A Descriptive Study To Assess The Knowledge And Prevalence Of Nutritional Anaemia Among Adolescent Girls Of 17-22 Years In A Selected Educational Institution At Gwalior.

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Backgound of the study

The proportion of the world adolescent population is rising rapidly than that of any other age group. Between 1960 and 1980, while world population increased by 46%, the population of adolescent increased by 66%. Today 84% of adolescents live in developing countries. In India there are an estimated 200 million adolescents, comprising one-fifth of the total populationAdolescence is an important time in the life of an individual. It is a time of major physical changes including growth spurt in which the size and shape of the body changes markedly. During adolescence there is significant psychological as well as behavioural development, putting great stress on young people and those around them.

NEED FOR STUDY

In India, adolescents account for 25-30% of the total population. They form a large growing segment of the population and they represent a major potential human resources for the overall development of the nation.

Nearly 27% of adolescents in developing country are anaemic[6]. ICRW studies have documented high rates in India (55%), Nepal (42%).[7] This higher prevalence in adolescents is due to poor iron status contributed by pubertal growth spurt, less intake due to poverty and body weight concerns and heavy blood loss. The onset of menarche makes the adolescent girls to become more vulnerable and highly susceptible to anaemia.

OBJECTIVES

1. To determine the knowledge of adolescent girls of 14-18 years regarding nutritional anaemia.

2. To identify the prevalence of nutritional anaemia among adolescent girls of age group 14-18 years.

3. To assess the co-relationship between knowledge and prevalence of nutritional anaemia among adolescent girls of 17-22 years.

ASSUMPTIONS

1. Adolescent girls are likely to suffer from anaemia.

2. Adolescent girls may have less knowledge in anaemia.

LIMITATIONS

−   Study is delimited to adolescent girls of 14-18 years of selected educational institutions.

−   Assessment was based on haemoglobin level measured by Sahli's haemoglobinometer.

−   It is delimited to girls whose parents gave consent for them.

Time delimited to one month (30 days)

Purpose of the study

This study is aimed at identifying the knowledge and prevalence of nutritional anaemia. And educate them on prevention of nutritional anaemia by early detection and improved nutrition and corrective measures.

OPERATIONAL DEFINITIONS

•   Anaemia: Anaemia refers to reduction in haemoglobin level (< 12 gm %) assessed by Sahli's haemoglobinometer. Haemoglobin level of 12-15g% is considered as non-anaemia.

•   Nutritional anaemia: Anaemia caused due to deficiency of food factors like iron and folic acid.

- Knowledge: Right responses given by students on questionnaire on knowledge of anaemia.

- Prevalence: Ratio of individuals with Hb less than 12G% to the total sample.

- Adolescent girls: Adolescence has been defined as period of development between 14-18 years. The biological, social and psychological changes characterize the period of transition. It begins with puberty.

Scope of the study

- The knowledge and prevalence of nutritional anaemia.

- Study may help open awareness for further studies on anaemia.

CHAPTER II

REVIEW OF LITERATURE

Review of literature involves systematic identification, location and scrutiny of written material that contains information relevant to the problem. An extensive review of literature relevant to the topic was done to gain insight and collect maximum information for building the foundation of the study.

Literature related to nutritional anaemia in the general

- Magnitude of anaemia in adolescent girls

A cross-sectional study was done to assess the magnitude of anaemia in school going, pre-adolescent and adolescent girls along with associated demographic variables. 1,295 girls in the age group of 6-18 years were randomly selected from 15 urban slums of north zone of

Ahmedabad city. Study variables were haemoglobin level, age, body mass index, parent's education, parent's occupation, socio-economic status, consumption of tea/coffee, green leafy vegetables, lemon/sour fruits, knowledge about anaemia and status of menstruation. Results proved that prevalence of anaemia (Hb<l 2 gm/dl) was 81.8% (n=1153) and had significant association with variables such as occupation of father, habit of post meal consumption of tea/coffee, consumption of green leafy vegetables and body mass index. It was concluded that the Prevalence of anaemia necessitates pragmatic intervention to improve the dietary intake, nutritional supplement of iron and folic acid (IFA) tablets.

- Factors associated with anaemia

A cross-sectional survey was conducted in 2000 in Alexandria, Egypt to investigate the exposure to and the presence of factors associated with anaemia, such as socioeconomic conditions, dietary habits, intestinal parasitic infections and lead among 355 young male workers (7–19 years of age) employed in private workshops. Of the total study sample, 44.5% (158 participants) were found to be anaemic. The major risk factors for anaemia were multiple parasitic infections, high intensity of parasitic (*Ascaris lumbricoides*) infection and drinking tea soon after a meal. A significantly lower prevalence of anaemia was noted after Ramadan; it appeared to be further attention.

CHAPTER -III

METHODOLOGY

This chapter deals with the research methodology selected by the investigator in order to find out the knowledge and prevalence of nutritional anaemia among adolescent girls in a selected educational institution at Gwalior.

Methodology includes a research approach, research design, description of setting, population, samples & sampling techniques development and description of instruments, pilot study, and procedures for data collection and plan for data analysis. A brief summary of the chapter appears at the end.

RESEARCH APPROACH

In the present study, the investigator has adopted a descriptive survey approach to find out the knowledge and prevalence of nutritional anaemia among adolescent girls in a selected educational institution at Gwalior.

RESEARCH DESIGN

The terms **"research design**" refers to the plan of organizing a scientific investigation. It is concerned with an overall framework for conducting the study. The research design is the plan, structure and strategy of investigator of answering the research question. It is overall plan or blue print which the researcher selects to carry out the study

Polit and Hungler (1999) stated that "A researcher's overall plan for obtaining an answer to the research question or for the research hypothesis referred to as the research design".

Research design helps the researcher in selection of subjects, manipulating the variables and declining upon the type of statistical analysis to be used to interpret the data.

The non-experimental design (survey) adopted for the present study.

VARIABLES

When an abstract concept is defined in terms that can be measured, it is called variable; variables are characteristics that vary among the subjects being studied

Independent variable: – It is that variable which is manipulated by the researcher in order to study the effect upon the dependent variable. Selected demographic characteristics were the independent variable for survey.

Dependent variable: The dependent variable is the condition or characteristic that appears or disappears as a result of an independent variable.

Knowledge and Prevalence of nutritional anaemia among adolescent girls are dependent variable.

SETTING OF THE STUDY

Polit and Hungler (1999) defined setting as the physical location and condition in which data collection take place in the study.

This study was conducted in KRG college at Gwalior. Around 300 students study in this college.

Here, variables under study are knowledge and prevalence of anaemia and selected factors associated with anaemia such as demography.

Population

Polit and Hungler (2007), described population as the entire set of individuals having some common characteristics, and are of interest to the researcher.

Best and Khan, (2013) stated "A population is any group of individuals that have one or more characteristics in common and are of interest to the researcher." The need for defining the population for research arises from requirement to specify the group to which the result of the study is applied.

In the present study the target population is adolescent girls in the college aged between 17-22 years.

SAMPLING

Polit and Hungler (1999) "Sampling refers to the process of selection a portion of the population to represent the entire population".

Polit and Hungler (1995) illustrated sample as a "Subset of population selected to participate in a research study".

A sample of 60 adolescent girls aged between 17-22 years who met the inclusion criteria were selected for the present study.

SAMPLING TECHNIQUE

In order to choose the area, investigator adopted convenient sampling technique

SELECTION AND DEVELOPMENT OF THE TOOL

Treece and Treece (1986) stated that the instrument selected in a research should as far as possible to the vehicle that could best obtain data for drawing conclusions pertinent to the study and add to the body of knowledge in a discipline.

The tool was prepared on the basis of the objectives to be achieved in the study. The following steps were adopted prior to the development of the tool:

- Review of literature provided adequate content for tool design.

Development of a criteria check list

Criteria checklist for validation of the tool was prepared, comprising questionnaire and observation checklist. 'Yes' 'no' and 'remark' columns for the valuator to place tick mark depending on the appropriateness and relevance of each item

Description of the final tools

The final draft of the tool comprised of three sections.

Section A – Baseline Proforma (11 items)

It included identification data such as code number, age, type of family, number educational status of the subject and parents, occupation of parents, type of diet, monthly family income, and availability of information regarding anaemia, source of information

Section B – Schedule for collecting information on knowledge

It included the following areas

Knowledge about anaemia – 21 items

Section C – Assessment of prevalence of anaemia.

Content Validity

Abdellah and leaving (1965) described "validity as a criterion" for evaluating three qualities of data. Data are valid if they are actually measured what they are supposed to measure.

"Treece and Treece (1986) defined validity as instruments ability to actually test what is supposed to test.

In order to ensure the content validity the questionnaire was submitted to eleven experts for their opinion and suggestions.

The prepared tool along with the objectives, the blue print, and criteria checklist was given to 11 experts of which seven were from obstetrics and gynaecological nursing department and each from community health nursing department, paediatric nursing department, and Physiology Department and medical surgical department for establishing content validity. There was 100% agreement on two areas of the blue print. Other items were modified based on the suggestions given.

The final draft of the tool consisted of 21 questions under the assessment of knowledge.
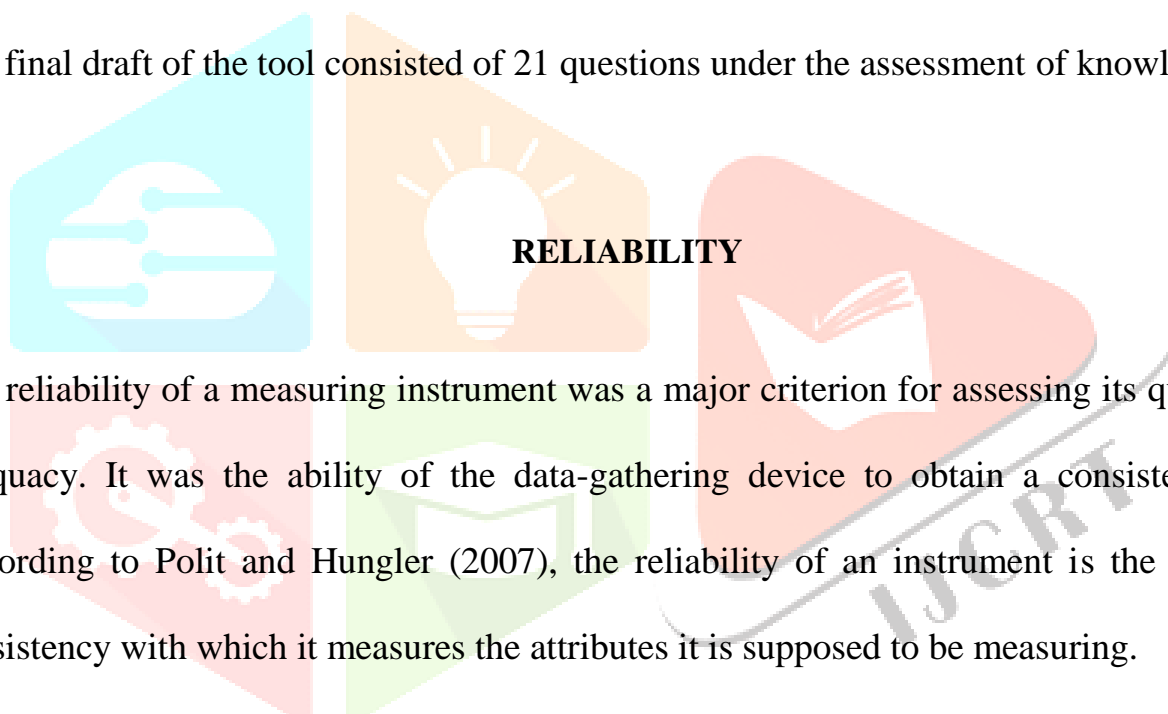
RELIABILITY

The reliability of a measuring instrument was a major criterion for assessing its quality and adequacy. It was the ability of the data-gathering device to obtain a consistent result. According to Polit and Hungler (2007), the reliability of an instrument is the degree of consistency with which it measures the attributes it is supposed to be measuring.

Reliability of the checklist and knowledge questionnaire was established by Karl Pearson formula. The reliability was found to be r=0.76 for checklist and r=0.86 for knowledge questionnaire.

PILOT STUDY

Pilot study of the present research was established by Karl Pearson formula. The responses were collected from 6 adolescent girls who were randomly selected for the pilot study from the Preston college of Gwalior from 7-12-13 to 13-12-13 to find out the possibility of conducting the study and deciding the plan of statically analysis.

The assessment of knowledge was done by a structured interview schedule. The investigator was satisfied with the feasibility of the tools. It gave effective information needed for the study. The questionnaire was found to be reliable, valid and practicable. The questions were finalized for the main project and arrangements were made for data collection. Findings of pilot study revealed that it was feasible to conduct the final study.

METHOD OF DATA COLLECTION

The investigator obtained written permission from Principal; the tool was administered to 60 respondents from the selected college who met the inclusion criteria. Prior to the data collection, the purpose of the study was explained to the respondents and informed consent was obtained from them.

The investigator filled the responses of the subjects and assured confidentiality of their responses. Haemoglobin estimation was done by Sahli's method. The blood sample was collected by finger prick method. Physical exam was conducted.

The data collection process was concluded by giving health education on prevention of anaemia with the help of charts and flash cards and thanking the respondents for cooperation and patience.

ETHICAL ISSUES

For the present study, the investigator took into consideration the ethical issues. The research committee accepted the study. The explanation regarding the purpose of the study was given to the selected college of Gwalior M.P. The girls had freedom to withdraw from the study at any time for without any reason

Summary

This chapter comprises of the methodology adopted for this study. This includes the research approach, research design, setting of the study, variables under study, population, sample, sampling technique, and development of the tool, testing the tool, data collection process

DATA ANALYSIS

This chapter deals with the analysis and interpretation of data collected from 60 adolescent girls registered in a selected college in Gwalior using a semi-structured interview schedule.

The data were analyzed according to the objectives of the study. Analysis of the data was done after all the data were transferred to the master data sheet using descriptive statistics.

percentage. Table shows the distribution of demographic characteristics of the subjects.

Table 1: Distribution of Subjects according to Demographic Variables

N = 60

Sl. No.		Variables	Frequency	Percentage
1.		Age (in years)		
	a.	17 – 19	43	71
	b.	20 – 21	9	15
	c.	21 – 22	8	14
	d.	22 and above	0	0
2.		Education level PUC with group opted		
	a.	Science	60	100
	b.	Commerce	0	0
	c.	Arts	0	0
3.		Educational status of the father		
	a.	Illiterate	2	3
	b.	Primary	16	27
	c.	High School	13	21
	d.	Pre-university	11	18
	e.	Graduation and any other	13	21

Sl. No.	Variables		Frequency	Percentage
4.	Educational status of the mother			
	a.	Primary	12	20
	b.	High School	23	38
	c.	Pre-university	10	17
	d.	Graduation and any other	3	5
5.	Father's Occupation			
	a.	Daily wages	13	21
	b.	Employed	23	38
	c.	Self-employed	15	25
	d.	Unemployed	2	4
6.	Mother's Occupation			
	a.	Daily wages	11	19
	b.	Employed	19	32
	c.	Self-employed	8	14
	d.	Unemployed	15	25
7.	Income			
	a.	Below 1000	6	10
	b.	1001-3000	22	37
	c.	3001-5000	10	16
	d.	5001 and above	22	37
8.	Type of Family			
	a.	Nuclear	43	72
	b.	Joint	16	26
	c.	Extended	1	2
9.	Food Pattern			
	a.	Vegetarian	4	7
	b.	Non-vegetarian	56	93
10.	Area of residence			
	a.	Urban	50	83
	b.	Rural	10	17
11.	Source of Information			
	a.	Textbooks	21	35

| Sl. No.	Variables	Frequency	Percentage
b.	Health personnel	17	29
c.	Friends	4	7
d.	Relatives	7	12
e.	Media	19	32

Data in Table show the distribution of subjects according to the demographic characteristics.

Age

Majority of the subjects (71%) were in the age group of 17-19 years. Fifteen percent of the students belonged to the age group of 19-21 years and 14% were of the age 22 and above.
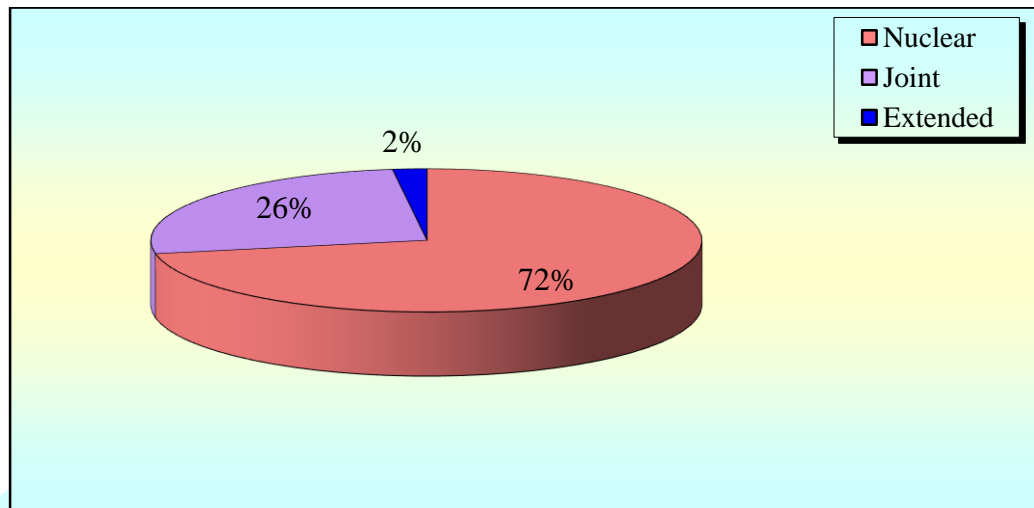
Occupation of the Parents

The data presented in Figure 6 shows that 43.4% of the fathers and 35.85%% of mothers were employed; 28.3% of fathers and 15.1% of the mothers were self-employed.
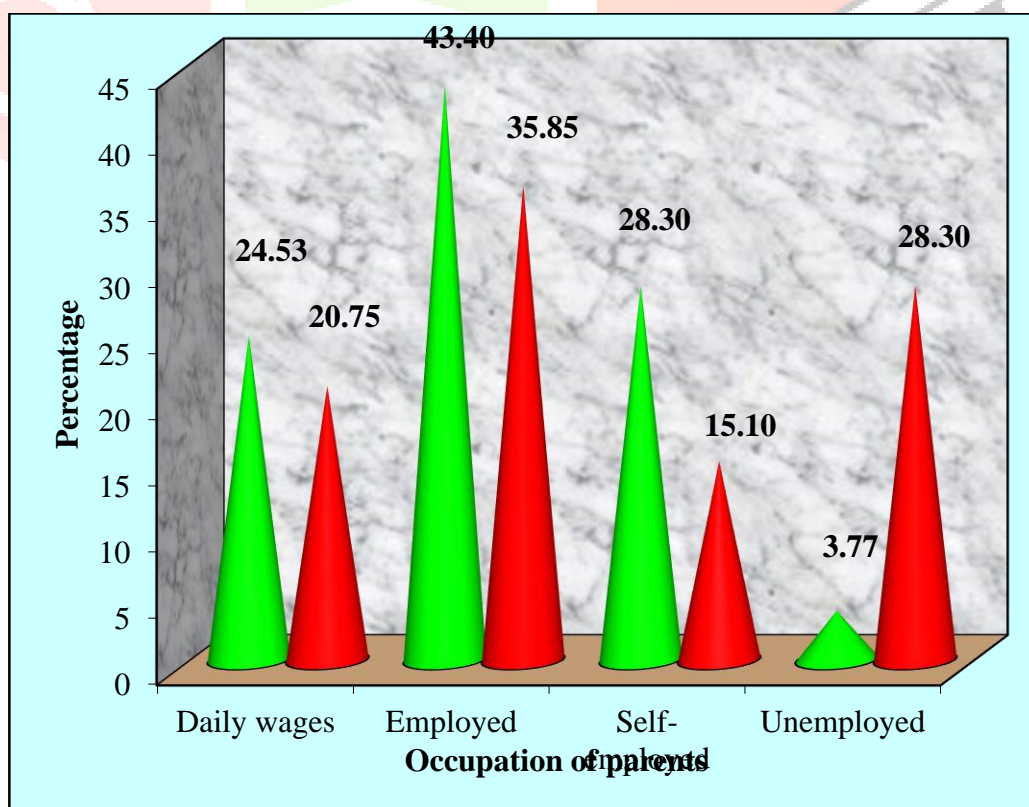
Type of the family

Majority of the subjects (72%) belonged to nuclear family and 27% belonged to the joint families and 2% to extended families.
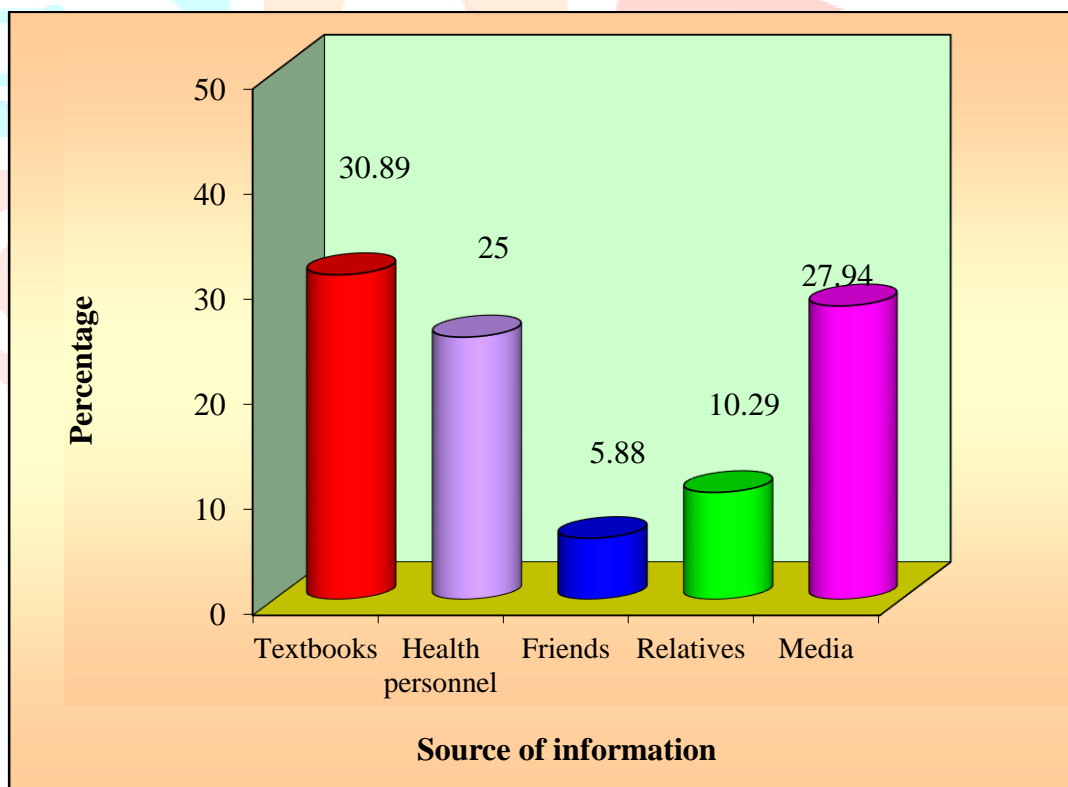

Source of Information

Figure: Cylinder diagram showing the distribution of sample according to source of information on anaemia

Thirty percent of the students gained information from text books, 25% gained information from health personnel. Twenty seven percent of the students gained information from media and 10% from relatives and 6% from friends.

CONCLUSION

Assessment of knowledge and prevalence of nutritional anaemia among adolescent girls is the main concept of the study. The following conclusions were drawn from the study:

1.   Most of the adolescent girls lack knowledge on anaemia.

2.   Magnitude of anaemia is significant in the adolescent girls.

3.   Having adequate knowledge on anaemia helps to decrease the prevalence of anaemia in the adolescent girls.

4.   Knowledge on anaemia is not influenced by demographic variables like parent's education, type of family area of residence or income level. Characteristics of age, sex, parent's education, occupation, food pattern, area of residence or income level.

5.   Adolescent girls rarely manifested clinical features. Only headache and pallor were seen in ¼ of the adolescent girls as no one had severe anaemia. So it can be supportive to the ice-burg phenomenon of disease.

6.   No students had worm infestation. So cause of worm infestation can be ruled out.

SUMMARY

Here presents a summary of the study.Adolescence is a period of transition from childhood to adulthood. So with rapid changes there is a likelihood of deficiency disorders like anaemia. So a detection of prevalence level can help to understand the extent of the problem and associated factors.

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