al., 2015).

**Table 2: Type of Victimization**  
**Source: The Author**

<b>Type of Victimization</b>	<b>Name of the Study (Ref.)</b>
<i>Cyber Bullying</i>	(Kircaburun et al., 2020) ; (Khine et al., 2020) ; (Abaido, 2020); (Barlett et al., 2017) ; (Peluchette et al., 2015) ; (Balakrishnan, 2015); (Selkie et al., 2015); (Walker et al., 2011)
<i>Cyber Victimization</i>	(Kaakinen et al., 2018); (Tennant et al., 2015); (Feinstein et al., 2014); (Reyns et al., 2013)
<i>Cyber Bullying &amp; Cyber Victimization</i>	(Ozden & Icelliglu, 2014); (Lee et al., 2015); (Kokkinos & Antoniadou, 2019); (Çimke & Cerit, 2021)
<i>Other related forms</i>	(Brown et al., 2021); (Douglass et al., 2018); (Vannucci et al., 2017); (Lindsay et al., 2016) ; (Gámez-Guadix et al., 2015); (Benson et al., 2015); (Näsi et al., 2015); (Wright, 2013); (Wright & Li, 2012)

Among the 25 studies analyzed, the researchers used various terms to assess different types and forms of cyber victimization. Eight papers used the term "Cyberbullying" or "Cyberbullying Victimization". Four studies examined both "Cyber Bullying" and "Cyber Victimization" —(Çimke & Cerit, 2021); (Kokkinos & Antoniadou, 2019); (Lee et al., 2015); "(Ozden & Icelliglu, 2014). One study focused on "Cyber Aggression (Wright, 2013), another on "Cybercrime Victimization"(Näsi et al., 2015), and one compared person and cyber victimization (Wright & Li, 2012). Additionally, one study discussed "Online Harassment" (Lindsay et al., 2016), and another assessed "Online Sexual Victimization" (Gámez-Guadix et al., 2015). Specific to social media, one study focused on "Social Media Use" (Vannucci et al., 2017), and another on "Social Media Victimization" (Benson et al., 2015). Furthermore, terms like "technology-facilitated sexual harassment" (Douglass et al., 2018) and "technology-facilitated abuse in relationships"(Brown et al., 2021) were used in individual studies to explore the extent of cyber victimization. These findings illustrate the broad range of terms used to study cyber victimization, reflecting its diverse nature. Notably, "Cyber Bullying" emerged as the most prevalent form of victimization targeting young adults over the last decade.



**Table 3: Mediating & Moderating Factors**

<b>Other variables as mediating and moderating factors</b>	<b>Name of the Study (Ref.)</b>
Anonymity	(Wright, 2013)
Anxiety	(Vannucci et al., 2017)
Cyber Displaced Aggression	(Wright & Li, 2012)
Depression and its association with Ruminantion, Social Support & Problem Alcohol Use	(Tennant et al., 2015) ; (Selkie et al., 2015); (Feinstein et al., 2014)
Emotional Reactions and Fear	(Lindsay et al., 2016)
Gender, Age, Internet Frequency	(Balakrishnan, 2015)
Personality	(Peluchette et al., 2015) ; (Ozden & Icelliglu, 2014)
Social Media Use, Addiction, and Others	(Çimke & Cerit, 2021); (Benson et al., 2015); (Abaido, 2020)
Sexting	(Gámez-Guadix et al., 2015); (Reyns et al., 2013)

**Source: The Author**

To understand cyber victimization among young adults, previous researchers have explored its associations with various factors which could be mediating or moderating ones. Only a subset of the 25 analyzed studies examined the frequency of online victimization and its relationship with other variables. For example, Depression and its association with Ruminantion, Social Support & Problem Alcohol Use "(Tennant et al., 2015); (Selkie et al., 2015); (Feinstein et al., 2014), Social Media Use, Addiction, and Sexting (Çimke & Cerit, 2021); (Benson et al., 2015); (Abaido, 2020); (Gámez-Guadix et al., 2015); (Reyns et al., 2013). Overall, these studies highlight the multifaceted nature of cyber victimization among young adults and its associations with various personal and social factors.

**Table : Gender Differences**

<b>Gender</b>	<b>Name of the Study (Ref.)</b>
Females as Victims	(Douglass et al., 2018) ; (Lindsay et al., 2016) ; (Balakrishnan, 2015) ; (Tennant et al., 2015) ; (Gámez-Guadix et al., 2015); (Reyns et al., 2013); (Feinstein et al., 2014)
Male as Victims	(Barlett et al., 2017); (Näsi et al., 2015); (Ozden & Icelliglu, 2014)

**Source: The Author**

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**Gender Differences:**

Females: Multiple studies revealed a consistent pattern where females demonstrated a higher likelihood of encountering cyber-victimization and experiencing its adverse consequences. These studies reported elevated rates of cyberbullying victimization, depressive symptoms, anxiety, and online sexual victimization among females (Reyns et al., 2013); (Feinstein et al., 2014); (Balakrishnan, 2015).

Males: Some research indicated that males were more inclined to face certain forms of cyberbullying and were more concerned about specific aspects, such as the spread of hurtful rumors. (Barlett et al., 2017); (Näsi et al., 2015); (Ozden & Icelliglu, 2014)

Gender Disparities: Gender disparities were observed in terms of traditional victimization, sexual harassment, and online bullying. The specific experiences varied across studies (Douglass et al., 2018); (Tennant et al., 2015), (Gómez-Guadix et al., 2015).

Moreover, the studies from 2011-2021 highlight cyber victimization's impacts on emerging young adults. The findings can be summarized as:

**Prevalence:** According to Walker et al., (2011) 54% were familiar with cyberbullying incidents, mainly on Facebook, instant messaging, and cell phones. Peluchette et al., (2015) reported 37% experienced 4-10 episodes and 33% more than 10.

**Platforms:** Balakrishnan, (2015) found social media as the primary platform for cyberbullying, and Abaido, (2020) identified Instagram, Facebook, and Twitter as top platforms.

**Effects on mental health:** Wright & Li, (2012) linked offline and online victimization to later online hostility. Feinstein et al., (2014) found increased rumination and depressive symptoms. Ozden & Icelliglu, (2014) identified a link between psychoticism and

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cyberbullying. Other studies reported anxiety, depression, and negative emotional responses.

**Vulnerability:** Kokkinos & Antoniadou, (2019) found connections between cyberbullying and loneliness, neuroticism, anxiety, online disinhibition, anger, and compulsive internet use. Kircaburun et al., (2020) reported lower self-esteem and higher depression among perpetrators.

**Prevention and intervention:** Lee et al., (2015) suggested cyberbullying scales for evaluation and Abaido, (2020) recommended smartphone apps, legal sanctions, and preventive measures.

In conclusion, cyber victimization significantly affects the well-being of young adults, especially their mental and emotional health. It is prevalent on social media and associated with negative outcomes. Understanding gender differences is crucial. Further research is needed on suggested topics, prevention strategies, gender data, aggression, predictors, and mental health outcomes. Awareness of online risks and safe technology use is essential. Citations varied, with (Vannucci et al., 2017) receiving the most (524) and (Brown et al., 2021) receiving the least (11).

#### **Discussion & Suggestions:**

The systematic review aimed to explore forms of victimization in cyberspaces among emerging young adults, including prevalence rates, mediating factors, impacts, and gender differences. Out of the 25 analyzed studies, diverse samples from various nationalities and ethnicities were represented. The United States demonstrated leadership with extensive international collaborations and publications, in line with a study (Ho & Luong, 2022).

The paper examined victimization among emerging young adults, focusing on the most vulnerable age group of 18-25 years. This finding aligns with the (Akhter, 2020) study on cyber victimization

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of adult women. The reviewed empirical studies primarily sampled from college and university settings, as noted by Henry & Powell (2016) and Jenaro et al., (2018). However, future research should consider including dropouts and working young adults to broaden the sample. Chan et al., (2021) suggests that including diverse samples would allow for better comparisons of online behaviors among bullies, bystanders, and victims, leading to more conclusive results.

The paper focused on evaluating victimization strategies targeting young, emerging adults. The study found that "cyberbullying" is the most pervasive issue, supported by extensive research across various fields. Jenaro et al., (2018) conducted empirical research on adult cyberbullying, highlighting its significance in this population. (Ho & Luong, 2022) also reported similar results in their review. In addition to cyberbullying, future studies could explore other prevalent forms of online victimization among emerging young adults, such as financial fraud, hacking, impersonation, cyberstalking, illegal surveillance, infringement of bodily privacy, child online sexual exploitation, revenge porn, non-consensual image sharing, hate speech, misogynist speech, sextortion, and more (Halder, 2021).

The reviewed studies highlighted various factors as moderating and mediating factors in cyber victimization among emerging young adults. These factors include personality traits, beliefs about anonymity and online content, social support, social media use, and emotional responses. Traits such as anxiety, anger, neuroticism, loneliness, depression, childhood emotional trauma, lower self-esteem, online disinhibition, and compulsive internet use are associated with an increased risk of cybercrime in this demographic. By examining these factors, researchers can better understand the reasons behind young adults becoming bullies or victims online and find ways to address the issue. Emerging young adults often face multiple stressors, leading them to seek solace in anonymous online platforms, which can result in acts of bullying or harassment. Similar connections between digital technology

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use and psychological stress have been found in studies, including one released by the Pew Research Centre on January 15, 2015 (Wolfers & Utz, 2022).

The current review analyzed the frequency of cybervictimization as reported in multiple studies. Walker et al., (2011) found that 54% of respondents had contact with cyberbullying victims, while Lindsay et al., (2016) reported that 32% of respondents became targets of known perpetrators. Similar findings were observed in other studies, indicating the widespread nature of cyberbullying. Recognizing the role of technology, particularly mobile devices, and social media platforms, is crucial as they significantly contribute to online victimization. This prompts inquiries into the role and responsibility of technology companies and social media giants in enforcing more robust preventive measures. Abaido, (2020) also proposed related steps in this regard.

Gender differences were found to be significant in the reviewed studies, with females being more prone to cyber victimization compared to males (Akhter, 2020); (Walker & Sleath, 2017). Halder, (2021) discussed in her book, "Cyber Victimology: Decoding Cyber-Crime Victimization," that females are particularly vulnerable to cyber sexual offenses due to various factors such as market demand for women's photos, lack of guardianship, limited digital empowerment, and feelings of loneliness. Future research could focus on studying ways to empower females, enhance their resilience to victimization, and help them cope more effectively with the impacts of victimization.

The current review paper focused on examining the effects of cyber victimization on emerging young adults. The findings revealed that victims experienced distress, anxiety, cyber aggression, and depression. This finding is consistent with the research conducted by Stevens et al., (2021), which revealed that the ramifications of cyber victimization encompassed emotions such as sadness, embarrassment, terror, anxiety, self-harm, and even attempted suicide. The psychological distress endured by

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victims during and following victimization contributes to the development of depression and post-traumatic stress disorder (PTSD). Future studies could explore ways and strategies to mitigate psychological trauma and help victims cope with the aftermath of cyber victimization. Interventions by civil society organizations, the legal justice system, and participatory research involving various sections of society can contribute to victim assistance and management, thereby reducing the impacts of cyber victimization.

In conclusion, the paper emphasizes the need for further research to enhance our understanding of cyberbullying and victimization, as well as to establish effective prevention and intervention programs. This includes gathering comprehensive data on factors like gender, perpetrators, and motivations, and developing assessment tools to address online anonymity and other aspects of cyberbullying. Additionally, exploring the effects of victimization on mental health in both online and offline contexts is crucial. Raising awareness about risks associated with online behaviors and promoting responsible technology use is important for individuals of all ages. The researchers of this paper suggest incorporating cross-country samples and collaborations for better comparisons, expanding research beyond undergraduate students, exploring various forms of online victimization, focusing on strategies to empower females and enhance their resilience, and implementing participatory research interventions by civil society organizations, the legal justice system, and other stakeholders. These recommendations aim to foster understanding, prevention, and support for individuals impacted by cyber victimization.

**Conclusion:**

The paper sheds light on cyber victimization targeting emerging young adults, highlighting cyberbullying as the most prevalent form of attack. The significant prevalence of cyber victimization among young adults, particularly those aged 18 to 25, is emphasized. The impacts are primarily emotional and psychological, including anxiety, depression, cyber aggression,

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and harm to well-being. The study also examines mediating factors like depression, social media use, personality, and sexting. Gender differences indicate that females are more vulnerable. The paper explores the association between cyber victimization and other aspects of life. It addresses the need to understand why emerging young adults are targeted and suggests remedies and recommendations from earlier works. Limitations include a focus on the 18-29 age group, exclusion of other age groups affected, and limited search keywords. The paper acknowledges the absence of recent publications and non-English literature. Additional suggestions include diverse sampling, cross-country collaborations, studying emerging forms of cyber-attacks, empowering women against victimization, and intervention-focused research.

### **Acknowledgement**

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*Note: The Studies with \* denote the ones reviewed in the current paper.*

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**THE CHALLENGES IN FIELD DATA  
COLLECTION: LEADING TO FABRICATION  
ISSUES AMONG SOCIAL WORK  
RESEARCHERS**

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**Abstract**

This research paper provides a thorough analysis of the ethical aspects that are inherent in social work research, with a specific emphasis on the processes of data collection and interpretation. The obligation for social workers to give priority to obtaining informed consent and protecting the privacy and confidentiality of participants throughout the collection of primary data creates a challenging ethical environment. A significant quandary emerges when researchers, who are obligated to safeguard the identities of participants, may feel driven to engage in data falsification or modification. This essay explores the complex ethical dilemmas faced by social workers when conducting thorough and valid research while also ensuring the protection of participant rights. The research examines the ethical challenges that arise in current social work research techniques, specifically the conflict between ethical obligations and the risk of compromising data integrity. The main topics explored include the importance of obtaining informed consent, the sensitive issues surrounding privacy and confidentiality, and the ethical consequences of any data fabrication or manipulation. The paper assesses the ethical quandaries presented by these problems and aims to suggest workable ethical frameworks that achieve a harmonious equilibrium between safeguarding participants and maintaining research integrity.

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This research contributes to the continuing discussion on ethical considerations in social work research by addressing these important topics. Its purpose is to provide information to practitioners, policymakers, and researchers about the complex ethical landscape. The article provides practical suggestions and factors to consider when addressing these ethical dilemmas, with the aim of fostering transparency, honesty, and ethical behaviour in social work research. This research has been done using primary data; the samples were collected by the social work students of Annamalai University. The findings from this research can contribute to the development of guidelines and protocols for ethical conduct in social work research.

**Key words:** Data falsification, Data manipulation, Ethical aspects, Data interpretation. Privacy.

### **Introduction**

Social scientists and researchers use social research as a methodical approach to learn about people and communities, which enables them to create goods and services that meet a variety of societal needs. Various socio-economic groups from different regions within a county possess distinct perspectives. To comprehend individuals' thoughts and feedback regarding the social world, it is necessary to examine different facets of human behaviour, a task that can be accomplished through the use of social research(Bhat, 2018).

Stages of social research social research is a methodical process used to investigate and provide explanations for social phenomena that are currently unexplained. Its purpose is to clarify and correct any uncertain or misunderstood information. Scientific inquiry is a systematic process used to uncover new information or validate existing information in order to elucidate the cause-and-effect relationship of a phenomenon. Hence, the purpose of research is to produce conceptual frameworks, theories, and dependable

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explanations. Social research involves the following steps' (Steps Involved in the Process of Social Research, 2015).

1. Selection on of a Research Problem
2. Review of Related Literature
3. Formulation of Research Objectives
4. Devising hypotheses
5. Making the Research Design: Methodology
6. Sampling procedure
7. Data Collection
8. Data Analysis and Interpretation
9. Hypotheses Testing
10. Deriving findings, conclusions, and suggestions
11. Report writing

This article is mainly focused on the problems of the researcher faces in the process of data collation and data interpretation processes and how these problems can impact the overall research outcomes and validity of the study. Data collection refers to the systematic gathering and analysis of information or data from various sources in order to address research inquiries, provide answers, assess outcomes, and predict trends and probabilities.

During the process of data collection, it is imperative for the researchers to ascertain the data types, determine the sources of data, and specify the methods employed (Simplilearn, 2021). During the process of collecting data from the samples, the researcher is concerned with maintaining confidentiality, which is an essential component of social science research, particularly when dealing with sensitive information about individuals. Listed below are some of the most important practices and considerations that researchers typically adhere to in order to maintain confidentiality.

They are outlined below.

1. Anonymity,
2. Data encryption and security,

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3. Confidentiality Agreements,
  4. Secure Data Transmission,
  5. Secure physical storage,
  6. Data retention and destruction

These practices are implemented to safeguard the privacy and confidentiality of sensitive data while also ensuring that a backup copy is securely stored. However, during the data interpretation process, social work researchers may engage in some fabrication in order to protect the privacy of the samples. However, this fabrication must be done ethically and transparently, with proper documentation and justification. But it undermines the originality of the research and undermines the integrity of the findings.

Data fabrication, making up data or results and reporting them (Zietman, 2013). The chance of having these fabrication problems is higher in social work research because researchers are collecting samples from a diverse population with complex needs and backgrounds. And the complexity of the data increases the potential for errors or biases in the findings. So, this article aims to highlight the importance of being vigilant in addressing these fabrication problems and ensuring the accuracy and reliability of social work research findings.

### **Statement of the problem**

The primary focus of this article is the potential risks involved in gathering and analysing data for social research, specifically within the field of social work. Social research plays a vital role in comprehending various viewpoints among socio-economic groups. However, difficulties that arise during the collection and interpretation of data could jeopardise the accuracy of its findings. The researcher faces the challenge of preserving secrecy, a crucial element when handling sensitive information. Although established measures like anonymity, data encryption, and confidentiality agreements are in place, there is a danger that social work researchers may engage in falsification to protect privacy

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during the interpretation process. If this possible falsification is not dealt with in an ethical and transparent manner, it could jeopardise the originality, accuracy, and trustworthiness of the study findings.

Due to the complicated nature of social work research conducted among populations with complex needs, there is a higher possibility of errors or biases. This highlights the importance of being vigilant in recognising and correcting fabrication concerns to ensure the strength and reliability of social research conclusions.

### **Review of literature**

(Abd El-Nasser, 2021). The article explores into the obstacles encountered by researchers operating in developing nations, with a particular emphasis on critical concerns including topic selection, ethical implications, material and method accessibility, financial backing, collaborative efforts, and the practical implementation of research findings. Prior to commencing research, the author underscores the criticality of carrying out feasibility studies, seeking expert consultation, and obtaining ethical approval. Proposed solutions for uncommon topics consist of collaboration between research centres and universities, pilot studies, and exhaustive pre-research studies. The article further discusses the importance of distinguishing between uncommon and common subjects, highlighting the potential advantages and disadvantages associated with each. Practical suggestions for surmounting obstacles pertaining to research materials and methodologies, results interpretation, financial backing, collaboration among team members, publication selection, and the implementation of research discoveries are offered. The underlying theme emphasises the significance of meticulous strategizing, ethical deliberations, and productive cooperation in order to augment the influence of scientific inquiry in developing nations.

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(Holden Richard J et al., 2015). The paper explores the advantages and difficulties related to contextual methodologies for gathering patient-reported data in the field of health research. Contextual data collection entails the acquisition of information from individuals in their residences and surrounding areas, employing less formal techniques such as interviews and observations. The challenges identified can be categorised into four broad types: those pertaining to the collaboration between the researcher and participant, the characteristics of the participants, the logistical and procedural aspects of the research, and the scientific quality and interpretation of the findings.

The authors utilise insights gained from two research endeavours, namely the Caring Hearts Study and the Keystone Beacon Community Project, to exemplify the pragmatic challenges encountered in the recruitment of participants, preservation of privacy and confidentiality, resolution of mistrust, management of compensation, and assurance of scientific rigour. The paper highlights the significance of comprehending and tackling these obstacles in order to enhance the calibre and utility of patient-reported data in healthcare research.

(Syed & Syed, 2021). The literature review presented in this paper offers significant insights into the obstacles encountered by researchers operating within the Pakistani context. It focuses specifically on challenges related to translation and access control, which are of particular concern. By referencing prior research (Riese, 2019; Vuban & Eta, 2019; Wanat, 2008; Birbili, 2000; Fersch, 2013), the authors underscore the significance of comprehending the hierarchy of gatekeeping within university environments and emphasise the context-specific nature of these challenges. The review emphasises the importance of effectively managing access negotiations with gatekeepers, addressing concerns regarding the attitudes of educators and female participants, and navigating the intricate challenges of translation in the context of multilingual research. The novice researchers

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who are planning studies in similar contexts can gain valuable insights from the practical experiences shared by the researchers. These insights underscore the importance of meticulous planning, establishing rapport with participants, and effectively addressing specific challenges associated with gender, language, and cultural norms.

(Bahn & Weatherill, 2013). This review of the literature looks at the idea of "sensitive data" in research, focusing on the risks and difficulties that field researchers may face. Different people have different ideas about what "sensitive data" is. Some include very private experiences and research that puts participants in serious danger. There is a lot of writing about the effects on the participants, but not as much on the difficulties researchers face when they have to be ethical while collecting data, especially in the homes of the participants. The paper talks about the risks that are often overlooked when collecting data in people's homes, focusing on the emotional and physical threats that researchers may face. The review uses different studies to show how important it is to do thorough risk assessments and come up with plans to protect the health and safety of researchers. It suggests that universities make a checklist and offer proactive safety training. The talk emphasises how important it is for institutions to have policies and procedures that clearly take into account the difficulties field researchers face. It also calls for a cultural shift that puts the safety and well-being of researchers ahead of research outcomes.

(Dempsey, 2016). This study examines how family carers feel about end-of-life care for dementia patients at home, filling a gap in previous research that mostly focused on nursing homes. Current and former urban and rural carers are studied using interpretative phenomenological analysis (IPA) and purposeful sampling. The study acknowledges that the topic is sensitive and emphasises ethical considerations when studying weak groups. The authors recommend planning ahead, getting to know the person, and being careful about when and where sensitive interviews take place. The study shows how difficult gatekeeper

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access can be and how important it is to give and receive access. The study also emphasises the need to address participants' emotional weakness and balance empathy with professional boundaries. Even though sensitive research has risks, the authors say the benefits must outweigh them. The proposed framework is meant to help researchers address these issues and sensitively talk to vulnerable groups, especially about dementia end-of-life care.

## **METHODOLOGY**

### **Objectives**

1. The challenges faced by researchers during the data collection process in social work research.
2. To analyse the impact of problems, such as confidentiality issues and the need for privacy protection, on the social work research outcomes.
3. The problem of interpreting sensitive data in a research paper.

### **Research design**

The study is a survey descriptive research method. The Study was based on primary data. The primary data was collected through a well-structured questionnaire. The data was collected from the Master of Social Work students from the department of sociology and social work at Annamalai University, Tamil Nadu, and India. The data has been collected by adopting the probability sampling method with a quantitative approach using the questionnaire method.

### **Sampling and Data Analysis**

The samples were chosen by an adaptation of simple random sampling method. The total number of samples is 120 samples. Samples selected were 40 for this research article. For data analysis, all information gathered from questionnaires was edited first, and then quantitative data was put into computerised SPSS spreadsheets using a coding design. Following that, the data was corrected and reviewed for transcription mistakes and



discrepancies, if any existed. The data was then analysed using IBM SPSS Amos software, Version 26.0. (IBM Corp., 2017). The study was carried out using frequency distributions

## RESULTS AND DISCUSSION

### **Distribution of Respondents by Gender**

The study provides information on the gender distribution of a sample population, consisting of 40 persons that were surveyed. Out of the overall sample, 27 respondents were male, making up 67.5% of the sample, while 13 respondents were female, making up 32.5% of the sample. Hence, the male respondents were the majority, accounting for 67.5%, while the remaining 32.5% were female.

### **Distribution of Respondents by Age**

The provided data illustrates the age distribution of a sample population consisting of 40 individuals. The participants are categorised into three age groups: 18-20, 21-25, and 26-30. 25% of the respondents fall within the age range of 18 to 20, accounting for 10 individuals. 40% of the respondents are aged between 21 and 25, representing 16 individuals. The remaining 35% of the respondents are aged between 26 and 30, totalling 14 individuals. Hence, the largest proportion of participants (40%) falls into the age bracket of 21-25, while 35% belong to the 26-30 age group, and 25% are in the 18-20 age range.

**How many years of experience do you have in social work research**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 year	9	22.5	22.5	22.5
	2 years	12	30.0	30.0	52.5
	3 or above years	19	47.5	47.5	100.0
	Total	40	100.0	100.0	

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The data presents the distribution of years of experience in social work research across a sample of 40 participants. The participants are classified according to their years of experience: 22.5% of the respondents indicated having 1 year of experience, which corresponds to a total of 9 individuals. Additionally, 30% of the participants claimed having 2 years of experience, constituting 12 individuals. The largest portion of the sample, accounting for 47.5%, reported having 3 or more years of experience, totalling 19 individuals. Therefore, the majority of participants have 3 or more years of experience in social work research, with the next highest group having 2 years of experience, and the lowest group having 1 year of experience.

**Have you conducted social work research studies in the past**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	40	100.0	100.0	100.0

The data reveals that every single one of the 40 participants had engaged in social work research studies previously, accounting for a complete representation of the sample at 100%. This indicates a widespread engagement in social work research among the participants examined, as each respondent had previous experience in carrying out such investigations. Therefore, all members of the sample population have actively participated in social work research activities, demonstrating a significant degree of knowledge and involvement in the subject.

**Difficulty in obtaining participant consent.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Challenging	20	50.0	50.0	50.0
Significantly Challenging	20	50.0	50.0	100.0
Total	40	100.0	100.0	

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The data illustrates the difficulties faced in acquiring consent from participants for research endeavours. Out of the 40 participants surveyed, half of them (50%) reported facing difficulties in obtaining consent, while the other half (50%) rated the process as notably demanding. This indicates that a considerable number of researchers encountered obstacles in obtaining participant agreement, with an equal division between those who found it tough and those who found it notably difficult. These findings emphasise the intricate and hindering aspects involved in getting consent for study participation, underscoring the significance of successfully addressing and managing these problems to assure ethical research procedures.

**Maintaining participant confidentiality and privacy**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Little bit Challenging	1	2.5	2.5	2.5
	Challenging	2	5.0	5.0	7.5
	Significantly Challenging	37	92.5	92.5	100.0
	Total	40	100.0	100.0	

The data reveals the perceived challenges in upholding participant anonymity and privacy during research endeavours. Out of the 40 participants who were polled, an overwhelming majority of 92.5% reported facing severe difficulties in this matter. A minority of respondents, comprising 5% of the total, encountered difficulties in upholding secrecy and privacy. In contrast, a negligible 2.5% reported facing minimal challenges. The results indicate that most researchers encountered significant obstacles in protecting the anonymity and privacy of participants. This highlights the crucial need to establish strong methods and norms to effectively address these problems. Maintaining the secrecy and privacy of participants is crucial for keeping ethical standards in research and fostering trust between researchers and participants.

**Managing and organizing large volumes of data**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Little bit Challenging	2	5.0	5.0	5.0
	Challenging	18	45.0	45.0	50.0
	Significantly Challenging	20	50.0	50.0	100.0
	Total	40	100.0	100.0	

The data presents the perceived difficulties in managing and organizing large volumes of data among researchers. Out of the 40 respondents surveyed, half, or 50%, reported facing significant challenges in this aspect, while 45% found it challenging. Only a small minority, representing 5% of respondents, reported experiencing little difficulty in managing and organizing large volumes of data. These findings indicate that a substantial portion of researchers encounter significant hurdles when dealing with extensive datasets, with nearly all respondents reporting at least some level of challenge in this area. Effective strategies and tools for data management and organization are crucial to address these challenges and ensure the efficient handling and analysis of research data.

**Maintaining data quality and accuracy**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Challenging	10	25.0	25.0	25.0
	Significantly Challenging	30	75.0	75.0	100.0
	Total	40	100.0	100.0	

The data reflects the perceived difficulties in maintaining data quality and accuracy among researchers. Among the 40 respondents polled, a substantial majority of 75% reported encountering serious difficulties in this matter, whilst 25% considered it to be problematic. All of the respondents reported no difficulties in preserving data quality and accuracy. These findings emphasise the general recognition among researchers of the significant challenges involved in guaranteeing the integrity and quality of research data. The high occurrence of difficulties in this

field emphasises the significance of establishing stringent quality control procedures and following established guidelines to reduce errors and inaccuracies in research data, thus improving the dependability and validity of research findings.

**Balancing ethical considerations during data collection**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Significantly Challenging	40	100.0	100.0	100.0

The data indicates that all 40 respondents surveyed found balancing ethical considerations during data collection to be significantly challenging. The unanimous agreement emphasises the intricate and significant nature of addressing ethical problems in research operations. Researchers encounter a multitude of ethical quandaries when gathering data, including the need to get informed consent, safeguard participant anonymity, and mitigate potential harm.

The high occurrence of substantial difficulties in this field underscores the crucial necessity for researchers to give priority to ethical principles and strictly adhere to ethical rules and standards. Through meticulous examination and resolution of ethical concerns at every stage of the research process, researchers can maintain the honesty and reliability of their work while protecting the rights and welfare of the individuals involved in the study.

**Adequate support and resources for data collection**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not a Challenge	9	22.5	22.5	22.5
	Little bit Challenging	18	45.0	45.0	67.5
	Challenging	13	32.5	32.5	100.0
	Total	40	100.0	100.0	

The data portrays the perceived adequacy of support and resources for data collection among researchers. Out of the 40 respondents surveyed, 22.5% stated that they did not face any difficulties in acquiring support and resources for data gathering. Nevertheless, a substantial majority of responders, accounting for 77.5%, encountered varying degrees of difficulty. More precisely, 45% of participants regarded it as slightly tough, while 32.5% perceived it as challenging. These findings indicate that although certain researchers may have ample support and resources for data collection, a significant portion encounter challenges in obtaining appropriate assistance and resources. Tackling these problems is essential for assuring the successful implementation of research initiatives and maximising the quality of gathered data.

**How much do privacy protection challenges affect the reliability of social work research results**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	some amount of impact	5	12.5	12.5	12.5
	impact	9	22.5	22.5	35.0
	fully impact	7	17.5	17.5	52.5
	significantly impact	19	47.5	47.5	100.0
	Total	40	100.0	100.0	

The data indicates that privacy protection difficulties significantly affect the dependability of social work study findings. Among the 40 participants who were polled, 12.5% acknowledged that these issues have a certain degree of influence, whilst 22.5% stated that they had a clear impact on the dependability of study findings. In addition, 17.5% of participants indicated that privacy protection concerns have a significant impact on the trustworthiness of research.

Nonetheless, a considerable proportion of participants, accounting for 47.5%, said that privacy protection difficulties have a substantial influence on the dependability of social work study findings. These findings emphasise the crucial significance of tackling privacy protection concerns in social work research to guarantee the reliability and accuracy of research results. Ensuring

participant privacy and confidentiality is crucial for upholding the credibility and dependability of research findings in the realm of social work.

**To what extent do confidentiality issues impact the overall quality of social work research outcomes**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid some amount of impact	12	30.0	30.0	30.0
impact	12	30.0	30.0	60.0
fully impact	16	40.0	40.0	100.0
Total	40	100.0	100.0	

The evidence suggests that concerns regarding confidentiality significantly affect the overall quality of research outputs in the field of social work. Among the 40 participants surveyed, 30% indicated that confidentiality concerns have a moderate effect on the quality of research, while another 30% felt that these concerns have a significant impact on study quality.

In addition, a significant 40% of participants indicated that confidentiality concerns have a complete impact on the quality of study outputs in the field of social work. The results emphasise the substantial impact of confidentiality concerns on the quality of research in the field of social work. Effectively addressing and mitigating confidentiality issues is essential for upholding the integrity, dependability, and credibility of research findings in social work. This ensures that the outcomes accurately represent the realities and experiences of the individuals and communities involved in the research process.

## SUGGESTIONS

Derived from the knowledge acquired via this research, a number of recommendations can be proposed to improve the calibre and efficacy of social work research:

### **Strengthen Ethical Oversight:**

Researchers should be guided and supervised by institutions and

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research ethics committees to ensure ethical conduct. This includes strong informed consent, confidentiality, and privacy policies.

**Invest in Training and Resources:**

Researchers should receive data collecting, administration, and analysis training from institutions. This involves ethical research, data handling, and software tool use training.

**Foster Collaboration and Support Networks:**

Sharing knowledge, best practices, and problems with peers, mentors, and support networks is important for researchers. This collaborative method can assist researchers resolve difficult ethical issues and improve research results.

**Promote Transparency and Accountability:**

Researchers should be transparent and accountable in data collection, analysis, and reporting. This includes transparent reporting of techniques, conclusions, and limitations and following research standards and guidelines.

**Continuous Evaluation and Improvement:**

Researchers should regularly evaluate and reflect to improve their methods. This includes asking participants, peers, and stakeholders for feedback and applying lessons learned to future research. By incorporating these recommendations, researchers can enhance the robustness, reliability, and moral soundness of social work research, eventually fostering the progress of understanding and the welfare of individuals and communities.

**Ethical dilemmas in privacy**

Ethical dilemmas in field data collection highlight the tension between maintaining **ethical integrity** and achieving **research goals**. Social work researchers must balance these challenges through **transparency, adherence to ethical guidelines**, and a strong commitment to participant well-being. Ethical dilemmas in privacy challenge social work researchers to carefully balance



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protecting participants' rights with the goals of rigorous research. By employing transparent, secure, and participant-centred practices, researchers can uphold ethical standards and foster trust in the research process.

### **Ethical dilemmas in privacy**

Privacy and confidentiality are fundamental to ethical social work research, but dilemmas arise when these principles clash with other responsibilities. Privacy refers to participants' right to control access to their personal information, while confidentiality is the obligation of researchers to protect that information from unauthorized disclosure.

Reporting may violate participants' trust, while not reporting may endanger individuals or break the law. Withholding details protects privacy but may undermine fully informed consent; full transparency may deter participation. Failure to protect identities can harm participants; overly vague reporting may weaken research quality.

### **Conclusion**

In its conclusion, this research study elucidates the difficulties encountered by social work researchers while collecting and interpreting data, highlighting how these problems can affect the dependability and accuracy of research findings. This study conducted an extensive examination of survey data obtained from Master of Social Work students, which uncovered notable challenges in obtaining consent from participants, safeguarding confidentiality and privacy, handling substantial amounts of data, and assuring the reliability and precision of the data. The results emphasise the crucial significance of tackling these difficulties in order to protect moral principles, preserve the credibility of research outcomes, and cultivate trust between researchers and participants. Furthermore, the study emphasises the widespread occurrence of these difficulties, underscoring the necessity for methodical approaches and strong measures to reduce their influence.

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## MARITAL INTENTION, ATTITUDE AND SOCIAL SUPPORT OF YOUNG WOMEN WITH DISABILITIES

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### Abstract

**Introduction:** Marriage is considered a woman's destiny and social security. The prevailing belief is that only a partner with a disability understands their disability. Women find it difficult to express their desires in Indian cultural viewpoints and traditional thinking. Sexual desires and information are considered taboo subjects and they have minimal support. **Objective:** This study aims to assess the marriage intention, attitude and perceived social support among 247 women with disabilities. **Method:** A descriptive research design was adopted. Results reported that intent to marry has a positive relationship with attitudes toward marriage and perceived social support. **Results:** Mean differences in the variables were reported in terms of education, occupation and level of disability. The majority of the respondents reported that the life partner they prefer is a person without a disability and receives highly perceived social support. **Conclusion:** The people around the persons with disabilities are influencers battling with the power structures reflected in the internalized stigma in the choice of relationships.

**Keywords:** Disability Social Work, Marital Attitude, Women with Disabilities, Social Support, Marriage Intention

### Introduction

In India, marriage is the approved institution for building a family. It is a legal and social contract. Marriage is a bond that has a

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socially and culturally acceptable relationship between a male and a female. It provides emotional and social security. Moreover, attitudes towards marriage influence the marital relationship. Individuals develop positive and negative attitudes through various sources. Age, gender, parental influence, relationship experiences, religious values and media are some of them. The relationship exists between positive parental and family dynamics with a positive attitude towards marriage (Shefali & Navya Shree 2016).

Perceived social support is the individual's perception of the support given by family members, friends and other significant persons in day-to-day life. The types of support one can provide are emotional and instrumental support; emotional support includes love, care, protection, and instrumental support, including assisting in doing things. Emotional support is closely connected with the psychological well-being of the individual. It increases self-esteem and provides for being loved (Redman, Tom, Snape, 2006). Positive relationships were found between perceived social support and psychological illnesses (Celik, 2012). The instrumental support that Persons with disabilities (PWDs) receive is from families, relatives, and institutionalized caregivers.

PWDs are socialized to be dependent and their caretakers treat them like children. Parents are not ready to invest money and effort in their school education or vocational training, as they think the disabled person may not go for a job and earn in the future. Their lack of education leads to poor decision-making skills. Parents look for a partner to be a caretaker for women with disabilities (WWDs). They are expected to look after their families, face difficulties and marry PWDs. Poor socioeconomic situations make them more vulnerable. In these situations, they are married to an older or disabled man. The societal misconception that WWDs produce children with a disability makes them not think of marriage (TARSHI, 2018). Young PWDs are denied to form their own families. Family and social constraints give them additional

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barriers to thinking of marriage life. No social acknowledgement is given to people involved in intimate relationships. Sex education is also not provided to them, which places them at risk for pregnancy (Groce, 2004). Disabled women were married to disabled men or with their sister's husband. Heavy dowries should be given to the person who is marrying disabled women. People were not aware of the infrastructure modifications that are needed for PWDs. Women are expected to be the sole responsible person for all the work, but the families do not make any special facilities to fulfil their duties (Mehrotra, 2008).

The support received from family has a significant association with psychological adjustment (Wilson et al, 2006). Women with severe disabilities receive less support from their in-law's families, and women with mild disabilities have adequate support from their in-law's families (Gupta et al., 2018). This study aims to measure the marriage intention and attitude towards marriage and perceived social support among women with disabilities.

### **Materials and Methods**

A quantitative study method with a descriptive research design was followed to collect data from unmarried women with disability in the districts of the Union Territory of Puducherry. 247 respondents constitute the study population. Purposive sampling was used. Data was collected using an interview schedule. The interview schedule comprises details about socio-demography and scales measuring intent to marry, attitude toward marriage and perceived social support. Park and Rosen (2013) developed scales related to marital relationships to assess the intent and attitudes toward marriage. The intent to marry scale consists of three items, with one reverse-scored item. The scales followed a seven-point Likert scale, ranging from strongly disagree (0) to strongly agree (6). The minimum and maximum scores are from 0 to 18. The general attitudes toward marriage scale consists of 10 items, with six reverse-scored items. This scale also followed a seven-point Likert scale, ranging from strongly disagree (0) to strongly agree

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(6). The minimum and maximum scores are from 0 to score 60.

Higher scores reflect positive attitudes. The multidimensional scale of perceived social support was developed by Zimet et al. (1988) to expose the perceptions of support received from three important dimensions of an individual's life, i.e., family, friends, and significant others. It has 12 items with a 7-point Likert scale response ranging from very strongly disagree (1) to very strongly agree (7). Each dimension has four items. Scoring is the summing of all the items divided by the total number of items. Scores higher than the average have high-perceived social support.

The Cronbach's Alpha value obtained was 0.897 for the Intent to Marry scale (3 items); 0.815 for the General Attitudes Towards Marriage scale (10 items); and 0.905 for the Multidimensional Scale of Perceived Social Support (12 items). Collected data was analysed using the Statistical Package for Social Sciences (SPSS version 19). Ethical clearance from the Institute Ethics Committee was obtained.

## **Results**

### **Socio-demographic details**

The majority of the respondents (57.5%) belong to the age group of 18-23 years, 85.8 per cent of the respondents are Hindus, 66.4 per cent of the respondent's education is under graduation, and 47 per cent of the respondents are not in any paid job. 84.6 per cent of the respondents are in the nuclear family, the monthly family income of 59.1 per cent of respondents is between ₹15001 and ₹30000, 52.6 per cent reside in rural rather than urban areas, 77.3 per cent have locomotor disability and 22.7 per cent are women with visual disability, and 58.3 per cent of the respondents are having 40 per cent to 60 per cent of disability.

**Table 1**

*Distribution of the level of intent to marry, Attitudes toward marriage, and perceived social support*

Variable	n	%
Intent to marry		
Low	101	40.9
High	146	59.1
Attitudes toward marriage		
Positive	224	90.7
Negative	23	9.3
Perceived social support		
Moderate	25	10.1
High	222	89.9

In this study, nearly three-fifths (59.1%) of the respondents have a high intention to marry, and 40.9 per cent have a low intention to marry. Most of the respondents (90.7%) have positive attitudes toward marriage. The perceived social support of most of the respondents (89.9%) is high.

From the analysis, it is noted that there is no significant difference existing in intent to marry, and attitudes towards marriage across age, religion, type of family, monthly family income, and place of residence and a significant difference was found across educational qualification, occupation, type of disability, level of disability, and life partner preference.

**Table 2**

*t-test results of the mean difference between the type of disability and other study variables*

Variable	Locomotor (n=191)		Visual (n=56)		t (245)	p
	M	SD	M	SD		
Intent to marry	11.73	5.5	8.61	6.6	3.565	0.000*
Attitudes toward marriage	43.79	10.37	40.34	9.09	2.248	0.025*
Perceived social support	77.24	9.53	73.98	10.32	2.204	0.028*

\* $p < 0.05$



There is a significant difference existing between young women with locomotor disability and visual disability in terms of self-esteem ( $t=2.592$ ,  $p<0.05$ ), intent to marry ( $t=3.565$ ,  $p<0.05$ ), attitudes toward marriage ( $t=2.248$ ,  $p<0.05$ ) and perceived social support ( $t=2.204$ ,  $p<0.05$ ). The mean values indicate that self-esteem, intent to marry, positive attitudes toward marriage, and perceived social support are high among women with locomotor disabilities.

**Table 3**

*t-test results of the mean difference between Perceived social support and other study variables*

Particulars	M	SD	t (245)	p
Age (in years)				
18-23 (n=142)	77.73	8.71	2.325	0.021*
24-29 (n=105)	74.83	10.9		
Place of residence				
Rural (n=130)	78.28	8.07	3.061	0.002*
Urban (n=117)	74.52	11.10		
Monthly Family Income				
₹15000 & Below (n=101)	74.88	10.78	-2.175	0.031*
₹15001- ₹30000 (n=146)	77.62	8.9		

\* $p<0.05$

There is a significant difference existing in the perceived social support concerning age ( $t=-0.047$ ,  $p>0.05$ ), place of residence ( $t=1.327$ ,  $p>0.05$ ), and monthly family income ( $t=-1.147$ ,  $p>0.05$ ). The mean values indicate that perceived social support is high among women in the age group of 18-23 years, those who reside in rural areas and those whose family income is between ₹15001-₹30000.

**Table 4**

*Results of ANOVA between the educational qualification and other study variables*

Variable	Educational Qualification						<i>F</i> (2,244)	<i>p</i>
	No Schooling (n=14)		1 <sup>st</sup> Std. to 12 <sup>th</sup> Std. (n=69)		Diploma/ UG / PG (n=164)			
	M	SD	M	SD	M	SD		
Intent to marry	4.93	6.22	9.23	5.32	12.3	5.61	16.242	0.000*
Attitudes toward marriage	37.14	5.28	39.09	9.12	45.16	10.27	12.086	0.000*
Perceived social support	70	13.03	72.58	10.41	78.7	8.42	14.124	0.000*

\* $p < 0.05$

There is a significant difference found in intent to marry ( $F = 16.242$ ,  $p < 0.05$ ), attitudes toward marriage ( $F = 12.086$ ,  $p < 0.05$ ) and perceived social support ( $F = 14.124$ ,  $p < 0.05$ ) based on the educational qualification of the respondents. Tukey HSD Post Hoc test indicates that the young WWDs who have completed their diploma, under graduation and post-graduation have a positive attitude toward marriage ( $\bar{X} = 45.16$ ), have a high level of intention to marry ( $\bar{X} = 12.3$ ) and perceived social support ( $\bar{X} = 78.7$ ).

**Table 5**

*Results of ANOVA between occupational status and other study variables*

Variable	Occupation						F (2,244)	P
	Student n=79		Working n=52		Not working n=116			
	M	SD	M	SD	M	SD		
Intent to marry	12.62	5.74	13.48	5.46	8.84	5.44	17.385	0.000*
Attitudes toward marriage	44.19	10.41	47.94	11.18	39.99	8.47	12.847	0.000*
Perceived social support	78.14	8.76	79.37	8.36	74.09	10.51	7.178	0.001*

\* $p < 0.05$

There is a significant difference found in intent to marry ( $F = 17.385$ ,  $p < 0.05$ ), attitudes toward marriage ( $F = 12.847$ ,  $p < 0.05$ ) and perceived social support ( $F = 7.178$ ,  $p < 0.05$ ) based on the occupation of the respondents. Tukey HSD Post Hoc test indicates that there is no significant difference in intention to marry, attitudes toward marriage and perceived social support between the respondents studying in the colleges and those working. On the contrary, intention to marry, attitudes toward marriage and perceived social support of the respondents who are currently not working differ from those who are studying in colleges and those who are working. There is a low intention to marry ( $\bar{X} = 8.84$ ), negative attitudes toward marriage ( $\bar{X} = 39.99$ ) and low perceived social support ( $\bar{X} = 74.09$ ) found among the respondents who are not working.

**Table 6**

*Results of ANOVA between the level of disability and other study variables*

Variable	Level of Disability						F (2,244)	P
	40% - 60%		61% - 80%		81% - 100%			
	(n=144) M	SD	(n=66) M	SD	(n=37) M	SD		
Intent to marry	13.09	5.44	8.68	4.5	7.16	6.45	26.442	0.000*
Attitudes toward marriage	46.49	10.57	37.65	7.15	39	7.39	24.279	0.000*
Perceived social support	78.46	8.79	73.83	10.44	73.62	10.67	7.282	0.001*

\* $p < 0.05$

There is a significant difference found in intent to marry ( $F = 26.442$ ,  $p < 0.05$ ), attitudes toward marriage ( $F = 24.279$ ,  $p < 0.05$ ) and perceived social support ( $F = 7.282$ ,  $p < 0.05$ ) based on the level of disability of the respondents. Tukey HSD Post Hoc test shows that there is no significant difference in intention to marry, attitudes toward marriage and perceived social support between the respondents who have 61-80 per cent disability and the respondents who have 81-100 per cent disability. The respondents with 40-60 per cent disability differ from the other two groups in intention to marry, attitudes toward marriage and perceived social support. The young WWDs who have 40-60 per cent disability have high intention to marry ( $\bar{X} = 13.09$ ), positive attitudes toward marriage ( $\bar{X} = 46.49$ ) and high perceived social support ( $\bar{X} = 78.46$ ).

**Table 7**

T-test results of mean difference in marital attitudes across life partner preference

Variable	Life partner Preference				t (245)	p
	Person with disability n=53 (78.5%)		Person without disability n=194 (21.5%)			
	M	SD	M	SD		
	Intent to marry	8.45	5.81	11.73		
Attitudes toward marriage	37.66	7.25	44.47	10.39	-4.476	0.000*

\* $p < 0.05$

Irrespective of the intention to marry, the respondents were asked about their preference for their life partner. Most respondents (78.5 per cent) reported that the life partner they prefer is a person without a disability, and 21.5 per cent prefer their life partner to be someone with a disability. t-test was used to find the difference in intention to marry and attitudes toward marriage based on the life partner preference. It was found that there is a significant difference existing between those who prefer their life partner to be a person with a disability ( $t = -3.666, p < 0.05$ ) and those who prefer their life partner to be a person without a disability ( $t = -4.476, p < 0.05$ ).

**Table 8**

Results of the correlation between SRH knowledge and other study variables

Variable	1	2	3	4	5	6
1 Age	—					
2 Level of disability	.005	—				
3 Family Income	-.005	-.050	—			
4 Intent to marry	-.094	-.470**	.028	—		
5 Attitudes toward marriage	-.055	-.416**	.098	.743**	—	
6 Perceived social support	-.121	-.260**	.179**	.377**	.344**	—

\*\* $p < 0.01$

In this study, no relationship exists between age and intent to marry, attitudes toward marriage, and perceived social support. Intent to marry has a positive relationship with attitudes toward marriage ( $r = .743, p < 0.01$ ) and perceived social support ( $r = .377,$

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$p < 0.01$ ). Perceived social support has a positive relationship with family income ( $r = .179$ ,  $p < 0.05$ ) and attitudes toward marriage ( $r = .344$ ,  $p < 0.01$ ). There is a negative relationship existing between the level of disability and the intent to marry ( $r = -.470$ ,  $p < 0.01$ ), attitudes toward marriage ( $r = -.416$ ,  $p < 0.01$ ), and perceived social support ( $r = -.260$ ,  $p < 0.01$ ). Thus, the increase in age may not improve intent to marry, attitudes toward marriage, and perceived social support. Marriage intention may increase if there is an improvement in attitudes toward marriage and social support and vice versa. Marriage intention, attitudes toward marriage and perceived social support may decrease if there is an increase in the level of disability.

### **Discussion**

High intention to marry and positive attitudes toward marriage can be seen among women with locomotor disability, those who completed their Post-Graduation degree, those who go for a salaried job, those with 40 per cent to 60 per cent disability, and those who prefer their life partner to be a person without a disability. Intent to marry and attitudes toward marriage have a positive relationship with attitudes toward marriage and perceived social support and have a negative relationship with the level of disability. PWDs have negative Attitudes towards marriage due to low self-love and self-esteem (Cheausuwantavee, 2002). The type of disability affects the intention to marry and attitudes towards marriage. The severity of the disability makes the respondents have negative attitudes toward marriage. Another study also reported that the type and degree of disability influences social acceptance of WWDs (Mehrotra, 2006). WWDs consider themselves less feminine, considering their physical impairments (Vaidya, 2015). Mehrotra (2006) points out that marriage is considered a woman's destiny. Hence, the parents do not invest money in the education of the disabled girl child. On the contrary, this study's findings report that most respondents study in educational institutions. As mentioned by the respondents, physical impairment and accessibility are the reasons for not continuing school education.

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Sexuality can be expressed only within the sphere of the marriage institution in India. The intention and attitudes toward marriage are high among those who prefer their life partner to be a person without a disability. This is in line with a study by Pinguart and Pfeiffer (2012) conducted among adolescents with visual impairment in Germany in which they had chosen a person with a visual impairment as their partner. A study by Chilwarwar and Sriram (2019) among women with visual impairment reported that the disability was not included in the criteria when selecting life partners. Many of the women with disability are married to men with disabilities or older men (TARSHI, 2010). Compromise and obligation often surround their marriage relationship (Habib, 1995). Negative body image has an impact on the ability of women with disability to find a life partner (Addlakha & Nayar, 2017). World Bank report (2009) expressed that the divorce and abandonment rate is high among the marriages of disabled persons. This fear also paves the negative attitudes towards family life among young WWDs. In addition, young WWDs fear the gender roles expected in marital life (Nguyen et al., 2016). The misconception is that disabled women transmit the disability to their children; this affects the attitudes toward marriage. This misconception affects the marital relationship of the disabled. Other factors include the fear of conception, childcare, and domestic responsibilities. These assumptions resulted in discrimination from inside and outside the family (Devkota et al., 2019). A study done by Adhikari (2020) reported that most PWDs get married at 28-32 years, old and have married a partner with a disability. None of the persons with a hearing disability had married a non-disabled person. Marrying a non-disabled person was more prevalent among men than women. In most cases, marriage with a non-disabled is due to the lower economic conditions. PWDs prefer to marry someone with some disability though the percentages of disabilities vary. Most men prefer to marry a person with a lesser degree of disability. WWDs were anxious about childbirth, sexual relationships, coping with in-law families, and fear of in-law family acceptance.

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A high level of perceived social support is reported in this study. However, nearly half of the respondents reported that they do not have friends in their lives. This is in line with the study conducted by Forouzan et al. (2013) among people with physical disabilities, which found that social support is associated with the age and severity of the disability. Another study by Gupta et al. (2018) reported the relationship between the level of disability and social support that women with severe disabilities receive less support from their in-law's families, and women with mild disabilities have adequate support from in-laws' families. A study by Wilson et al. (2006) among youth with physical disabilities reported that support from family has a significant relationship with psychological well-being. A study by Singh et al. (2011) reported that the respondents lack support from their families, siblings and community and reported that their disability plays a major role in the family environment and social life. Another study by Owusu-Ansah and Nkrumah (2017) reported that there is no significant difference found between the male and female participants; however, education levels significantly differed in perceived social support.

### **Conclusion and Recommendations**

The social worker has a significant role in enhancing the positive attitude towards marriage and improving the support systems. Social work methods like casework and group work help to find solutions to internal factors like negative attitudes toward marriage life, anxieties and problems related to relationships with others. Pre-marital counselling can be given to the WWDs to illuminate the fear regarding marriage and family life. Social workers can act as facilitators in forming a supportive network among WWDs at the community level similar to that of an Alcoholics Anonymous group that is meant for persons addicted to substance abuse. These support groups bring purposeful group experiences, which will help the WWDs to get solutions for the problems they experience and help to understand how members in the group think, act and cope with similar issues. These support groups enhance social interactions and in turn, reduce the social



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isolation among young WWDs. To address the psychological issues related to marital aspects of WWDs, the government can establish family counselling centres and appoint mobile counsellors; by doing periodic home visits mobile counsellors might help the WWDs to clarify their concerns regarding the aspects related to marriage. Counselling should be extended to the family members. A separate matrimonial website can be created for WWDs, which will help them to find a suitable partner.

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## **CHANGES IN HOUSEHOLD EXPENDITURE ON EDUCATION AND ITS POSITION IN THE HOUSEHOLD BUDGET IN ASSAM**

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### **Abstract**

Household expenditure is one of the notable indicators of the economic status of the household in India. Household expenditure comprises of all expenditures incurred by the households on various food and non-food items. Among all components, expenditure on education is one of the important components of total monthly household expenditure. In this paper, we study the changes in household expenditure on education in India and Assam and relative position of educational expenditure in the household budget in Assam with the help of NSSO data. The data are analysed with the help of simple statistical techniques. Engel ratio is calculated to study the share of educational expenditure in the household budget. It is found that household expenditure on education has been increased during the period between 1999-00 and 2011-12 in both India and Assam. Moreover, it is seen that the share of expenditure on education in household budget is higher in urban areas compared to rural areas of Assam. This may be either due to the fact that the cost of education is higher in urban areas than rural areas or may be urban people are more aware about the importance of education regarding its various economic and non-economic returns than rural people. Therefore, it can be suggested that Government should make public expenditure on education adequate.

### **Introduction**

The household consumption expenditure has been changing over time in India. There is a strong relationship between household

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consumption expenditure on different items and economic development of a country (Saikia, 2018). Since 1991 the government of India has been following the policy of liberalisation, privatisation and globalisation. The government of India has started economic reforms in various sectors of the economy in 1991. During the pre-reform period, Indian economy has experienced an annual average growth rate of about 4%. But since 1991, the rate of economic growth got accelerated. India's faster economic growth after economic reforms has affected the national income and per capita income. Before economic reforms, during the Sixth Plan (1980-85) period, average annual growth rates of national income and per capita income are 5.4% and 3.2% respectively. During the Eighth Plan (1992-97) period, it is seen that national income has shown an annual average growth of 6.8% and per capita income has shown an annual average growth rate of 4.9%. Further national income has shown an annual average growth of 7.8% and per capita income has shown an annual average growth rate of 6.3% during the Eleventh Plan period (2007-12). From this, it is seen that after economic reforms there is an increase in national income and per capita income in India. Therefore, it can be said that the growth of Indian economy has raised per capita income which in turn has increased the purchasing power of the people.

This may have significantly influenced the household consumption expenditure pattern. Moreover, some other factors namely geographic and climatic conditions, economic factors like prices of the goods, income of the family, demographic factors like household size, education of household members, degree of urbanisation, exposure to the world market through mass media, application of new technology, cultural factors and changing needs, habits and attitudes of the people for different goods are likely to influence household consumption expenditure pattern (Sinha & Adhikary, 2020). Due to these factors there have been a continuous change in the household expenditures on various items over time in India. The household expenditure in terms of monthly per capita household expenditure is one of the notable indicators of

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the economic status of the household and it also determines the standard of living of the people. As living standards of the household improves, the household expenditure pattern also get transformed since the rising living standards have enlarged and enriched the choices of the households regarding different consumption items in their household budget (Sinha & Adhikary, 2020). Household consumption expenditure comprises of all expenditures incurred by the households on domestic consumption of food and non-food items (NSS Report). Among all components, expenditure on education is one of the important components of total monthly household consumption expenditure.

In this paper, we study the household expenditure particularly focussing on one of the important human development indicators namely education. In India, expenditures on education are incurred by two different ways- public and private. Considering the importance of education in nation building process, the Central and State Governments of India have been spending a considerable share of their resources in the field of education. The Government of India has constituted and appointed several educational commissions namely Kothari Commission (1964-66) and Tapas Majumdar Committee (1999) which have indicated that in order to provide proper educational facilities to the millions of children in the country, huge amounts of resources need to be provided. In this regard, Kothari Commission advocated in spending 6% of the GDP for public expenditure on education. National education policy 1968 also recommended that investment on education should increase gradually to 6% of GDP and reiterated by the 1986 policy, which is also NITI Aayog's target to improve education quality in India. NEP 2020 reaffirms the recommendation of increasing public spending on education to 6% of GDP (Tilak, 1996, 2002, 2006 & Rani 2008). But the goal has remained unfulfilled. However, a lot of funds have been spent on education in the last several decades. As a result, the budgeted expenditure on education has shown an increase from 64.46crores in 1951-52 to 19,615.85crores in 1990-91 and then to

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5,06,849crores in 2014-15(MHRD Budget Analysis, India). Although public expenditure on education is increasing over the years, public expenditure on education as a proportion of GDP has been quite below the target of spending which is 6% of GDP. India spent 3% of its GDP on education in 2019-20 (Economic Survey, 2019-20 RE). Therefore, it can be said that although public expenditure on education has shown an increasing trend, but it is not adequate in India. This situation may lead to an increase in expenditure on education at household level.

With the above fact, in this paper, we study the changes in household expenditure on education in India and Assam and relative position of educational expenditure in the household budget in Assam.

### **Objectives**

The objectives of this paper are

1. To study the changes in household expenditure on education in India and Assam.
2. To study the relative position of educational expenditure in the household budget in Assam.

### **Methodology**

We use only "quinquennial " surveys of consumer expenditure which were conducted in the 55<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> rounds by the NSSO to study the changes in household expenditure on different items, particularly education and its relative position in the household budget in the post-reform period in both rural and urban areas. NSS 55<sup>th</sup>, 61<sup>st</sup>, 66<sup>th</sup> and 68<sup>th</sup> rounds are used because data on education as an item of expenditure is separately available only in the above mentioned rounds. So, the objectives of the study are fulfilled with the help of secondary data (different quinquennial rounds of NSSO on Household Consumption Expenditure such as 1999-00, 2004-05, 2009-10 and 2011-12). The simple statistical tool is used in this study. Changes in average monthly per capita household expenditure on education in India as well as in Assam at both current prices and constant prices is found. Moreover,

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changes in share of average monthly per capita household expenditure on education in total monthly per capita expenditure is calculated with the help of Engel ratio in Assam.

## **RESULTS AND DISCUSSION**

### **Changes In Level of Monthly Per Capita Expenditure in Monetary and Real Terms in India and Assam**

Monthly per capita expenditure (MPCE) is defined as the ratio between household monthly consumer expenditure and size of the household. MPCE serves as the indicator of the level of living of the household. The Indian economy is one of the major growing economies in the world which has increased per capita income and this in turn raised per capita expenditure.

The Table shows estimates of all India average MPCE at both current and constant prices from five full scale surveys of consumer expenditure. For rural India, MPCE in current prices is seen to have grown from Rs. 286.10 in 1993-94 to Rs. 579.17 in 2004-05 and then to Rs. 1287.17 in 2011-12. Moreover, MPCE in constant prices also (measured using a price deflator with 1987-88 as base) is seen to have grown continuously from Rs. 162.56 in 1993-94 to Rs. 181.56 in 2004-05 and then to Rs. 221.93 in 2011-12- an increase of about 36.5% over 18 years. In urban India also MPCE in current prices has shown an increase from Rs. 464.30 in 1993-94 to Rs. 1104.60 in 2004-05 and then to Rs. 2477.02 in 2011-12. Moreover, there has been a substantially higher growth in real MPCE from Rs. 268.38 in 1993-94 to Rs. 413.53 in 2011-12 in urban India- an increase of 54% in the 18- year period since 1993-94.



Table 1: Growth in MPCE at Current and Constant Prices  
in India (in Rs.)

India	Year				
	1993-1994	1999-2000	2004-2005	2009-2010	2011-2012
MPCE in rural areas (Current Prices)	286.10	486.16	579.17	953.05	1287.17
Price deflator for rural sector	176	271	319	494	580
MPCE in rural areas (at 1987 - 88 prices)	162.56	179.39	181.56	192.93	221.93
MPCE in urban areas (Current Prices)	464.30	854.92	1104.60	1856.01	2477.02
Price deflator for urban sector	173	279	338	503	599
MPCE in urban areas (at 1987 - 88 prices)	268.38	306.42	326.80	368.99	413.53

Source: NSS KI (68/1.0): Key Indicators of Household Consumer Expenditure in India

In rural Assam, MPCE in current prices is seen to have grown from Rs. 258 in 1993-94 to Rs. 576.71 in 2004-05 and then to Rs. 1056.98 in 2011-12. Moreover, MPCE in constant prices also (measured using a price deflator with 1982 as base) is seen to have grown from Rs. 107.05 in 1993-94 to Rs. 125.64 in 2004-05 and then to Rs. 144.39 in 2011-12. Between 1993-94 and 2011-12, the MPCE in constant prices has increased by about 34.9% over 18 years for rural areas.

Table 2: Growth in MPCE at Current and Constant Prices in Assam (in Rs.)

India	Year				
	1993-1994	1999-2000	2004-2005	2009-2010	2011-2012
MPCE in rural areas (Current Prices)	258	426.13	576.71	866.57	1056.98
Price deflator	241	403	459	621	732
MPCE in rural areas (at 1982 prices)	107.05	105.74	125.64	139.54	144.39
MPCE in urban areas (Current Prices)	459	814.12	1129.57	1604.06	2090.18
Price deflator	241	403	459	621	732
MPCE in urban areas (at 1982 prices)	190.45	202.01	246.09	258.30	285.54

Source: Different Rounds of Key Indicators of Household Consumer Expenditure in India

In urban Assam also MPCE in current prices has shown an increase from Rs. 459 in 1993-94 to Rs.1129.57 in 2004-05 and then to Rs.2090.18 in 2011-12. Moreover, there has been a substantially higher growth in real MPCE from Rs. 190.45 in 1993-94 to Rs. 285.54 in 2011-12 in urban Assam- an increase of 49.9% in the 18- year period since 1993-94. It is seen that although the growth in MPCE in both rural and urban areas of Assam at both current and constant prices is lower than national average, but MPCE has shown a continuous increase at the state level. Moreover, it is seen that MPCE is higher in urban areas compared

to rural areas at both national and state level. It indicates that cost of living is higher in urban areas than rural areas. With these facts, it is important to study the pattern of household consumption expenditure, particularly focussing on education in both rural and urban areas of India and Assam.

### **Changes in Level of Monthly Per Capita Expenditure on Education in Monetary and Real Terms in India and Assam**

Expenditure on education is one of the important components of total monthly household consumption expenditure. It includes expenditure on goods purchased for the purpose of education namely books and journals, newspapers, stationery, educational CD and also it includes magazines, novels and other fiction. It also includes fees paid to educational institutions such as schools, colleges, universities on account of tuition and other fees like game fees, library fees, fees for music etc (NSS Report No. 555).

**Table 3: Growth in MPCE on Education at Current and Constant Prices in India (in Rs.)**

India	Year			
	1999-2000	2004-2005	2009-2010	2011-2012
MPCE in rural areas (Current Prices)	9.37	18.06	40.27	50.69
Price deflator for rural sector	271	319	494	580
MPCE in rural areas (at 1987 - 88 prices)	3.46	5.66	8.15	8.74
MPCE in urban areas (Current Prices)	37.06	73.70	162.19	193.09

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Price deflator for urban sector	279	338	503	599
MPCE in urban areas (at 1987 - 88 prices)	13.28	21.80	32.24	32.24

Source: NSS KI (68/1.0): Key Indicators of Household Consumer Expenditure in India

In rural India, MPCE in education at current prices is seen to have grown from Rs. 9.37 in 1999-00 to Rs. 18.06 in 2004-05 and then to Rs. 50.69 in 2011-12. Moreover, MPCE in education in constant prices also (measured using a price deflator with 1987-88 as base) is seen to have grown from Rs. 3.46 in 1999-00 to Rs. 5.66 in 2004-05 and then to Rs. 8.74 in 2011-12. Between 1999-00 and 2011-12, the MPCE in education in constant prices has increased by about Rs. 5.28 over 12 years for rural areas. In urban India, MPCE in education in current prices is seen to have grown from Rs. 37.06 in 1999-00 to Rs. 73.70 in 2004-05 and then to Rs. 193.09 in 2011-12. Moreover, MPCE in education in constant prices also (measured using a price deflator with 1987-88 as base) is seen to have grown from Rs. 13.28 in 1999-00 to Rs. 21.80 in 2004-05 and then to Rs. 32.24 in 2011-12. Between 1999-00 and 2011-12, the MPCE in education in constant prices has increased by about Rs.18.96 over 12 years for urban areas.

Although the MPCE in education has been increased over 12 years in both rural and urban areas of India at constant prices, but it is seen that between 2009-10 and 2011-12 the MPCE has shown a slight increase from Rs. 8.15 to Rs. 8.74 in rural areas and remained at the same level at Rs.32.24 in urban areas. It may indicate that the Government must have taken some subsidizing initiatives to support household expenditure on education. But, it is seen that household expenditure on education is higher in urban areas compared to rural areas at both current and constant prices during all the NSSO rounds.

Table 4: Growth in MPCE in Education at Current and Constant Prices in Assam (in Rs.)

Assam	Year			
	1999-2000	2004-2005	2009-2010	2011-2012
MPCE in rural areas (Current Prices)	5.89	16	22.25	20.96
Price deflator	403	459	621	732
MPCE in rural areas (at 1982 prices)	1.46	3.48	3.58	2.86
MPCE in urban areas (Current Prices)	24.84	72.94	119.81	133.38
Price deflator	403	459	621	732
MPCE in urban areas (at 1982 prices)	6.16	15.89	19.29	18.22

Source: Different Rounds of Key Indicators of Household Consumer Expenditure in India

In rural Assam, MPCE in education at current prices is seen to have grown from Rs. 5.89 in 1999-00 to Rs. 16 in 2004-05 and then increased to Rs. 22.25 in 2009-10 and after that it is decreased to Rs. 20.96 in 2011-12. Moreover, MPCE in education in constant prices also (measured using a price deflator with 1982 as base) is seen to have grown from Rs. 1.46 in 1999-00 to Rs. 3.48 in 2004-05 and then slightly increased to Rs. 3.58 in 2009-10 and after that it is decreased to Rs. 2.86 in 2011-12. Between 1999-00 and 2011-12, the MPCE in education in constant prices has increased by about Rs. 1.4 over 12 years for rural areas.

In urban Assam, MPCE in education in current prices is seen to have grown from Rs. 24.84 in 1999-00 to Rs. 72.94 in 2004-05 and then to Rs. 119.81 in 2009-10 and again increased to Rs. 133.38 in 2011-12. Moreover, MPCE in education in constant prices also

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(measured using a price deflator with 1982 as base) is seen to have grown from Rs. 6.16 in 1999-00 to Rs. 15.89 in 2004-05 and then increased to Rs. 19.29 in 2009-10 but after that it is decreased to Rs. 18.22 in 2011-12. Between 1999-00 and 2011-12, the MPCE in education in constant prices has been increased by about Rs.12.06 over 12 years for urban areas. Although MPCE on education has been increased in both rural and urban areas of Assam over the 12 years, but it is seen that between 2009-10 and 2011-12 the MPCE on education at constant prices has been decreased slightly in both rural and urban areas of Assam.

This phenomenon might be the result of some of the Government schemes including Sarva Siksha Abhiyan which helps to support the expenditure on education at household level. But, it is seen that household expenditure on education is still higher in urban areas compared to rural areas at both current and constant prices during all the NSSO rounds. This may be due to the fact that either cost of materials, fees etc. related to education is higher in urban areas or the urban people being more literate than the rural people is expected to lay greater emphasis on education due to which they expense more on education.

It is seen that the rural-urban gap in MPCE on education has been increasing over time in both India and Assam. The rural-urban gap at current prices is increased from Rs. 27.69 in 1999-00 to Rs. 55.64 in 2004-05 and then to Rs. 121.92 in 2009-10 and then again increased to Rs. 142.4 in 2011-12 in India. Moreover, it is increased from Rs. 9.82 in 1999-00 to Rs. 16.14 in 2004-05 and then to Rs. 24.09 in 2009-10 but after that it is slightly decreased to Rs.23.5 in 2011-12 at constant prices in India. The rural-urban gap has shown an increase by Rs. 114.71 and Rs. 13.68 at current and constant prices respectively over the 12 years in India.

In case of Assam, the rural-urban gap at current prices is increased from Rs. 18.95 in 1999-00 to Rs. 56.94 in 2004-05 and then to Rs.

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97.56 in 2009-10 and then again increased to Rs. 112.42 in 2011-12. Moreover, it is increased from Rs. 4.7 in 1999-00 to Rs. 12.41 in 2004-05 and then to Rs. 15.71 in 2009-10 but after that it has shown a slight decrease to Rs.15.36 in 2011-12 at constant prices. The rural-urban gap has shown an increase by about Rs. 93.47 and Rs. 10.66 at current and constant prices respectively over the 12 years at the state level. It is seen that although the rural-urban gap has been increased in Assam but it is comparatively narrow at the state level.

**PERCENTAGE SHARE OF EDUCATION WITH  
INCREASE IN CONSUMPTION LEVEL IN INDIA  
AND ASSAM**

Since a household in the top MPCE class has a consumption pattern very different from that of a low MPCE class household, there exists variation in consumption expenditure on all items across households at different MPCE levels. Therefore, it is expected that there may be a change in the expenditure on education with increase in consumption level. The change in share of the education in total consumption expenditure across 10 classes-the lowest MPCE decile class to the highest is shown in the Table for rural and urban areas of India and Assam.

Table 5: Percentage Share of Education in MPCE for Each MPCE Decile Class (in percentage)

INDIA/ASSAM	DECILE CLASS OF MPCE									
	1	2	3	4	5	6	7	8	9	10
Urban India (1999-00)	1.62	1.99	2.32	2.83	3.36	3.73	4.09	4.62	5.26	5.66
Urban India (2011-12)	2.85	3.78	4.25	5.11	5.71	6.51	7.06	8.12	8.94	10.32

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Rural India (1999-00)	0.79	1.06	1.15	1.28	1.35	1.55	1.66	1.89	2.27	3.09
Rural India (2011-12)	1.60	2.18	2.10	2.44	2.54	2.76	3.38	3.47	4.56	6.60
Urban Assam (1999-00)	0.44	1.45	2.09	2.18	2.85	2.87	4.51	3.51	3.24	3.34
Urban Assam (2011-12)	1.10	1.71	2.39	3.95	3.12	2.56	5.61	6.05	5.36	11.84
Rural Assam (1999-00)	0.90	0.98	0.86	0.85	1.12	1.13	1.29	1.71	1.82	3.21
Rural Assam (2011-12)	0.84	1.27	1.01	1.29	1.55	1.65	1.86	1.85	2.46	3.29

The share of education in total consumption expenditure in the bottom decile class is about 0.79% and 1.62% for rural and urban India in 1999-00. The share then increases from the bottom class as one moves to the higher classes. For the rural and urban India, the share of education rises by about 2.3% points and 4.04% points respectively from the lowest decile class to the highest in 1999-00. In 2011-12, the share of education rises continuously from 2.85% in the bottom decile class to 10.32% in the top decile class in urban India. In case of rural India also, the share of education has shown an increase from 1.60% in the bottom decile class to 6.60% in the top decile class. In rural India the rise is steeper from the ninth to the top decile class compared to urban India. For the rural and urban India, the share of education rises by about 5% and 7.47% points respectively from the bottom decile class to the top in 2011-12. It is seen that urban share remains a little above the rural share throughout the MPCE classes during the periods 1999-00 and 2011-12. Moreover, in case of urban and rural India the share of education rises by about 1.23% and 0.81% points respectively in the bottom decile class from 1999-00 to 2011-12. In the top decile class, the share of education rises by about 4.66% and 3.51% points in urban and rural India respectively from 1999-00 to 2011-12. It is seen that the rise in the share of education in the household budget is higher in urban India than rural India in both top and bottom decile classes.



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The share of education in total consumption expenditure in the bottom decile class is about 0.90% and 0.44% for rural and urban Assam in 1999-00. The share then increases to 3.21% and 3.34% in rural and urban areas respectively as one moves to the higher classes. In rural and urban Assam, the share of education increases by about 2.31% point and 2.90% point respectively from the lowest decile class to the highest in 1999-00. In 2011-12, the share of education rises from 1.10% in the bottom decile class to 11.84% in the top decile class in urban Assam. In case of rural Assam also, the share of education has shown an increase from 0.84% in the bottom decile class to 3.29% in the top decile class. In urban Assam the rise is steeper from the ninth to the top decile class compared to rural Assam. For the rural and urban Assam, the share of education rises by about 2.45% and 10.74% points respectively from the bottom decile class to the top in 2011-12. It is seen that urban share remained a little above the rural share throughout the MPCE classes during the periods 1999-00 and 2011-12.

Moreover, in case of urban Assam the share of education rises by about 0.66% point in the bottom decile class from 1999-00 to 2011-12. But the share of education falls slightly by about 0.06% point in the bottom decile class from 1999-00 to 2011-12 in rural Assam. In the top decile class, the share of education rises by about 8.5% and 0.08% points in urban and rural Assam respectively from 1999-00 to 2011-12. It is seen that the rise in the share of education in the household budget is higher in urban Assam in top decile class compared to bottom decile class between two time periods.

Thus, it is seen that in both rural and urban areas of India and Assam, the proportion of expenditure incurred on education gradually increases with increasing economic status across the two rounds of consumption. The share of expenditure incurred on education increases not only among the richest class population but also among the poorest class population during the period between 1999-00 and 2011-12 at both the rural and urban areas of India. In case of Assam also the share of education increases among the richest class population in both rural and urban areas

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and among the poorest class population in urban areas. This phenomenon either may be due to the increasing cost of education or may be due to the realization of importance of education among the people. It is also seen that, on an average, the share of expenditure on education is generally higher in urban areas compared to rural areas. One of the reasons behind this phenomenon is the cost of education which is higher in urban areas than rural areas. Moreover, urban people give much more importance to education than rural people owing to different benefits of education.

**HOUSEHOLD EXPENDITURE ON EDUCATION AND ITS RELATIVE POSITION IN THE HOUSEHOLD BUDGET: AN ENGEL RATIO ANALYSIS**

As the income of a household increases the overall food consumption expenditure may rise but they tend to spend a lower proportion of their total expenditure on food and tend to spend a higher proportion of their total expenditure on non-food items which supports the Engel's Law of Consumption. In order to know the relative position of educational expenditure in the household budget, an Engel ratio analysis is carried out. Engel ratio is calculated for each and every item of expenditure including education in both rural and urban areas during the period between 1999-2011.

Table 6: Share of Food and Non-food items in Household Expenditure in Assam in terms of Engel Ratio

NSSO Rounds	Rural Assam		Urban Assam	
	Food	Non-Food	Food	Non-Food
1999-00	67.63	32.37	55.38	44.62
2004-05	62.15	37.85	46.37	53.63
2009-10	60.71	39.29	48.43	51.57
2011-12	56.53	43.47	42.13	57.87

From the above table it is evident that the Engel ratio for food items has declined during the above mentioned time period in both rural and urban areas of Assam. But the Engel ratio for non-food items has been increasing in both areas since 1999-00. Engel ratio which

measures the share of food in total monthly per capita consumer expenditure has fallen from 67.63% in 1999-00 to 56.53% in 2011-12 in rural areas and from 55.38% in 1999-00 to 42.13% in 2011-12 in urban areas. The decline in the Engel ratio for food item indicates that the expenditure allotted for non-food items has been increased. Between 1999-00 and 2011-12, Engel ratio which measures the share of non-food in total consumer expenditure has gone up from 32.37% to 43.47% in rural areas and from 44.62% to 57.87% in urban areas of Assam. From the above table it is seen that the decline in the share of expenditure on the food item was higher in urban areas than rural areas. Conversely, the rise in the share of expenditure on the non-food items was higher in urban areas than rural areas.

The percentage share of different food and non-food items in total household consumption expenditure in terms of Engel ratio has been shown in the following Table.

Table 7: Engel Ratio of Food and Non-food items in Rural Assam

Rounds	55 <sup>th</sup> (1999-00)	61 <sup>st</sup> (2004-05)	66 <sup>th</sup> (2009-10)	68 <sup>th</sup> (2011-12)
Food	67.63	62.15	60.71	56.53
Pan, Tobacco and Intoxicants	4.40	4.08	3.17	3.13
Fuel and light	7.08	9.50	9.43	9.8
Clothing and bedding	6.13	6.76	5.74	6.54
Footwear	1.01	0.98	0.94	0.98
Education	1.38	2.78	2.57	1.98
Medical (Institutional)	0.70	0.36	0.41	0.33
Medical (Non-Institutional)	1.69	1.61	1.73	2.41
Entertainment	0.37	0.46	0.80	1.16
Minor durable type goods	0.37	0.31	0.49	0.35
Toilet articles	1.99	2.28	2.09	2.23
Other household consumables	1.58	1.91	1.79	1.66
Consumption Services	1.85	2.46	3.61	4.06
Conveyance	1.84	1.85	2.86	3.60
Rent	0.06	0.10	0.07	0.09
Taxes and cesses	0.01	0.05	0.04	0.06
Durable goods	1.91	2.35	3.55	5.09
Non-Food (Total)	32.37	37.85	39.29	43.47
Total Expenditure (Food and Non-Food)	100	100	100	100

It is seen that during the period between 1999-00 and 2011-12, the Engel ratio for food items has shown a continuous decrease in rural Assam. But, the Engel ratio for non-food items has shown a

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continuous increase during the above mentioned period. The Engel ratio of the twelve classes of the non-food items have recorded an increase over the period from 1999-00 to 2011-12. The proportion of expenditure on fuel and light, clothing, education, medical (non-institutional), entertainment, toilet articles, other household consumables, consumption services, conveyance, rent, taxes, durable goods have recorded an increase in rural Assam. However, pan, tobacco and intoxicants, footwear, medical (institutional) and minor durable type goods are the items for which the percentage share of expenditure has declined in Rural Assam.

During the year 1999-00, the Engel ratio for food and non-food items signify that among the food and non-food items the Engel ratio for food exhibited the first highest position (67.63%), fuel and light exhibited the second highest position as an item of expenditure (7.08%), clothing and bedding exhibited the third position (6.13%), pan, tobacco and intoxicants exhibited the fourth position (4.40%), toilet articles exhibited the fifth position (1.99%), durable goods exhibited the sixth position (1.91%), consumption services exhibited the seventh position (1.85%), conveyance exhibited the eighth position (1.84%), medical (non-institutional) exhibited the ninth position (1.69%), other household consumables exhibited the tenth position (1.58%), education exhibited the eleventh position (1.38%) as an item of consumption expenditure followed by footwear (1.01%), medical (institutional) (0.70%), entertainment (0.37%), minor durable goods (0.37%), rent (0.06%) and taxes and cesses (0.01%). During the year 2011-12, it is seen that the Engel ratio for food again exhibited the first highest position (56.53%) in the household budget in rural areas of Assam followed by fuel and light (9.8%), clothing (6.54%), durable goods (5.09%), consumption services (4.06%), conveyance (3.60%), pan, tobacco and intoxicants (3.13%), medical (non-institutional) (2.41%), toilet articles (2.23%), education (1.98%), other household consumables (1.66%), entertainment (1.16%), footwear (0.98%), minor durable goods (5.09%), medical (institutional) (0.33%), rent (0.09%) and

taxes and cesses (0.06%). Therefore, it is evident that household expenditure on education occupies eleventh position in the household budget during the year 1999-00. But, the position of education as an item of expenditure in the household budget slightly moved upward during the year 2011-12 as education occupies tenth position in the rural areas of Assam.

Table 8: Engel Ratio of Food and Non-food items in Urban Assam

Rounds	55 <sup>th</sup> (1999-00)	61 <sup>st</sup> (2004-05)	66 <sup>th</sup> (2009-10)	68 <sup>th</sup> (2011-12)
Food	55.38	46.37	48.43	42.13
Pan, Tobacco and Intoxicants	2.95	2.71	2.08	2.02
Fuel and light	6.66	9.26	7.77	7.49
Clothing and bedding	6.04	5.88	5.09	5.61
Footwear	1.17	1.03	1.14	1.05
Education	3.05	6.47	7.48	6.39
Medical (Institutional)	1.29	0.67	0.48	0.99
Medical (Non-Institutional)	4.26	2.14	1.83	2.96
Entertainment	0.90	1.88	2.33	2.14
Minor durable type goods	0.74	0.20	0.39	0.45
Toilet articles	2.26	2.24	2.57	2.39
Other household consumables	1.54	1.57	1.88	1.58
Consumption Services	2.85	5.35	7	5.81
Conveyance	4.06	4.69	4.56	6.96
Rent	4.81	6.03	3.63	6.48
Taxes and cesses	0.22	0.37	0.48	0.50
Durable goods	1.82	3.14	2.86	5.05
Non-Food (Total)	44.62	53.63	51.57	57.87
Total Expenditure (Food and Non-Food)	100	100	100	100

In case of urban areas of Assam also it is seen that the percentage share of expenditure allotted for food items in terms of Engel ratio has shown a decline from 55.38% to 42.13% over the period between 1999-00 and 2011-12. Unlike the food items, the Engel ratio of non-food items has been increased from 44.62% to 57.87% during the study period in urban areas of Assam.

The Engel ratio of the ten classes of the non-food items have shown an increase over the period from 1999-00 to 2011-12. The share of expenditure on fuel and light, education, entertainment, toilet articles, other household consumables, consumption services, conveyance, rent, taxes and durable goods have recorded an increase in urban Assam between 1999-00 and 2011-12.

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However, pan, tobacco and intoxicants, clothing, footwear, medical (institutional), medical (non-institutional) and minor durable type goods are the items for which the percentage share of expenditure has declined in urban Assam.

During the year 1999-00, it is seen that the Engel ratio for food has obtained the first highest position (55.38%), fuel and light exhibited the second highest position as an item of expenditure (6.66%), clothing and bedding exhibited the third position (6.04%), rent exhibited the fourth position (4.81%), medical (non-institutional) exhibited the fifth position (4.26%), conveyance exhibited the sixth position (4.06%), education exhibited the seventh position (3.05%) as an item of consumption expenditure followed by pan, tobacco, intoxicants (2.95%), consumption services (2.85%), toilet articles (2.26%), durable goods (1.82%), other household consumables (1.54%), medical (institutional) (1.29%), footwear (1.17%), entertainment (0.90%), minor durable goods (0.74%), and taxes and cesses (0.22%).

Similarly, it is seen that the Engel ratio for food has again acquired the first highest position (42.13%) in the household budget in urban areas of Assam during the year 2011-12. Fuel and light has gained the second highest position (7.49%) as an item of expenditure, conveyance obtained the third position (6.96%), rent exhibited the fourth position (6.48%), education acquired the fifth position (6.39%) as an item of consumption expenditure followed by consumption services (5.81%), clothing (5.61%), durable goods (5.05%), medical (non-institutional) (2.96%), toilet articles (2.39%), entertainment (2.14%), pan, tobacco, intoxicants (2.02%), other household consumables (1.58%), footwear (1.05%), medical (institutional) (0.99%), taxes and cesses (0.50%) and minor durable goods (0.45%).

From the above, it is seen that the percentage share of expenditure on education in terms of Engel ratio has shown a slight increase from 1.38% in 1999-00 to 1.98% in 2011-12 in rural areas of Assam. Moreover, it is noticed that the percentage share of

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expenditure on education in terms of Engel ratio has also been increased from 3.05% in 1999-00 to 6.39% in 2011-12 in urban areas of Assam. From this rural-urban comparison, it is evident that the change in Engel ratio of educational expenditure is higher in urban areas than in rural areas of Assam during the period between 1999-00 and 2011-12. During the year 1999-00, household expenditure on education occupies eleventh and seventh position in the household budget in rural and urban areas respectively. But, household expenditure on education has obtained tenth and fifth position in the household budget during the year 2011-12 in rural and urban areas of Assam respectively. Therefore, it is seen that the position of education as an item of expenditure in the household budget move upward during the period between 1999-00 and 2011-12 in both rural and urban Assam. Moreover, it can be said that a noticeable change is taken place in the household expenditure on education in urban areas compared to rural areas during the above mentioned period as education as an item of expenditure occupies fifth position in the household budget in urban areas as against tenth position in rural areas during the year 2011-12. From this, it can be said that education is one of the most important items of household expenditure in urban areas compared to rural areas of Assam.

### **CONCLUSION**

The consumer expenditure data of NSSO reveal that there has been a significant increase in average MPCE at both national and state level. From the above analysis, it is seen that the share of various items of food and non-food consumption expenditure in the household budget have undergone change over time in accordance with the changing lifestyle and increasing awareness among people. Therefore, it is seen that the position of various items in the household budget also undergo considerable changes. People today spend more on education also. Due to which it is seen that the position of education as an item of expenditure moved to fifth position from seventh position in urban areas and to tenth position from eleventh position in rural areas. It signifies that household expenditure on education has been increased during the

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above mentioned period in both areas. Moreover, it is seen that the share of expenditure on education is higher in urban areas compared to rural areas. This may be either due to the fact that the cost of education is higher in urban areas than rural areas or urban people are more aware and they know better about the importance of education regarding its various economic and non-economic returns than rural people. A shift in consumer preference from public sector to private sector for acquiring education may also be one of the major factors for higher share of expenditure on education in urban areas compared to rural areas. Therefore, from the above analysis it can be suggested that Government should make public expenditure on education adequate to support educational expenditure at household level and should focus more on urban areas along with rural areas.

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The book under review should have been published in the **last two years** and should have direct relevance to the field of social work.

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The book review can include the following aspects.

- Title of the book (underlined/italicized), edition, name(s) of the author(s)/editor(s), year of publication and name of publisher (separated by a colon), ISBN number, Format (hardcover/soft cover), number of pages and price of the book.
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- Conclusion

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- A catchy quip/anecdote that succinctly delivers the reviewer's perspective/viewpoint/argument
- Relevant information of the author, where he/she stands in the genre/field of enquiry
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- Quote with a specific page reference. Excessive quotations to be avoided.

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**Points to note when the book is an edited version comprising chapters from many authors:**

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This is an article based on an original research project/study, involving information from primary data sources. Such an article contains the following sections:

- Introduction
  - Description of the subject
  - Critical Summary of available information
  - Background of the research
  - Problem identification / analysis
  - Research questions
  - Rationale for the study
- Methodology
  - Aims of the research
  - Research design
  - Variables
  - Operational definitions
  - Sampling strategy
  - Description of the tools of the data collection
  - Techniques for analysis
  - Limitations of the study, if any
- Discussion:
  - Results of the study: This should include a summarized description of the statistical figures and techniques as well as a concise note on the key findings which could be descriptive or numeric
  - Interpretation of the data in terms of:
    - Validation of the hypothesis
    - Corroboration with cited literature

### ● Conclusion and recommendations:

This section should include the following

- Recommendations to improve/remedy the situation
- Implication for the future research and field practice

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This article is based on information from secondary data sources. It generally seeks to raise new issues or examine existing issues from a new perspective. It can also be used for theory building. It should contain the following sections:

- Introduction:
  - Description of the background and importance of the subject under consideration

- Statement of purpose
- Rationale for the article
- Discussion:
  - Critical review of literature

- Gaps in knowledge/services and emerging area addressed:
  - Intervention methods
- Conclusion:
  - Summary of key points
  - Recommendations

## III. Writing an Article based on Field Experiences

This article stems from the experiences of the author. It focuses on a specific issue / problem / project / program that is within the purview of the author's professional practice and is descriptive in nature. It provides details of how the author dealt with the specific issue / problem or implemented the program / project under consideration. An overview of such an article is given below.

- Introduction:
  - Description of the subject under consideration
  - Critical review of relevant literature
  - Problem identification/analysis
  - Rationale for intervention
- Discussion:
  - Details of the problem/issue/program/project under consideration
  - Action plan to improve/remedy the situation
  - Details of implementation of the action plan
  - Critical assessment of effectiveness of intervention
  - Learning in relation to existing theory
  - Limitations and suggested modifications
- Conclusion:
  - Summary of key points
  - Suggestions for future work

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