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A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON KNOWLEDGE REGARDING ADVERSE EFFECTS OF USAGE OF COSMETICS AMONG ADOLESCENTS AT SELECTED COLLEGES IN MYSURU

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ABSTRACT

Cosmetics, derived from the Greek word "Kosmeticos," have been integral to human culture for millennia, serving to enhance appearance and boost self-esteem. However, many cosmetic products contain harmful chemicals that can adversely affect health, particularly among adolescents. This study aims to assess adolescents' awareness of the adverse effects associated with cosmetic use and evaluate the effectiveness of video-assisted teaching (VAT) in enhancing this knowledge. A pre-test was administered to gauge baseline awareness, followed by an educational intervention using VAT. A post-test was conducted to measure knowledge improvement. Statistical analysis was performed to identify significant demographic variables associated with awareness levels. Findings indicate that adolescents possess limited knowledge regarding the harmful chemicals present in cosmetics. The VAT intervention significantly improved awareness, with notable differences observed across various demographic groups. The study underscores the need for targeted educational programs to inform adolescents about the potential health risks of cosmetic products and promote safer usage practices. The results highlight the importance of integrating such educational initiatives into school curricula to foster informed decision-making among youth.

KEYWORDS: Cosmetics, adverse effects, video assisted teaching, awareness, adolescents, effectiveness.

INTRODUCTION

Beauty is a combination of qualities that elicit pleasure or satisfaction,^[1] often tied to fairness and personal appeal. As part of human nature, the desire to be attractive boosts self-confidence, with men and women adopting different strategies to enhance and recognize beauty.^[2] Ultimately, beauty is subjective—rooted in individual perception or "taste"—highlighting its psychological link to how people view themselves.^[3]

Adolescence is the transitional phase between childhood and adulthood, marked by rapid physical, cognitive, and psychosocial growth.^[4] This stage shapes health foundations and influences how individuals think, feel, look, decide, and interact with the world.^[5]

During adolescence, appearance becomes a vital language for expressing identity. Teenagers adopt personal care habits and cosmetics both to distinguish themselves and gain peer acceptance, reflecting a delicate balance between the desire for individuality and the fear of rejection.^[6] The Indian cosmetic industry is growing rapidly at 20% annually, driven by Western influences and mass media. Financially independent young female students, influenced by aesthetic trends, increasingly focus on self-image and regular cosmetic use.^[7]

The word 'cosmetics' comes from the Greek "kosmeticos," meaning to adorn. Since ancient times, cosmetics have been used to enhance appearance.^[8] They include a wide range of products for cleaning, protecting, and beautifying the skin, hair, teeth, and nails—such as toothpaste, shampoos, lotions, makeup, deodorants, and more.^[9]

Teenagers are a key target for both branded and unbranded cosmetic manufacturers. Branded products, made by well-known companies and typically more expensive, are often bought by upper and middle-class

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families. In contrast, unbranded products, lacking recognition and advertising, are usually purchased by rural and lower-class families and are more likely to cause side effects.

According to US, adolescent girls reported that, total of 93.5% used hygiene products, followed by shampoo/conditioner 90.1%, body products 84.9% and facial products 74.3% perfume 65.8% cosmetics 62.2%, and acne treatments 51.3% on a daily basis. Occasionally, 51.2% of adolescent girls used hairstyling gel/spray, hair dye 41.5% as well as nail products 71%. Further analysis indicated that girls tended to use beauty products more frequently than boys.^[11]

Cosmetic products can contain more than 10,000 ingredients which can be linked to many diseases like cancer, birth defects, developmental and reproductive impairments. Many of these products have been added with chemical additives which will cause adverse reaction on physical health. Some examples of these chemical additives are Diazolidinyl Urea, Dioxane, Formaldehyde and Paraformaldehyde, Imidazolidinyl urea, heavy metals, Methylchloroiso-thiazolinonemethylisothiazolinone(MCI-MI),

Methyldibromoglutaronitrile-phenoxyethanol (MDBGN-PE), Parabens, Phthalate, Quaternium-15, Thimerosal and others.^[12]

The most common health problems related to cosmetics, toiletries, and topical applications are allergic contact dermatitis. In most cases, these are only mild or transient and most reactions being irritant rather than allergic in nature. Various adverse effects may occur in the form of acute toxicity, percutaneous absorption, skin irritation, eye irritation, skin sensitization and photosensitization, sub chronic toxicity, mutagenicity/genotoxicity, and phototoxicity/ photoirritation.^[13]

The knowledge of the fact that though cosmetics enhance beauty, they do produce some adverse effects. Most women have a false perception of cosmetic needs and prefer the same type of cosmetics despite the adverse effects. Most cosmetic users give more attention to their transient enhanced look, ignoring the longstanding systemic adverse effects caused by the cosmetics.^[14]

Health education on the adverse effects of cosmetics is essential, as widespread use increases exposure to various chemical compounds. Many users with mild reactions may not seek medical help, making it hard to track such effects. Health risks range from mild allergies to severe reactions like anaphylaxis or even lifethreatening toxicity.^[15]

METHODS

A pre-experimental one group pre-test post-test design is used to assess two fifty-five adolescents using nonprobability convenient sampling technique. Data was collected using a structured knowledge questionnaire with 26 items. Data was analysed using descriptive and inferential statistics.

RESULT AND DISCUSSION ORGANIZATION OF THE FINDINGS

The analysis of the data was organized and presented as follows

Section A: Description of demographic variables.

Section B: Knowledge of adolescents regarding adverse effects of usage of cosmetics.

Section C: Effectiveness of video assisted teaching on knowledge regarding adverse

effects of usage of cosmetics among adolescents.

Section D: The association between pre-test knowledge score and selected demographic

Variables

Table 2: Distribution of fre	quency and	percentage anal	ysis of Demograp	hic Variables.
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SL	Characteristics	Catagony	Respondents		
NO	Characteristics	Category	Numbers	Percentage (%)	
1	Age ij Years	17 Years	28	13 %	
		18 Years	206	80	
		19Years	21	7	
2	Rea Of Residence	Urban	31	12	
		Rural	224	88	
3	Religion	Hindu	208	80	
		Christian	28	13	
		Muslim	19	7	
4	Family Type	Nuclear	193	76	
		Joint	62	24	
5	Family Income per Month	<10,000	10	3	
		10,000-15,000	35	13	
		15,000-20,000	164	64	
		>20,000	46	20	
6	Numbers of Cosmetic Item Used Per Day	1 or 2	15	6	
		3 or 4	58	22	

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		5 or 6	175	68
		More Than 6	7	4
7	Sources of Recommendation to Use	Professional practitioners	20	8
		Family, Relatives and Friends	207	81
		Social media	28	11
8	Criteria Used for Selection Cosmetics	Brand	212	83
		Advertisement	33	13
		Cost	10	4
9	Experience of any adverse effects of usage of cosmetics	Yes	20	8
		No	235	92

n = 255

Table 2: and respective figure related to the frequency and percentage distribution of respondents based on selected demographic variables reveals the following findings

1. Majority (80%) of the respondents were 18 years old, 13% were 17 years, 7% were 19 years,

2. Majority (88%) of the respondents were living in rural area and (12%) of them were living in urban area.

3. Majority 80% of the respondents was Hindu and 13% respondents were Christian, 7% were Muslims.

4. Majority of the 76% respondent living in nuclear family, and only 24% respondent were living in a joint family.

5. (10%) of respondent's family income was Rs. <10,000, 13% was between Rs.10, 000-15,000, 64% was between Rs.15, 000- 20,000 and 20% of respondents' family income was more than Rs.20, 000 per month.

6. Majority of 68% respondents were using 5 or 6 cosmetics item, 22% respondent were using 3 or 4 cosmetic item, 6% respondents were using cosmetics item 1 or 2 and only 4% respondent were using cosmetics item more than 6 item per day.

7. Majority of 81% respondent were getting family, relatives and friends' recommendation, 11% respondent were getting social media recommendation, and only 8% respondent getting professional practitioners' recommendation to use cosmetics.

8. Majority of 83% respondent used brand as criteria for selecting cosmetics, 13% respondent used advertisement as criteria for selecting cosmetics and only 4% respondent used cost as criteria for selecting cosmetics.

9. Majority of 92% respondent have not experienced any adverse effects of cosmetics, and only 8% respondent have experienced adverse effects of cosmetics.





Fig: 3 Distribution of samples according to pre-test and post-test level of knowledge score.

Data from the above figure 3 depicts that in pre-test out of 255 Adolescents, 140(55%) had average knowledge, 115(45%) had poor knowledge and none of the sample had good knowledge regarding adverse effects of usage of cosmetics. In post-test 196(76%) had good knowledge and 59(24%) had average knowledge and none of the sample had poor knowledge regarding adverse effects of usage of cosmetics.

Section C: Effectiveness of video assisted teaching regarding adverse effects of usage of cosmetics among adolescents

The paired't value was computed to determine the effectiveness of video assisted teaching on knowledge regarding adverse effects of usage of cosmetics among adolescents. The following research hypothesis was stated.

H1: There is significant difference between mean pre-test and mean post-test knowledge score regarding adverse effects of usage of cosmetics.

H2: There is a significant association of pre-test knowledge score regarding adverse effects of usage of cosmetics and selected demographic variables.

 Table: 3 Effectiveness of video assisted teaching on knowledge regarding adverse effects of usage of cosmetics among adolescents.

	Numbers of Sample		Mean	SD	df	Paired 't' test
	255	Pre-test Score	9.88	1.55	254	72.52
		Post-test Score	19.72	1.59		
Significant at 5% level		t(0.05	(.254 df) =	=1.660		

Data in table 3 illustrates that the mean post-test knowledge score (19.72) was higher than the mean pretest knowledge score (9.88). The mean difference between pre-test score and post test score was (9.84). Paired 't' test knowledge score is 't'=72.52 is significant

at 0.05% level. Hence research hypothesis H1 was not rejected. This infers that the VAT was effective in increasing the knowledge regarding adverse effects of usage of cosmetics among adolescents

Section D: The association between pre-test knowledge scores and selected demographic variables.
Table 4: Association between pre-test knowledge scores and selected demographic variable

SL	Demographic Variables		Respondent		Chi-	đf	Table	Acconintion
No			average	poor	square	ui	value	Association
1	Age in Years	17 Years	13	15				
		18 Years	110	96	6.75	2	5.99	*
		19Years	17	4				
2	Amer of Desidence	Urban	23	8	5 20	1	2.04	*
2	Alea of Residence	Rural	117	107	5.50		5.64	•
		Hindu	115	93				
3	Religion	Christian	18	10	3.51	2	5.99	NA
		Muslim	7	12				
4	Family Tyma	Nuclear	110	83	1.40	1	3.84	NT A
4	Family Type	joint	30	32	1.40	1		INA
	Family income per month	<10,000	8	2				
5		10,000-15,000	17	18	8.92	3	7 0 1	
5		15000-20,000	97	67			7.01	*
		>20,000	18	28				
	Numbers of cosmetic item used per day	1 or 2	12	18	3.22			
6		3 or 4	28	19		3	7 0 1	NIA
0		5 or 6	91	71			7.01	INA
		>6	9	7				
	Source of recommendatio to use cosmetics	Professional	10	16	9.75			
		Practitioners	10	10				
7		Family, relatives, friends	106	66		2	5.99	*
		Social media	24	33				
	Criteria used for	Brand	89	74	0.09			
8	selecting	Advertisement	36	30			5.00	N T 4
	cosmetics	Cost	15	11		2	5.99	NA
	A december offenster of	Vee	7	12				
9	Adverse effects of	res	122	15	3.47	7 1	2.04	NT A
-	cosmetics	INO	133	102			3.84	INA

* Associated NA = Not Associated

It is evident from the Table.4 that the association between the level of pre-test knowledge score with Age

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(χ 2=6.75), Area of Residence (χ 2=5.30), Family Income Per Month (χ 2=8.92) and sources of recommendation to

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use cosmetics ($\chi 2=9.75$), are statistically associated. Religion ($\chi 2=3.51$), Family type ($\chi 2=1.40$), numbers of cosmetic items used per day ($\chi 2=3.22$), criteria for selecting cosmetics ($\chi 2=0.09$) and adverse effects of usage of cosmetics ($\chi 2=3.47$) are statistically not associated.

CONCLUSION

The study demonstrates that Video Assisted Teaching (VAT) is an effective method for enhancing adolescents' knowledge about the adverse effects of cosmetic usage. Prior to the intervention, participants exhibited inadequate to moderate understanding of these risks. Post-intervention assessments revealed a significant improvement in knowledge scores, indicating the effectiveness of VAT in bridging the awareness gap. Additionally, demographic factors such as age, area of residence, and family type were found to significantly influence the pre-test knowledge levels, highlighting the need for tailored educational approaches. These findings underscore the importance of integrating VAT into educational curricula to promote informed decision-making among adolescents regarding cosmetic use.

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