# HEALTH PROMOTING BEHAVIOUR AND ITS BARRIERS AMONG NURSING STUDENTS OF AIIMS, JODHPUR

A Thesis submitted to the

**All India Institute of Medical Sciences, Jodhpur**

**In partial fulfillment of the requirement for the degree**

Master of Science in Nursing

(Paediatric Nursing)


By

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**[2021]**

# DECLARATION BY THE CANDIDATE

I hereby declare that the thesis entitled **"Health promoting behaviour and its barriers among nursing students of AIIMS, Jodhpur"** is a bonafide work carried out by me under the guidance of Mrs. Remiya Mohan, Assistant Professor, Department of Paediatrics, College of Nursing, All India Institute of Medical Sciences (AIIMS), Jodhpur (Rajasthan). No part of this thesis has formed the basis for the award of any degree previously.

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# CERTIFICATE BY THE GUIDE

This is to certify that the thesis entitled **"Health promoting behaviour and its barriers among nursing students of AIIMS, Jodhpur"** is a bonafide work done by Ms. Pratibha Sharma in partial fulfilment of requirement for the award of M.Sc. (Nursing) degree of the All India Institute of Medical Sciences, Jodhpur under the guidance of undersigned. She has carried out the work at College of Nursing, All India Institute of Medical Sciences, Jodhpur.

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# LIST OF ABBREVIATIONS

| ABBREVIATION | EXPANSION |
|---|---|
| AIIMS | All India Institute of Medical Sciences |
| CON | College of Nursing |
| df | Degree of freedom |
| NCD | Non communicable diseases |
| NS | Non significant |
| HPBS | Health Promoting Behaviour Scale |
| HTN | Hypertension |
| SD | Standard Deviation |
| N | Sample size |
| > | Greater than |
| < | Less than |
| % | Percentage |
| $X^2$ | Chi-Square |

# ABSTRACT

**Introduction-** Non communicable diseases (NCD's) are increasing all over the world and accounts for major problems in developing countries like India. Due to unhealthy lifestyle, there is happened a great increase in the prevalence and incidence of many chronic conditions, including obesity, atherosclerosis, and coronary heart disease (CHD).

**Method-** A descriptive study was conducted on a sample of 160 students of CON, AIIMS, Jodhpur. Sampling method was total enumerative sampling and data collection method was structured telephonic interview.

**Result-** The study findings reveal a significant association Health Promoting Behaviour using the Chi-Square ($p \leq 0.05$). 120 (75%) were have excellent Health Promoting Behaviour score and 40 (25%) were good category. The total mean score and standard deviation of health promoting behaviour score was 84.18±5.81. The highest mean score and S.D. in the subscale was 5.21±0.59 for safety; lowest was 10.49±0.65 for physical activity. 121 (75.6%) and 89 (55.6%) reported time management problems due to college timings and spending of more time on mobile phones as barriers in promoting healthy lifestyle respectively.

**Conclusion-** The present study concluded that the nursing students shows positive attitude towards health promoting behaviours. Poor health behaviour practices were noted for physical activity. Time is an important factor which needs to be addressed. Work and college timings should also be favourable.



***Keywords- Barriers, Behavior; College; Health; Nursing students.***

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# INTRODUCTION

## BACKGROUND

Now a days, there is increase in the emergence of non-communicable diseases such as cancer, diabetes, hypertension and coronary heart disease which is becoming a universal health concern. It has been expected with the help of several studies that by 2020, these diseases will be accountable for seven out of every 10 deaths in the developing countries like India.[1] Also, an international report stated that instead of only being limited to adult population, these chronic diseases are affecting youths too.[2] Obesity is increasing internationally at distressing rate and is estimated to be the fifth leading cause of death worldwide.[3] Overweight is also considered a remarkable predisposing factor for other chronic diseases.[4] Unhealthy eating habits and sedentary lifestyles are considered as the main reasons that leads to obesity in the person.[5,6] By enhancing the health promoting lifestyles, we can control the chronic conditions prevalence across all the people of all age groups that would ultimately decrease the rate of development of disease among them.[6]

A lifestyle can be defined as the way of living of life which can be both terms, like healthy as well as unhealthy that depends on the personal behaviour choices. Health promoting behaviours include health responsibilities, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management.[7] A health promoting lifestyle is an important factor that is responsible for health status and is considered as a major determinant for the maintenance and improvement of health.[8] Some of the modifiable factors of

health behaviour that are responsible for the development of chronic conditions are physical activities, eating habits, and smoking.[9]

College time is a challenging period when students come up with a number of challenges that includes changes in developing new social relationships, social environment, having more behavioural independence, and reconcile to new time tables.[10] College students used to engage more in risky health behaviours which has negative affect on the well-being such as poor dietary habits, stress and physical activity.[11,13] Health promoting behaviours plays an important role in the well-being of an individual; exercises are known to show potential physical and psychological benefits and exercise habits in the child known to have positive association with his/her academic achievement.[12,14,15.]

Noncommunicable diseases (NCDs) are increasing all over the world and results in the development of various problems in the developing countries like India. Internationally, NCDs are responsible for 63% of all the deaths that accounts for 80% of the global burden of diseases.[16] Statistics indicate that 53% of the causes of death are related to human lifestyle. Due to sedentary lifestyle, there is great increase in the prevalence and incidence of many chronic conditions like hypertension, coronary heart disease (CHD), atherosclerosis and obesity.[17,18] Due to sedentary lifestyle like unhealthy eating and reduced physical activities, there is increase in the prevalence of obesity among the people in both developing as well as developed countries that leads to the emergence of chronic conditions.[19,20] Obesity is the fifth leading cause of mortality globally and is considered as a predisposing factor for many diseases such as hypertension, cancers, metabolic syndrome, CHD and Type 2 diabetes[21] in a way that 23% of ischemic heart diseases, 7-41% of

cancers and 44% of Type 2 diabetes are corresponding to overweight and obesity.[22] It is possible to tackle these predisposing factors by modifying the lifestyle that would decrease the rate of chronic diseases' mortality and morbidity.[23,24]

Health is one of the basic human right. In order to improve the concept of health, it is important for each individual in society to take responsibility and make the healthy life model as a part of daily routine.[25] Whole actions and beliefs which individuals adopt in order to stay healthy and thus preventing themselves from development of diseases is defined as health promoting behaviours. Along with that, the health promoting behaviour is based on the ability to express one's personality in social environments, support between individuals, nutritional values, stress management, exercising and taking the responsibility of one's own health.[26] The tremendously growing incidence of non-communicable diseases is responsible for 60% of world's deaths.[26] In India also, the condition of life diseases is quite distressing. There is rapid change in the disease profile. The World Health Organization (WHO) has considered India as one the nation that has most of the lifestyle disorders in the coming future. Nowadays, these lifestyle disorders are becoming more common and also affecting the youths. Therefore, the at-risk population shifts from 40+ to may be 30+ or even younger.[27,28] Healthy lifestyle and health promoting activities are main factors in facilitating and preserving health.[25] Nursing students are responsible for providing health education to clients. They are important to the success of this paradigm shift from a disease model to health promotion.[29] Most of the nursing activities involve healthcare education, that's why health promoting behaviour is an important aspect

concept in nursing. Nurses are often expected as role models of health promoting lifestyles and as leaders to adopt health promoting behaviour in the communities.[30] Today's nursing students will become tomorrow's health care providers. Nurse's role modelling healthy lifestyles encourage people to adopt the health promoting behaviours.[25]

In spite of the busy schedule of the nursing students, if they are able to develop the health promoting lifestyles and function as role models as per the expectation of the client is the main purpose of this study. However, there are limited research studies conducting in assessing the health promoting lifestyle of nursing students in India. Therefore, this study was undertaken to determine the health promoting behaviours of nursing students of College of Nursing, All India Institute of Medical Sciences, Jodhpur.

## NEED OF THE STUDY

A health promoting lifestyle contributes a person towards the maintenance and improvement of health.[31,34] Lifestyle is basically defined as the way of living of individuals, families, and societies that can be healthy or unhealthy in terms of personal behaviours such as stress management, physical activity and nutrition. A healthy lifestyle may lead to better health and happiness whereas an unhealthy lifestyle may lead to illness and morbidity.[35,36] Pender et al. indicated that health promoting behaviours like self-initiated behaviours, actions and health perceptions may have an impact on individual happiness and well-being.[37] Health promoting behaviours comprise of six components including stress management, nutrition, spiritual growth, health responsibility, physical activity and interpersonal relations. Increasing evidence indicate that

if individuals practice properly and routinely, it would result in better health and lifestyle.[38 32,33]

Physical as well as mental health promoting are considered in the terms of holistic health. There is tremendous overgrowth in the prevalence of non-communicable as well as mental problems in India.[39,40] This can be reduced by engaging individual towards the adoption of health promoting behaviours and being accountable for their own health.[41]

Healthy behaviours help individual to be healthy as well as not to have diseases as said by the WHO (World Health Organization).[42] Health promotion is considered to be an important concept in nursing. Nursing students are future health professionals who will motivate the common people towards health promotion.[39] So, it is important for nursing students to maintain the healthy lifestyle. Many of the studies conducted in US and European countries, found that students were not interested in adopting healthy behaviours.[43,44,45] Out of the various domains, healthy diet and physical activity were the most least scored domains among all the domains of health promoting behaviours.

A study that was conducted on 500 students in Iran reported that nutrition and the physical activities were the most least scored domains.[43] Likewise, another study from Jordan conducted among 167 nursing students reported that students were more lacking behind in terms of physical activity.[45] A study from Kuwait noted higher scores in spiritual growth and stress management for students.[46] In few Indian studies also it was found that there are lowest scores for diet and physical activity and also found that there was age and gender differences in terms of health promoting behaviour.[39,47]

For nursing students who are hostelers, it may be exciting for the first time being away from home and taking on the independent roles but for many it brings new challenges for them. That's why their focus may not be on the healthier diet. As a result, they prefer for fast food, packed food and immediate preparation of food. Time management is also one of the challenges that can lead to adopt unhealthy lifestyle.[48,65] These conditions may force them internet addict or being online and available in social media. Their procrastination, stress and laziness may lead them to choose unhealthy lifestyle in terms of reduced physical activity or health responsibility. Also, they thought that their young age will not have that much problems which is the reason why they neglect the health promoting lifestyle.[49,51]

Most of the researches indicate that many of the health problems are underlying in the people's lifestyles and health behaviours. Implementation of these health promoting behaviours is one of the best with the help of which people can maintain their health.[50,52] Also, health promotion and disease prevention are directly related to these behaviours.[53,54]

Implementing these behaviours are very important, and it has been researched that 70% of illnesses are associated with the individual's lifestyle.[55,56] Some musculoskeletal and cardio-pulmonary disorders and other disorders are directly or indirectly related with the individual's lifestyle.[57] According to WHO (World Health Organization), around 60% of quality of life and health of individuals depends on their personal behaviours[58] and 53% of mortality is due to lifestyle behaviours[59,60]

Despite the fact that youths play a major role in shaping the future generation and promoting health in the society, they are not considered at priority rather they are considered to be in a relatively health stage of life.[61,62]

During student life, individuals are at risk of developing mental health problems in certain situations, that affects their academics and may result in subsequent outcomes[54,63] Therefore, students must be aware of health promoting behaviours so that they can maintain a healthy lifestyle.[64,66]

Considering the importance of this issue, there is need to identify the reasons why students are not accepting the health promoting behaviours[67,68] and also considering the fact that limited studies have been carried out on nursing students, this study was conducted with an aim to investigate the health promoting behaviour and its barriers among the undergraduate students of College of Nursing, All India Institute of Medical Sciences, Jodhpur.

It is hoped that appropriate interventions must be taken for promoting health among the group by using the result findings of this study.

**AIM OF THE STUDY**

The aim of the study is to explore the health promoting behaviour and its barriers among nursing students of AIIMS, Jodhpur.

**STATEMENT OF PROBLEM**

Health promoting behaviour and its barriers among nursing students of AIIMS, Jodhpur.

**OBJECTIVES**

1. To assess the health promoting behaviour among nursing students of AIIMS, Jodhpur.

2. To determine the barriers in health promoting behaviour among nursing students.
3. To find the association between health promoting behaviour of nursing students with selected demographical variables.

**HYPOTHESIS**

**Null Hypothesis ($H_0$): -** There will be no significant association between the health promoting behaviour of nursing students with the selected demographic variable.

**Research Hypothesis ($H_1$): -** There will be significant association between the health promoting behaviour of nursing students with the selected demographic variable.

**OPERATIONAL DEFINITIONS**

In present research, a descriptive study is being done to explore the health promoting behaviours, and barriers in health promotion among nursing students of AIIMS, Jodhpur.

1. **Nursing students**: - Students of nursing college who are studying at AIIMS, Jodhpur. All the students are females.
2. **Health promoting behaviour: -** These are the behaviour implemented by the Undergraduates to maintain the positive health outcome and as measured by self-structured tool for Health Promoting Behaviour Scale (3-point Likert Scale).
3. **Health promoting barriers**: - In this context, it refers to the real blocks experienced by the undergraduates in implementing the health promoting lifestyle behaviours, based on physical activity, nutrition,

sleep, lacking in availing of health facilities) as measured by self-structured questionnaire.

**ASSUMPTIONS**

It is assumed that: **-**

1. Nursing students might be adopting some of the unhealthy lifestyle.
2. Demographic variables may influence the health promoting behaviour score of the nursing students.
3. Health promoting barriers might be influencing the health promoting behaviour of the nursing students.
4. The tools employed for the study might be adequate to collect information about assessing the health promoting behaviour and health promoting barriers of nursing students.

**DELIMITATION**

1. Study had not included the sexual health behaviour of the nursing students.
2. Research study was delimited to undergraduates of College of Nursing, AIIMS, Jodhpur.
3. The study was delimited to age group between 17-24 years of age.

# *CHAPTER II*

# *REVIEW OF LITERATURE*

# REVIEW OF LITERATURE

Review of literature is an important step in the development of a research project. It helps in understanding the problem and developing the conceptual context and methodology for data collection and analysis. The review of literature refers to both the activities involved in searching for the information on a given topic as well as actual written report that summaries the states of existing knowledge research problem.

The review of literature of the study is divided under the following headings: -

- Studies related to the Health promoting behaviour among nursing students.
- Studies related to the barriers in promoting healthy lifestyle among nursing students.

**Studies related to the health promoting behaviour among nursing students**

**Borle et al[69]** carried out a study on 124 pupils to investigate their health promoting behaviours in a tertiary care institute. Self-structured tool was developed that consists of demographical variables of the students and contain some information about the Health promoting behaviour of the respondents and the Health-promoting lifestyle information, a converted version of Health Promoting Lifestyle Profile II (HPLP II). The results of the study reported that out of 124 pupil, 29 pupils were found in excellent category whereas 89 pupil belongs to good category. The overall mean score of Health Promoting Lifestyle Profile score came to be 62.27±9.66 (ranging from 33 to 87). Out of the domains of Health Promoting Lifestyle, spiritual growth and self-

concept has highest mean score. The lowest score was found for exercises and food practices. Also, highly significant difference ($p<0.0001$) was found between the total mean HPLP values among the different age groups.

**Sahu et al**[70] carried out study on 125 students from different nursing universities of India to investigate the use of internet and the health promoting behaviour. Out of 125 students, 89 students were undergraduate and 36 students were postgraduate. Researcher used a Berger Social Media Addiction Scale (a standardized tool) in assessing in dependence of students on social media and another tool was Health Promoting Lifestyle Profile (HPLP II) for investigating their health promoting lifestyle. 52 students reported that they delay their sleep because of influence of social media addiction, 11 students reported that they had habit of excessive use of social network. Total health promoting lifestyle profile score was found more in males as compared to females. Male students were found more to be involved in excessive use of social networking communication.

**Raj et al.** [71] carried out a pilot study which was conducted in 2009 among the undergraduate nursing students in Chandigarh university between age 17-20 years of age. A tool was developed that was semi structured which includes 28 items that was used for investigating the health promoting lifestyle behaviour like physical activity, nutrition, spiritual growth, healthy relationships. In the result, the total mean score of the students was 67.34±19.99 (Max. score-106). Also, it was found that students were adopting moderate health promoting lifestyle. It was found that students were having frequent intake of junk food and they consume less fruits and vegetables.

**Salem et. Al**[72] carried out a cross-sectional study on 262 students in 2014 to investigate the health promoting lifestyle among the medical students of Rafsanian University of Medical Sciences, Iran. Voluntary participation of the students was there. Semi-structured tool was developed that included the demographic variables questionnaire for obtain the baseline information of the respondents and the Health Promoting Lifestyle Profile II (HPLP II) was used to assess the health promoting lifestyle of the students. Out of 262 students, 154 students were female. The mean age of the students was 22.50 ± 2.16 years. The mean and the standard deviation of health promoting lifestyle profile was 109.74 ± 18.65. It was found that there was a significant relationship between the health promoting lifestyle and age group, entrance year, education level of mother and father. Whereas, no relationship was found between the health promoting lifestyle and parents' occupation. It can be concluded that the students of this university were adopting moderate level of health promoting lifestyle.

**Damu et.al**[73] carried out a cross-sectional study to explore the health promoting lifestyle of undergraduate first year students of Sri Venkateshwara Institute of Medical Sciences with an aim to compare the health promoting lifestyles of different first year under graduate students of different courses of the university. A self-structured questionnaire tool was developed and administered to assess the health promoting lifestyle of the students. 354 students participated in the study. Out of these students, 149 students were form MBBS, 99 were from Bachelor of Physiotherapy, 56 were from B. Sc Nursing and 50 were from B. Sc Paramedical course. Results of the study revealed that Study findings revealed that students scored higher in

Interpersonal relations (i.e. 2.98 ± 0.45) whereas lower score was found for physical exercises (i.e. 2.08±0.6) and nutrition (i.e. 2.4 ± 0.44) had highest score in Interpersonal relations (i.e. 2.98 ± 0.45). It can be concluded that there was no significant difference between different courses in terms of Health Promoting lifestyle.

**Studies related to the barriers in promoting healthy life-style among nursing students.**

Lee[75] (2013) carried out a mixed-method study among 236 nursing pupils in the urban area of Delhi to investigate the barriers and promoting factors involved in health promoting behaviour among nurses. Aim of the study was to assess the prevalence of health promoting behaviour among nursing students with the investigation of the barriers. Shift work and work-related stress were found as the barriers in health promotion whereas self-efficacy, social support and individual attributes were reported as facilitators in health promotion as measured by the application of conceptual framework i.e. Health Action Plan Approach. Two thirty-six nurses were involved in the study. Findings of the study revealed that there was a significant positive association with some of the variables and health promoting lifestyle. With the help of focussed group interviews, two subthemes were found i.e. 12 hour shift duty and stress related to the working condition are the reasons why nurses are unable to adopt the health promoting lifestyle.

**Mc. Gill et al[76]** carried out a study to find out the physical activity levels of nursing and medicine students of UK medical school and investigate the facilitators of physical exercise. Researcher conducted study on 361 students. Among them, 193 students were form nursing and 168 students were from

medicine. Survey was done including measures like benefits and barriers to exercise, social support, physical activity level, self-efficacy and perceived stress for exercise. Findings revealed that 48% of nursing students and 38% of medical students were found less active in the involvement of physical activities and unable to achieve the levels of physical activity. Perceived benefits of exercise were health related for nurses and for medicine students it was concerned with stress relief. Lack of time, lack of motivation and inconvenient schedules were most noted barriers to exercise. Nursing students were found less active as compared to medicine students in terms of physical activities. Nursing students perceived more barriers and fewer benefits to exercise and reported lower social support for exercise.

**Thwaite et.al.** [77] carried out a qualitative study on Australian nursing students with an aim to assess the barriers to healthy lifestyle behaviours. In 7 focus groups, 54 nursing students were present during the interview. Researcher find out psychological, environmental, individuals' barriers that prevents in adopting healthy lifestyle. Respondents recommended several individual plans of action to overcome barriers.

**Sanjay et.al.**[78] carried out a cross-sectional study to assess the barriers in health promotion among medical students. Study was conducted between 1st year and final year medical students. In this study, all medical students were asked to fill the self-structured questionnaire about perceived barriers to health promoting behaviour. Time management issues, lack of motivation as well as pressure of studies were the most common barriers among students.

**Guler et.al.**[79] carried out a cross-sectional study among nurses of military hospital with an aim to assess their exercise/benefit beliefs. Exercise

Benefits/Barriers Scale questionnaire was used for collecting the data from the subjects and was analyzed with the help of sample mean, ANOVA, Kruskal-Wallis analysis and t-test. Study findings revealed that nurses appreciated importance of physical exercises for health promotion and disease prevention. Providing easily accessible sport facilities and providing enough time to them for performing physical fitness can lead them to adopt health promoting behaviour.

**Thomas et.al**[80] carried out a study to find out the barriers to healthy eating in a nurse's working environment. Sampling technique used by the researcher is convenience sampling. Research design included the following things i.e. photo collection, a self-report survey, and individual semi-structured interviews. Subjects used Photo Voice to take pictures of their experiences and environment. The self-report survey included demographics, physical health, eating habits as well as mental and emotional health. Sample size included 6 subjects. Lack of availability and food quality were the reasons for adopting unhealthy lifestyle. Subjects included various ways of adopting healthy lifestyle like easier availability of healthy food.

**Allan et.al**[81] carried out a qualitative study to assess the perceived factors found for nurses' eating and physical activity behavior. Semi-structured qualitative interviews were conducted by researcher with 16 nurses to investigate the factors based on the TDF (Theoretical Domains Framework). Result findings revealed that the important health promoting barriers in engaging healthy eating and physical activity behaviour were stress, lack of planning, family and friend's behaviour, fatigue.

# *CHAPTER III*

# *RESEARCH METHODOLOGY*

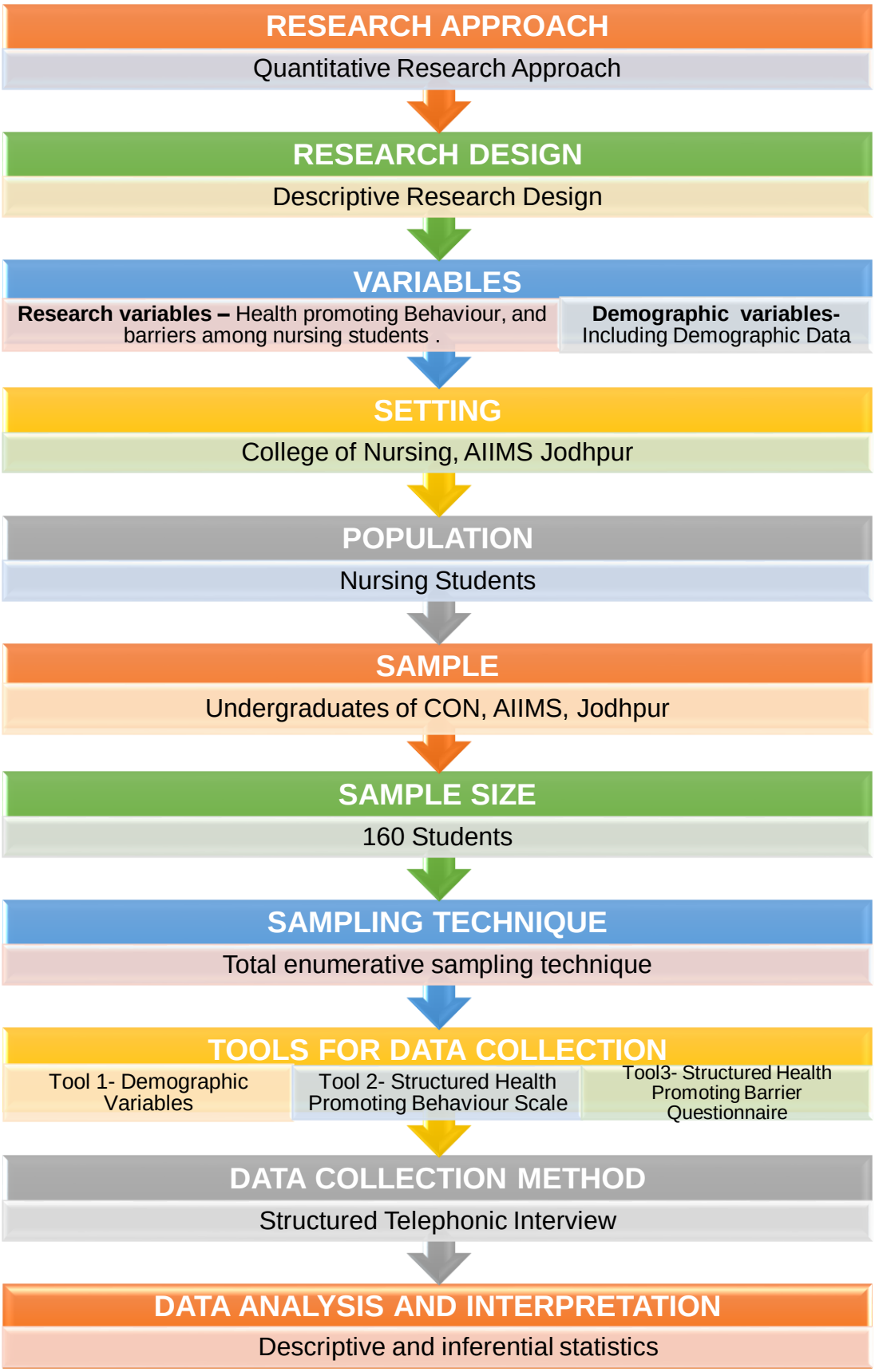


**FIGURE 1: Flow chart of research methodology**

# RESEARCH METHODOLOGY

Research methodology is a systematic procedure, which the researcher starts from the initial identification of the problem to its final conclusions. The role of methodology consists of procedures and techniques for conducting a study.[82]

## RESEARCH APPROACH

A research approach tells the researcher, from whom the idea is to be collected, what to collect, how to collect and analyze them. It also suggests possible conclusions and helps the researcher in answering specific research questions in the most accurate and efficient way possible.[83] The research approach adopted for this study was descriptive, as it aimed to assess the health promoting behaviour and its barriers in nursing students.

## RESEARCH DESIGN

The research design is explicit blue- print for research activities to be carried out. Research design helps the researcher to determine what data to collect and how to analyze it. It also suggests possible conclusions to be drawn from the data. In the present study the researcher adopted descriptive research design as there was a need to assess the health promoting behaviour and its barriers among the nursing students.

## VARIABLES

Variables are the characteristics that may vary among the subjects being studied. It is the focus of the study and reflects the empirical aspects of the concepts being studied, the investigator measures the variables. [84]

**Research variable**: - The research variable is the variable used by the researcher in the study[85] In this study, the health promoting behaviour and its barriers in undergraduates were the research variables.

**Demographic variables**: it includes selected parents demographic data include like education, occupation, religion, family income, type of family whereas child profile include age, sex, dietary pattern, BMI of the child, any history of abuse and chronic illness.

**SETTINGS OF THE STUDY**

Selection of an appropriate place for conducting the study is an important aspect because there is effect of setting in a way how the person behaves or feel and as well as in the way of responding. Setting is defined as physical place where the data collection takes place. The study was conducted at College of Nursing, All India Institute of Medical Sciences, Jodhpur.

The College of Nursing, All India Institute of Medical Sciences, Jodhpur has been established to become a benchmark in field of Nursing Education in India. The first batch of B. Sc (Hons) Nursing started on 2nd September, 2013 with an intake of 60 students.

The selection of study setting was on the basis of: -

- Feasibility of the study
- Availability of the samples

**POPULATION**

A population is a complete set of people with a specialized set of characteristics.[87]. There is need to define the population in the research study so as to mention the group to which the results of the study findings can be applied.[87]. In this study, the study population comprises the nursing students.

**Target population: -** Undergraduate nursing students (between 17-24 years of age).

**Accessible population: -** Undergraduate students of College of Nursing, All India Institute of Medical Sciences, Jodhpur (between 17-24 years of age).

**SAMPLE AND SAMPLING TECHNIQUE**

Sample is defined as a group of people, objects or items that are taken from a larger population for measurement.[86] Sample was conducted on 160 undergraduate nursing students between 17-24 years of age selected by Non probability i.e. Total enumerative sampling technique. Complete list of undergraduate nursing students was taken from office and those who fulfilled the criteria were approached and selected as sample for the research study.

**SAMPLE SIZE**

The sample size was determined based on a previous similar study with 95% confidence interval.

**Sample size was calculated through Cochran formula-**

$$n_0 = Z^2pq/e^2$$

$n_0$ is the sample size**;** Z is 1.96 from the Z-table

e is the margin of error i.e. 5% (0.05)

p is the estimated proportion which has the attribute in question; q is 1-p

So, in the present study, p is prevalence (prevalence of 47% of students showing health promoting behaviour according to Journal of Lifestyle Medicine).[1]

Therefore, sample size came to be 382.72

~383 (approximately)

**To reduce sample size,**

$$n = \frac{n0}{1+(n0-1/N)}$$

$n_0$ is sample size recommended by Cochran's sample size i.e. 383

N is the population size, i.e. 240 and

N is new sample size.

Therefore, reduced sample size came to be 148.

**SAMPLE CRITERIA**

- **Inclusion Criteria:**

Undergraduate nursing students studying in AIIMS, Jodhpur within age group 17-24 years of age who were: -

- Present at the time of data collection.
- Willing to participate in the research study.
- Able to speak and understand English/Hindi.

- **Exclusion Criteria:**

- Diagnosed with any chronic disease condition (like HTN, Cancer, Diabetes, etc.)

**DESCRIPTION OF DATA COLLECTION TOOLS**

Data collection tool refers to the instruments which were constructed by the researcher to obtain relevant data.

Section A: - Demographic variables ***(APPENDIX III)***

Section B: - Self-structured Health Promoting Behaviour Scale ***(APPENDIX IV)***

Section C: - Self-structured Health Promoting Barrier Questionnaire ***(APPENDIX V)***

**Section A: Demographic variables**

This section collects the information regarding the demographic profile of the sample. It includes Age, Academic year, Residence, Accommodation, Religion, Dietary pattern, Socio-economic status, Type of family, Any Health campaign attended, If the student is diagnosed with any chronic disease condition, Any history of substance abuse, BMI of the student.

**Section B: Self-Structured Health Promoting Behaviour Scale**

- A self-structured 3-point Likert scale was developed that measures health promoting behaviour of the students which helps to maintain or preserve the health of a person.
- This tool focuses on the actions taken by the person itself in order to maintain or preserve their own health.
- It is a **3-point response scale** consisting of: -
    i. 1 representing ‘‘never’’
    ii. 2 representing ‘‘sometimes’’
    iii. 3 representing ‘‘Routinely’’
- This scale comprises of 35 items which are health promoting behaviours categorised into 6 health promoting behaviour subscales i.e. physical activity, nutrition, stress management, healthy relationships, health responsibility and safety as shown in Table 1.

**Section C: Self- structured Health Promoting Barrier Questionnaire**

This section includes various aspects of health promoting barriers i.e. physical activity, nutrition, sleep, lack of support system. The questionnaire is based on the yes/no response. It includes total 13 questions.

**Interpretation**

Among the listed barrier in the questionnaire, the maximum percentage of barrier reported by the student will be considered as the main barrier in their health promoting behaviour.

**TABLE 1: Table showing Health Promoting Behaviour Subscales**

| | DOMAINS | ITEM NUMBER |
|---|---|---|
| HEALTH PROMOTING BEHAVIOUR SUBSCALES | Physical Activity | 1,3, 21,25, 31 |
| | Nutrition | 2,4,8,10,12,14,15,18,19,28,33 |
| | Stress management | 5,7,11,26, 32, 35 |
| | Healthy Relationships | 6,13,17,24,34 |
| | Health Responsibility | 9,16,20,22,27,29 |
| | Safety | 23,30 |

## ETHICAL CONSIDERATIONS

1) Ethical Clearance had been obtained from the Institute Ethics committee, AIIMS, Jodhpur. Certificate Reference Number: AIIMS/IEC/2020-21/3002. ***(APPENDIX I)***
2) Prior permission to conduct the study was taken from Principal, College of Nursing, AIIMS, Jodhpur.
3) Informed verbal consent had been taken from the subjects and they were assured of confidentiality with autonomy to withdraw self from the study at the time of data collection. **(*APPENDIX II)***

## VALIDITY OF TOOL

Content validity has a special relevance to individuals designing a test to measure knowledge in specific content area[88]. Validation of the self-structured tools was done in the following way: first, it was prepared using the reliable books and sources (the WHO standard questionnaire of life quality); then, it was examined by consultation with the guide and experts in the field of Paediatric Nursing and their suggestions were applied to the questionnaire; finally, its validity was approved after correcting some problems and ambiguities. ***(APPENDIX VII)***

1) Self-structured Health Promoting Behaviour Scale tool's content validity was determined by scale content validity index (SCVI). Validity (SCVI) value was 0.88 which means tool was valid as validity (SCVI) range from 0.83 to 1. (Table 2)
2) Self-structured Health Promoting Barrier Questionnaire tool's content validity was determined by scale content validity index (SCVI). Validity (SCVI) value was 0.96 which means tool was valid as validity (SCVI) range from 0.83 to 1. (Table 2)

**TABLE 2: Content Validity Index of data collection tool**

| TOOLS | VALIDITY | CVI |
|---|---|---|
| Self-structured Health Promoting Behaviour Rating Scale | Content validity | 0.88 |
| Self-structured Health Promoting Barriers questionnaire | Content validity | 0.96 |

## RELIABILITY OF TOOL

1. Self-structured Health Promoting Behaviour tool's internal consistency was checked by Cronbach's alpha. Reliability of the tool was 0.80 which means tool was reliable as reliability acceptability range is 0.70 to 1.0. (Table 3)

2. Self-structured Health Promoting Barriers questionnaire tool's internal consistency was determined by Split-half method. Reliability of the tool was 0.766 which means tool was reliable as reliability acceptability range is 0.70 to 1.0. (Table 3)

**TABLE 3: Reliability of data collection tool**

| TOOLS | RELIABILITY | STATISTICS | VALUE |
|---|---|---|---|
| Self-structured Health Promoting Behaviour Rating Scale | Internal consistency | Cronbach's alpha | 0.801 |
| Self-structured Health Promoting Barriers questionnaire | Internal consistency | Split half method | 0.766 |

## PILOT STUDY

The pilot study was conducted from 15 October to 22 October at College of Nursing, All India Institute of Medical Sciences, Jodhpur on 10% of the total sample size of main study i.e. 18 undergraduates of age group between 17 to 24 years of age selected by Non-probability (Convenient) sampling technique. Data was collected using self-structured tools.

The main objectives were: -

- To assess the feasibility of the study.
- To assess the practicability of the study.
- To determine the reliability of data collection tool.
- To determine the understanding and language clarity of the tool.

Result of the pilot study indicated that study was found feasible, practical and language of data collection tool was clear and understandable to students.

Average time taken in interviewing each student was 15-20 min.

**DATA COLLECTION PROCEDURE**

After obtaining permission from Institute Ethics committee and Principal of College of Nursing, AIIMS, Jodhpur, data collection was initiated. Data collection was done from 5 Nov 2020 to 7 Dec 2020. Steps of data collection were as follows:

- Undergraduate nursing students were approached.
- Introduced myself to the students and aim and purpose of the study was explained to them before the data collection.
- Confidentiality of their responses was assured and their informed verbal consent was taken from them prior to the study.
- Data collection was through structured telephonic interview method.
- Undergraduate students were asked to be comfortable and be relaxed and instructions related to the tool were given to facilitate co-operation.
- Students were instructed to respond to each and every question asked and not to skip any question.
- General information was asked related to demographic data as per the interview schedule.

- Structured questionnaire to assess the health promoting behaviour with 35 items and barriers with 13 items was interviewed one by one.
- Responses were recorded on the rating scale during the telephonic interview.
- Clarifications of the questions were provided wherever necessary.
- Approx. 15-20 min. were taken to collect data from each student.
- After that the collected data was coded one by one and it was entered into the master sheet for the analysis.

**DATA ANALYSES AND INTERPRETATION**

Collected data was coded and entered into master sheet and analysed with help of SPSS 20 version. Descriptive and inferential statistics were used.

- **Descriptive statistics:** Frequency, mean, percentage, mean percentage and Standard Deviation had been used to assess the demographic profile, Health promoting behaviour and its barriers among undergraduate nursing students of College of Nursing, All India Institute of Medical Sciences, Jodhpur.
- **Inferential statistics:** Inferential statistics was done with the application of Chi-square test. This test was used to discover the association of Health promoting behaviour of undergraduate nursing students with selected demographic variables.

Analyzed data are interpreted and depicted with the help of tables, graphs and charts, etc.

## SUMMARY

This chapter deals with the research methodology. Quantitative research approach and descriptive research design were used in the study. Study was conducted at College of Nursing, All India Institute of Medical Sciences, Jodhpur (Rajasthan). Data was collected by structured telephonic interview from 160 undergraduate students using total enumerative sampling technique. Self-structured health promoting behaviour scale was administered and along with it another self-structured health promoting barrier questionnaire tool was used to assess the barriers which they face in implementing healthy lifestyle. Collected data was entered into master sheet and SPSS 20 version was used for the descriptive and inferential statistical analysis.

# *CHAPTER IV*

# *ANALYSIS*

# *AND*

# *INTERPRETATION*

# ANALYSIS AND INTERPRETATION

The term analysis refers to the computation of certain measures along with searching for patterns of relationship that exits among data groups. (Kottari C.R. 1990).

Kerlinger (1995) defines analyses as the categorizing, ordering, manipulating and summarizing of data into intelligible and interpretation form so that the relations of research problem can be studied and tested.

This chapter deals with the analysis and interpretation of data collected 160 undergraduate students of College of Nursing, All India Institute of Medical Sciences, Jodhpur. The collected data were coded, calculated, organised & interpreted by using descriptive and inferential statistics as per the objectives of the study.

The findings are presented under the following sections.

**SECTION A**: - Analysis of demographic variables of nursing students.

**SECTION B**: - Analysis of Health Promoting Behaviour Score among nursing students.

**SECTION C:** - Analysis of Item-wise Mean and Rank of Health Promoting Behaviour Scale among nursing students.

**SECTION D**: - Analysis of Domain-wise Mean and Rank of Health Promoting Behaviour Scale among nursing students.

**SECTION E: -** Analysis of the Health Promoting Barriers among the nursing students.

**SECTION F:** Analysis of association between the Health Promoting Behaviour of nursing students with the selected demographical variables.

## SECTION A: Analysis of demographic variables of nursing students.

## TABLE 4: Frequency and percentage distribution of demographic variables.

**N=160**

| S. No | Demographic variables | Frequency (%) |
|---|---|---|
| 1. | Age (years of age) | |
| | 17-19 | 43 (26.9) |
| | 19-21 | 62 (38.7) |
| | >21 | 55 (34.4) |
| 2. | Academic year | |
| | I | 0 |
| | II | 54 (33.8) |
| | III | 59 (36.9) |
| | IV | 47 (29.3) |
| 3. | Residence | |
| | Urban | 87 (54.4) |
| | Rural | 73 (45.6) |
| 4. | Accommodation | |
| | Hosteler | 127(79.4) |
| | Day Scholar | 33 (20.6) |
| 5. | Religion | |
| | Hindu | 154 (96.2) |
| | Muslim and other | 6 (3.8) |
| 6. | Dietary pattern | |
| | Vegetarian | 87 (54.4) |
| | Non-vegetarian | 30 (18.7) |
| | Eggetarian | 43(26.9) |
| 7. | Socio-economic status of the family | |
| | Class I (Upper) | 0 |
| | Class II (Upper Middle) | 0 |
| | Class III (Lower Middle) | 87 (54.4) |
| | Class IV (Upper Lower) | 73(45.6) |
| | Class V (Lower) | 0 |
| 8. | Type of family | |
| | Nuclear family | 120 (75) |
| | Joint family | 40 (25) |
| | Extended family | 0 |
| 9. | Any health campaign attended? | |
| | Yes | 23 (14.4) |
| | No | 137 (85.6) |
| 10. | Do you have any history of addiction? | |
| | Yes | 2 (1.3) |
| | No | 158 (98.7) |
| 11. | BMI (Body mass index) | |
| | <18.5 (underweight) | 39 (24.4) |
| | 18.5-24.99 (normal) | 103 (64.3) |
| | 25-29.99 (pre-obese) | 9 (5.6) |
| | 30.0-34.9 (Obesity class I) | 2 (1.3) |
| | 35.0-39.9 (Obesity class II) | 0 |
| | Above 40 (Obesity class III) | 7 (4.4) |

The data presented in Table 4 illustrates the demographic characteristics of the students of 160 participants. More than one-third i.e. 62 students were between 19-21 years and mean age of students was 20.5±1.2 years (range from 17 to 24 years). Majority of students were Hindus (96.2%). More than half of the students i.e. 54.4% were from urban area and majority of the students were hosteler (79.4%). Out of 160 students, 54.4% belong to Socio-economic Class III as per the Kuppuswamy socio-economic scale. 54.4% students were vegetarians and majority i.e. 120 of the students belong to nuclear family. Among all of them, 23 students had not attended health campaign. Only 2 students reported the history of addiction. Body Mass Index was calculated for all students and it showed that 39 students were underweight and 9 were in pre- obese stage, while more than half i.e. 64.3% students had normal BMI.

**SECTION B: Analysis of Health Promoting Behaviour Score among nursing students.**

**TABLE 5: Frequency and percentage distribution of Health Promoting Behaviour Score among nursing students.**

**N=160**

| Level of Health Promoting Behaviour | Frequency | Percentage (%) |
|---|---|---|
| **Poor (≤51)** | 0 | 0 |
| **Average (52-79)** | 30 | 18.75% |
| **Good (≥80)** | 130 | 81.25% |

Table 5 and Figure 2 illustrates that among 160 undergraduate students, 130 had good health promoting behaviour. Only 30 students had 30 had average health promoting behaviour and none of the students has poor health promoting behaviour.

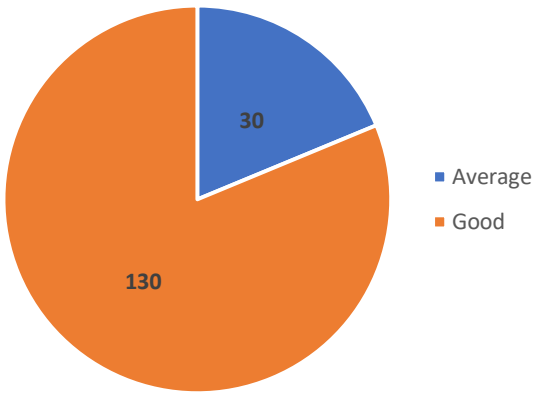


**FIGURE 2: - Health Promoting Behaviour score among nursing students.**

**SECTION C: Analysis of Item-wise Mean and Rank of Health Promoting Behaviour Scale among nursing students.**

**Table 6: Mean and rank of Health Promoting Behaviour Scale among nursing students.**

| Items | Mean ± S.D. | Rank |
|---|---|---|
| 1. Exercise for 30 minutes or more at least three times a week (such as brisk walking, bicycling, aerobic dancing, use stairs). | 2.07±0.16 | 29 |
| 2. Eat poultry/fish/dried beans/eggs/nuts group each day. | 1.90±0.67 | 31 |
| 3. Takes part in the games/sports events. | 2.15±0.66 | 27 |
| 4. Limited intake of sugars and food containing sugars (sweets). | 2.48±0.56 | 13 |
| 5. Sleep for at least 8 hours daily. | 2.77±0.43 | 1 |
| 6. Cooperate with others. | 2.63±0.53 | 6 |
| 7. Do yoga for at least 30 minutes for relaxation each day. | 2.24±0.73 | 25 |
| 8. Have regular breakfast. | 2.65±0.51 | 4 |
| 9. Maintain adequate personal hygiene. | 2.70±0.48 | 3 |
| 10. Drink 6-8 glasses of water daily. | 2.71±0.53 | 2 |
| 11. Think of something good I had done during the daytime. | 2.39±0.51 | 17 |
| 12. Have salad with each meal. | 2.31±0.56 | 22 |
| 13. Discuss my problems with others. | 2.31±0.52 | 22 |
| 14. Read the labels on the packed food items to identify nutrients, fat and sodium content in it. | 2.51±0.54 | 12 |
| 15. Eat fruits daily. | 2.37±0.52 | 19 |
| 16. Seek medical help, in case of illness. | 2.60±0.51 | 7 |

| | | |
|---|---|---|
| 17. Praise and feel happy in others achievements. | 2.64±0.55 | 5 |
| 18. Have milk/yogurt or cheese each day. | 2.58±0.57 | 9 |
| 19. Have balanced diet. | 2.56±0.59 | 10 |
| 20. Brush before going to bed daily. | 2.53±0.62 | 11 |
| 21. Include muscle and bone strengthening activities, at least 3 times per week. | 2.08±0.67 | 28 |
| 22. Use internet sources for health maintenance (like MedlinePlus, Health finder govt. app etc). | 2.33±0.58 | 21 |
| 23. Use seat belts and helmets every time while travelling. | 2.64±0.56 | 5 |
| 24. Handle the conflicts through discussion with others. | 2.26±0.57 | 24 |
| 25. Take part in free-time physical activities (like swimming/dancing/bicycling/gardening). | 2.21±0.64 | 26 |
| 26. Accept the things in my life which I cannot change. | 2.41±0.53 | 15 |
| 27. Perform necessary examination every month (i.e. Breast self-examination for girls). | 2.16±0.71 | 26 |
| 28. Eat less salt and salty items (<5gm i.e. just under a teaspoon). | 2.38±0.55 | 18 |
| 29. Go for regular health check-ups. | 2.27±0.62 | 23 |
| 30. Follow the traffic rules. | 2.59±0.61 | 8 |
| 31. Spend more than 60 minutes a day on physical activities such as fast walking. | 1.98±0.64 | 30 |
| 32. Able to deal with stressful situation. | 2.40±0.51 | 16 |
| 33. Avoid using saturated fats and fatty foods. | 2.43±0.54 | 14 |
| 34. Spend time with my close friends. | 2.36±0.58 | 20 |
| 35. Able to control the stresses of my life. | 2.31±0.78 | 22 |

Table 6 depicts the item wise rank of Health Promoting Behaviour Scale in nursing students by calculating the mean and the standard deviation in which item 5 from stress management domain has the highest mean 2.77, which signifies that most of the students have 8 hours of sleep daily. Item 10 from nutrition domain has the second highest mean i.e. 2.71 which reflects to be the second most practiced health promoting behaviour among the 35 items listed. Item 9 from health responsibility has the third highest mean i.e. 2.70. Whereas Item no. 1 is third lowest mean i.e. 2.07 from physical activity domain which signifies that students are not doing exercises for promoting healthy lifestyle. Item 31from physical activity domain is the second lowest mean 1.98 which signifies that students are less interested towards adopting additional health benefits. Item 2 from nutrition domain has the lowest mean among total of 35 items, i.e. 1.90 which signifies that students are not in the habit of eating nutritious things daily.

**SECTION D: Analysis of Domain wise mean and rank of Health Promoting Behaviour Score among nursing students.**

**TABLE 7: Domain wise mean and rank of Health Promoting Behaviour Score among nursing students.**

| Aspects of health promoting behaviours | Mean ± S.D. | Mean percentage | Rank |
|---|---|---|---|
| Physical activity (5) | 10.49±0.65 | 69.93% | 6 |
| Nutrition (11) | 26.92±0.62 | 81.57% | 3 |
| Stress management (6) | 14.64±0.59 | 81.33% | 4 |
| Healthy relationships (5) | 12.34±0.58 | 82.26% | 2 |
| Health responsibilities (6) | 14.63±0.62 | 81.27% | 5 |
| Safety (2) | 5.21±0.59 | 86.83% | 1 |
| TOTAL SCORE | 84.18±5.81 | | |

Table 7 illustrates that the overall mean score of Health promoting scale came out as 84.18±5.81 which signifies that students were having reasonably good orientation towards health promoting behaviour. The highest mean score in the subscale was for safety i.e., 5.21±0.59 which signifies that the students were more engaged towards adopting safety measures; and next to safety, highest score was found for healthy relationships i.e.,12.34±0.58 which signifies that students were more engaging themselves towards maintaining healthier relationships and lowest was 10.49±0.65 for physical activity which signifies that students were reluctant in performing physical activities as depicted by the table.

**SECTION E: Analysis of the Health Promoting Barriers among the nursing students.**

**TABLE 8: Frequency and percentage distribution of Health Promoting Barriers among the nursing students.**

| | N-160 |
|---|---|
| **HEALTH PROMOTING BARRIERS** | **Frequency (%) YES** |
| 1. Lack of appropriate place of physical activity. | 30 (18.8) |
| 2. Time management problems due to academic hours. | 121 (75.6) |
| 3. Low self-esteem due to poor physical activity. | 37 (23.1) |
| 4. Intake of less nutritious diet, due to poor economic status. | 39 (24.4) |
| 5. Parents more focus towards academic achievement. | 39 (24.4) |
| 6. Lack of motivation to consume healthy nutrition. | 43 (26.9) |
| 7. Lack of information on healthy eating. | 21 (13.1) |
| 8. Easy accessibility of outside food nearby college. | 83 (51.9) |
| 9. Lack of knowledge towards maintaining healthy lifestyle. | 13 (8.1) |
| 10. Lack of will-power. | 32 (20.0) |
| 11. Irregular sleeping pattern due to late sleep time of roommate/family members. | 15 (9.4) |
| 12. Spending more time on mobile phone. | 89 (55.6) |
| 13. Negative influence of peer group. | 47 (29.4) |

Table 8 illustrates that most of the students i.e., 121 students reported time management problems due to college timings which signifies that they were unable to perform health promoting activities due to their busy schedule whereas 89 students reported that they spend more time on mobile phones. The second least barrier reported is irregular sleep pattern due to late sleep time of roommate/family members by 15 students. Only few students reported lack of knowledge towards maintaining healthy lifestyle.

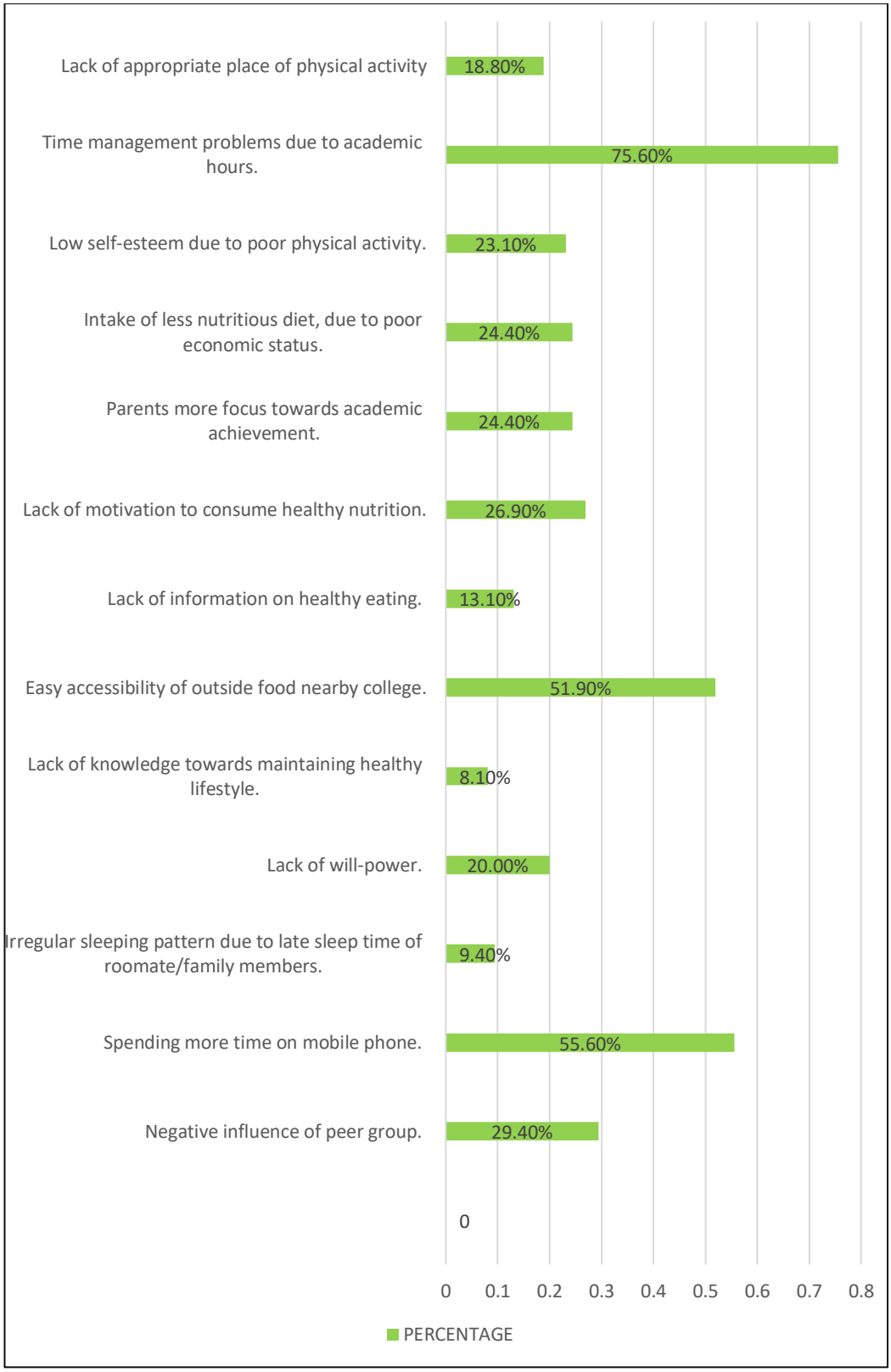


**FIGURE 3: Graphical representation of Health Promoting Barriers among nursing students.**

**SECTION F: Analysis of association between the Health Promoting Behaviour of nursing students with the selected demographic variables.**

**TABLE 9: Association between the Health Promoting Behaviour of nursing students with the selected demographic variables.**

| Demographic variables | Health Promoting Behaviour Score | | df | $X^2$ | P |
|---|---|---|---|---|---|
| | Average | Good | | | |
| 1. Age (years) | | | | | |
| 17-19 | 11 | 32 | 2 | 0.084 | 0.959 NS |
| 19-21 | 16 | 46 | | | |
| >21 | 13 | 42 | | | |
| 2. Academic year | | | | | |
| II | 12 | 42 | 2 | 1.525 | 0.467 NS |
| III | 18 | 41 | | | |
| IV | 10 | 37 | | | |
| 3. Residence | | | | | |
| Urban | 24 | 63 | 1 | 0.680 | 0.410 NS |
| Rural | 16 | 57 | | | |
| 4. Accommodation | | | | | |
| Hosteller | 29 | 98 | 1 | 1.54 | 0.215 NS |
| Day Scholar | 11 | 22 | | | |
| 5. Religion | | | | | |
| Hindu | 39 | 115 | 1 | 0.231 | 0.631 NS |
| Muslim and other | 1 | 5 | | | |
| 6. Dietary pattern | | | | | |
| Vegetarian | 24 | 63 | 1 | 0.735 | 0.693 NS |
| Non-vegetarian | 7 | 23 | | | |
| Eggetarian | 9 | 34 | | | |
| 7. Socio-economic status | | | | | |
| Class I | - | - | | | |
| Class II | 25 | 62 | 1 | 1.419 | 0.234 NS |
| Class III | 15 | 58 | | | |
| Class IV | - | - | | | |
| Class V | - | - | | | |

| | | | | | |
|---|---|---|---|---|---|
| 8. Type of family | | | | | |
| Nuclear family | 24 | 96 | 1 | 6.40 | **0.01*** |
| Joint family | 16 | 24 | | | |
| Extended family | - | - | | | |
| 9. Any health campaign attended? | | | | | |
| Yes | 2 | 21 | 1 | 3.808 | **0.05*** |
| No | 38 | 99 | | | |
| 10. Do you have any history of addiction? | | | | | |
| Yes | 2 | 0 | 1 | 6.076 | **0.01*** |
| No | 38 | 120 | | | |
| 11. BMI (Body Mass Index) | | | | | |
| <18.5 | 12 | 27 | 4 | 4.390 | 0.356 NS |
| 18.5-24.99 | 21 | 82 | | | |
| 25.0-29.99 | 4 | 5 | | | |
| 30.0-34.9 | 1 | 1 | | | |
| 35.0-39.99 | - | - | | | |
| Above 40 | 2 | 5 | | | |

**Note: Chi-Square test, level of significance ≤0.05, *Significant, NS- Non significant**

Table 9 depicted the association between the Health Promoting Behaviour and selected demographic variables using the Chi-Square. The health promoting behaviour was found significant with the type of family, any health campaign and history of addiction. There was no association with age group, academic year, residence, accommodation, religion, dietary pattern, socio-economic status and BMI.

## MAJOR FINDINGS OF THE STUDY

Summary of major findings of the study:

- More than one-third i.e. 62 (38.7%) students were between 19-21 years with mean age of the students was 20.5±1.2 years (range from 17 to 24 years).
- Majority of students were Hindus (96.2%).
- More than half of the students were from urban area and majority 79.4% students were hosteller.
- Out of 160 students, 54.4% of students belong to Socio-economic Class III as per the Kuppuswamy socio-economic scale.
- 54.4% of the students were vegetarians.
- 3/4$^{th}$ (i. e.120) of the students were belonging from nuclear family.
- Among all of them, 23 (14.4%) students that are very huge in number had attended health campaign.
- 2 students reported the history of addiction.
- BMI (Body Mass Index) was calculated for all students and it showed that 39 (24.4%) students were underweight and 9 (5.6%) were in pre-obese stage, while more than half (i. e. 64.3%) students were in normal BMI.
- The mean overall (Total) Health Promoting Behaviour Scale score was 84.18±5.81. The highest mean score in the subscale was 5.21±0.59 for safety; and 12.34±0.58 for healthy relationships and lowest was 10.49±0.65 for physical activity.
- Most of the students 121 (75.6%) and 89 (55.6%) reported time management problems due to college timings and spending of more

time on mobile phones as barriers in promoting healthy lifestyle respectively.

- A significant association was found between the Health Promoting Behaviour and the selected demographic variables using the Chi-Square ($p \leq 0.05$).

## DISCUSSION

In developing countries like India, health promotion and health education are two main pillars that are achieving an increased level of attention as it plays an important role in health maintenance. One of the factors that positively contributes to the quality of life is the Health promoting lifestyle of an individual. Today's worldwide research topic is focusing on the Health promoting lifestyle among the students. College time is a transitional period in the life of the students that offers good opportunities in a number of ways that helps them in maintaining health promoting lifestyles. Many of the research studies conducted in US and European countries, found that students were not interested in adopting healthy behaviours in terms of physical activity and health eating[89]**.** However, very few studies are conducted in India regarding the assessment of health promoting among the students. A person has a great potential to be healthy and live a healthy life without any disease condition, when he/she engages in health promoting lifestyle. The Health promoting behaviour score reflect the nursing student's commitment of health maintaining act, so better is the score, better will be the health profile of a student.

Only Females were there in the study. In this study, overall mean Health Promoting Behaviour Scale score was 84.18±5.81 and majority i.e. 130 students shows good level of health promoting behaviour (≥80).

It can be concluded that students were practicing moderate level of health promoting behaviours. Previous studies also showed similar type of result findings[90] With regard to the health promoting behaviour subscales, the students in this study scored highest in safety. In safety, 109 (65.12%)

students, use seat belts every time while travelling and 84 (52.5%) were following the traffic rules.

The second highest score among the health promoting behaviour subscale achieved by the students was healthy relationships. In healthy relationships, these students were having a good score for interpersonal relations. Hindu is the primary religion in India. Hossein et al[91] reported that out of the domains of Health promoting behaviour, the second highest score was found in interpersonal relations which corresponds to our findings.

The next lowest score was for nutrition. The present study findings showed that only 69 (43.12%) students ate fruits daily and 47 (29.37%) had their breakfast daily. About 56.87% of our sample were not taking the fruits and vegetables in their diet. This might be because majority students were hostelite and they had to rely on mess food which only sometimes had vegetables and usually not contains the fruits. Fast food consumption is said to be the barrier of fruit and vegetable intake as well.[92]

The lowest score among the health promoting behaviour subscale achieved by the students was physical activity which was consistent with other studies.[93]

The description of the findings could be that the nursing students have both theoretical and clinical hours in the curriculum that makes their schedule busy that makes them tired or exhausted to practice health promoting behaviours.

This could be due to the younger age students were new comers for this course and were might not be aware of the health promoting behaviours. Consistent result was not founded with the findings of other studies.[94]

Similarly, while assessing the Health Promoting Barriers in the students, most of the students i.e. 121 reported time management problems due to college

timings and 89 students reported spending of more time on mobile phones as barriers in promoting healthy lifestyle. Sanjay et al.[78] study findings reported time management issues and lack of motivation were reported by the students as the barriers in promoting healthy lifestyle which corresponds to our findings of research study.

# *CHAPTER V*

# *SUMMARY, CONCLUSION AND RECOMMENDATION*

# SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter gives a brief account of the present study including summary of major findings, limitations, implications of the study and recommendations for future research. A descriptive study was conducted among nursing students of All India Institute of Medical Sciences, Jodhpur to assess their health promoting behaviour and its barriers. The objectives of the study were:

1. To assess the health promoting behaviour among nursing students of AIIMS, Jodhpur.
2. To determine the barriers in health promoting behaviour among nursing students.
3. To find the association between health promoting behaviour of nursing students with selected socio-demographic variables.

Sample of the study were undergraduate students of College of Nursing, All India Institute of Medical Sciences, Jodhpur, Rajasthan. Tools for collecting data included Demographical information, self-structured Health promoting behaviour scale to assess the health promoting behaviour of students. Another tool was used to assess the health promoting barrier of the students. A total of 160 students participated in the study by total enumerative sampling technique. The students who were willing to participate were approached and all the instructions were given to them verbally. Data was collected through structured telephonic interview method. Informed verbal consent was taken prior to the study. After interview, students were thanked for participating in the study. Data was collected from 5 Nov 2020 to 7 Dec 2020 and analyzed with descriptive and inferential statistics.

**Strength of the study**

- Extensive ROL (Review of Literature) has been done while conducting the research.
- Sample was calculated with the help of sample size calculation formula.
- Emphasis was laid down on the barriers which results in adoption of their unhealthy lifestyle.

**Limitations of the study**

- It is a single-centred study.
- The samples were limited to 160 students.
- Only females were taken into consideration.

## IMPLICATIONS IN NURSING

Nursing is an art and science. It is based upon the current knowledge, i.e., frequently changing the discoveries, ideas, techniques, methodologies and motivations. When nurses collaborate the science and art of nursing in their practice then the quality of care provided to the clients it at maximum level that profits innumerable persons. The findings of the study have implications on nursing education, nursing practice, nursing administrators, nursing research and general public.

a) **Nursing Education**

The student nurses of today will be the staff nurses, educators, administrators, supervisors of future; this study has nursing implications as well. As nurses are often expected as role models of health promoting lifestyles and as leaders to activate communities for health promotion. So, their beliefs, attitudes and behaviours may affect the lifestyle of

general population. Nursing educators should conduct continuing nursing education programmes and quality improvement programmes to nursing officers to provide methods for interventions to be adopted to maintain healthy lifestyle.

**b) Nursing Practice**

Educate the nursing students to overcome the barriers faced in implementing the health promoting behaviour. There should be promotion of physical activities in the students. Interventions must lay down efforts in building self-efficacy for physical activities among students. Interventions should be developed that specifically target to reduce time-management related barriers to physical activities as well as motivating the students towards less addiction of mobile phone use by them.

**c) Nursing Administration**

The concept of extended and expanded role of the nurse offers many opportunities for a nurse administrator to improve the quality of life of students. The nurse administrator should co-ordinate her work along with the preventive, creative and rehabilitative aspect of care.

- Formation of rules and regulations in mess department to ensure the quality of food supplied to students for health promoting behaviour of nursing students.
- Helping the nursing students in providing them less burden of assignments, clinicals, etc.

d) **Nursing Research**

Main focus of the nursing research is on the expansion of the scientific base of knowledge in nursing profession and broad the scope of nursing. Nursing research helps in the evidence-based practice. It will be advantageous only if nurses are taking initiatives to conduct research in future. Several many studies must be conducted in different settings with the use of various innovative methods so as to improve the health promoting behaviour practices among nursing students.

## RECOMMENDATIONS

On the basis of the findings of the study, it is recommended that: -

- A similar study can be replicated with large sample size to strengthen the study findings.
- Multi-centre study can be done along with the involvement of male gender also in the study.
- Comparative study can be done between health and non-health colleges.

## PROBLEM FACED DURING STUDY

1. There were some network connection issues in connecting through students at the time of data collection.
2. First year students were not available at the time of data collection.
3. Some of the students refused to participate in the study.

## CONCLUSION

Poor health behaviour practices were noted for physical activity. Simply knowing about the benefits of physical activity is not sufficient to translate it to practice. Sedentary life-style among the students was distressing. Health promotion planning is necessarily needed to motivate the students for regular physical activities with an aim to preserve and maintain health along with the disease prevention. An enabling environment could be provided for the students. Physical activation promotion in the form of sports/exercise at the college, should be supported with adequate infrastructure and its maintenance. Time is an important factor which needs to be addressed. Work and college timings should also be favourable. At a personal level, motivation needs to come from within and needs to be persistent. Therefore, it is recommended that attention need to be promoting for physical activities for the students to have healthy lifestyle. Nursing educators should raise the concern regarding the health promoting lifestyles.

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# *APPENDICES*

## APPENDIX I (ETHICAL CLEARANCE CERTIFICATE)

अखिल भारतीय आयुर्विज्ञान संस्थान, जोधपुर
**All India Institute of Medical Sciences, Jodhpur**
संस्थागत नैतिकता समिति
**Institutional Ethics Committee**

**No. AIIMS/IEC/2021/3423** **Date:** 20/01/2021

**ETHICAL CLEARANCE CERTIFICATE**

Certificate Reference Number: **AIIMS/IEC/2020-21/3002**

Project title: **"Health Promoting Behaviour and its Barriers among nursing students of AIIMS, Jodhpur"**

| | |
|---|---|
| Nature of Project: | **Research Project Submitted for Expedited Review** |
| Submitted as: | **Student Research Project, as a part of Academic Programme** |
| Investigator: | **Pratibha Sharma** |
| Supervisor: | **Mrs. Remiya Mohan** |
| Co-Supervisor: | **Dr. Daisy Khera & Mr. Mukesh Chandra Sharma** |

Institutional Ethics Committee after thorough consideration accorded its approval on above project.

The investigator may therefore commence the research from the date of this certificate, using the reference number indicated above.

Please note that the AIIMS IEC must be informed immediately of:

- Any material change in the conditions or undertakings mentioned in the document.
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research.

The Principal Investigator must report to the AIIMS IEC in the prescribed format, where applicable, bi-annually, and at the end of the project, in respect of ethical compliance.

AIIMS IEC retains the right to withdraw or amend this if:

- Any unethical principle or practices are revealed or suspected
- Relevant information has been withheld or misrepresented

AIIMS IEC shall have an access to any information or data at any time during the course or after completion of the project.

Please Note that this approval will be rectified whenever it is possible to hold a meeting in person of the Institutional Ethics Committee. It is possible that the PI may be asked to give more clarifications or the Institutional Ethics Committee may withhold the project. The Institutional Ethics Committee is adopting this procedure due to COVID-19 (Corona Virus) situation.

If the Institutional Ethics Committee does not get back to you, this means your project has been cleared by the IEC.

On behalf of Ethics Committee, I wish you success in your research.

**Dr. Praveen Sharma**
**Member Secretary**
**Member secretary**
**Institutional Ethics Committee**
**AIIMS,Jodhpur**

Basni Phase-2, Jodhpur, Rajasthan-342005; **Website:** www.aiimsjodhpur.edu.in; **Phone:** 0291-2740741 Extn. 3109
**E-mail** : ethicscommittee@aiimsjodhpur.edu.in; ethicscommitteeaiimsjdh@gmail.com

## APPENDIX II

All India Institute of Medical Science Jodhpur, Rajasthan

Informed Assent Form

Title of Thesis/dissertation: - Health promoting behaviour and its barriers among nursing students of AIIMS, Jodhpur.

Name of PG Student: Ms. Pratibha Sharma (M.Sc. Nursing 1st Year)

Tel. No. 8396020776

Patient/Volunteer Identification No:

I,_____S/o or D/o_____

R/o _____ give my full, free, voluntary consent to be a part of the study “Health promoting behaviour and its barriers among nursing students of AIIMS, Jodhpur.” The information and nature of which has been explained to me in my own language to my full satisfaction. I confirm that I have had the opportunity to ask questions.

I understand that my participation is voluntary and I am aware of my right to option out of the study at any time without giving any reason.

I understand that the information collected about my child may be looked at by responsible individual from AIIMS, Jodhpur or from regulatory authorities. I give permission for these individuals.

Date: -_____ _____

Place: _____ Signature/Left thumb impression

This to certify that the above consent has been obtained in my presence

Date: -_____ _____

Place: _____ Signature of PG Student

1. Witness 1 2. Witness 2

_____ _____

Signature Signature

Name: _____ Name: _____

Address: _____ Address: _____

**परिशिष्ट - II**

अखिल भारतीय आयुर्विज्ञान संस्थान

जोधपुर, राजस्थान

सूचित प्रपत्र

थीसिस / शोध प्रबंध का शीर्षक: - "स्वास्थ्य को बढ़ावा देने वाले व्यवहार और एम्स, जोधपुर के नर्सिंग छात्रों के बीच इसकी बाधाएं"

पीजी छात्र का नाम: सुश्री प्रतिभा शर्मा (M.Sc नर्सिंग प्रथम वर्ष)

दूरभाष क्रमांक- 8396020776

रोगी / स्वयंसेवक पहचान संख्या:

मैं,_____पुत्र/बेटी_____

पता_____ मेरी पूर्ण, मुक्त, स्वैच्छिक सहमति "स्वास्थ्य को बढ़ावा देने वाले व्यवहार और एम्स, जोधपुर के नर्सिंग छात्रों के बीच इसकी बाधाएं" का हिस्सा बनने के लिए सहमति दें। जिसकी जानकारी और स्वरूप मुझे अपनी भाषा में अपनी पूर्ण संतुष्टि के लिए समझाया गया है। मैं पुष्टि करता हूं कि मुझे प्रश्न पूछने का अवसर मिला है।

मैं समझता हूं कि मेरी भागीदारी स्वैच्छिक है और मुझे बिना किसी कारण के किसी भी समय अध्ययन से बाहर निकलने के अपने अधिकार के बारे में पता है।

मैं समझता हूं कि मेरे बच्चे के बारे में एकत्रित जानकारी को एम्स, जोधपुर के जिम्मेदार व्यक्ति या नियामक अधिकारियों द्वारा देखा जा सकता है। मैं इन व्यक्तियों को अनुमति देता हूं।

दिनांक:_____ _____

स्थान: _____ हस्ताक्षर / बाएं अंगूठे का निशान

यह प्रमाणित करने के लिए कि मेरी उपस्थिति में उपरोक्त सहमति प्राप्त हुई है।

दिनांक_____ _____

जगह: _____ पीजी छात्र के हस्ताक्षर

1. साक्षी 1 2. गवाह 2

_____ _____

हस्ताक्षर हस्ताक्षर

नाम: _____ नाम: _____

पता: _____ पता: _____

## APPENDIX III

## DEMOGRAPHIC VARIABLES

**INSTRUCTIONS:** Following are the items related to personal data. You are requested to provide some information about you.

DATE: -

ID NUMBER: -

1. **Age (in years): -**

   a. 17-19
   b. 19-21
   c. >21

**2. Class: -**

**3. Residence: -**

   a. Urban
   b. Rural
   c. Semi-urban

**4. Accommodation: -**

   a. Hosteler
   b. Day scholar

**5. Religion: -**

   a. Hindu
   b. Muslim and other

**6. Dietary pattern: -**

   a. Vegetarian
   b. Non-vegetarian
   c. Eggetarian

**7. Socio-economic status of the family: -**

| S.No | Education of head | Score | Occupation of head | Score | Updated monthly family income in rupees (2020) | Score |
|---|---|---|---|---|---|---|
| 1. | Postgraduate or professional | 7 | Professional | 10 | >199,862 | 12 |
| 2. | Graduate degree | 6 | Semi-professional | 6 | 99,931-199,861 | 10 |
| 3. | Higher secondary Certificate | 5 | Arithmetic skill Job | 5 | 74,755-99,930 | 6 |
| 4. | Higher school certificate | 4 | Skilled worker | 4 | 49,962-74,755 | 4 |
| 5. | Middle school certificate | 3 | Semi-skilled worker | 3 | 29,973-49,961 | 3 |
| 6. | Literate, less than middle school certificate | 2 | Unskilled worker | 2 | 10,002-29,972 | 2 |
| 7. | Illiterate | 1 | Unemployed | 1 | ≤ 10, 001 | 1 |

**Socio-economic class of the family: -**

a. 26-29 Upper (I)

b. 16-25 Upper Middle (II)

c. 11-15 Lower Middle (III)

d. 5-10 Upper Lower (IV)

e. <5 Lower (V)

**8. Type of family: -**

a. Nuclear family
b. Joint family
c. Extended family

**9. Any health campaign attended?**

a. Yes
b. No

**10. Do you have any history of addiction?**

a. Yes
b. No

**11. BMI of the student: -**

a. Height (in cm): - _____
b. Weight (kg): - _____

| | **BMI** | **Nutritional status** |
|---|---|---|
| a. | Below 18.5 | Underweight |
| b. | 18.5-24.9 | Normal weight |
| c. | 25.0-29.9 | Pre-obesity |
| d. | 30.0-34.9 | Obesity class I |
| e. | 35.0-39.9 | Obesity class II |
| f. | Above 40 | Obesity class III |

## परिशिष्ट – III

### जनसांख्यिकीय प्रश्न

**निर्देश:** निम्नलिखित व्यक्तिगत डेटा से संबंधित आइटम हैं। आपसे अनुरोध है कि आप अपने बारे में कुछ जानकारी प्रदान करें।

दिनांक: आईडी नंबर:

1. आयु (वर्षों में): -

क. 17-19

ख. 19-21

ग. .21

2. कक्षा: -

3. निवास: -

क. शहरी

ख. ग्रामीण

ग. अर्ध शहरी

4. आवास: -

क. छात्रावासी

ख. दिन का विद्वान

5. धर्म: -

क. हिंदू

ख. मुस्लिम और अन्य

6. आहार पैटर्न: -

क. शाकाहारी

ख. मांसाहारी

ग. अण्डे का सेवन करने वाले

7. परिवार की सामाजिक-आर्थिक स्थिति : -

<u>स्कोर सामाजिक आर्थिक वर्ग</u>

क. 26-29 अपर (I)

ख. 16-25 अपर मिडिल (II)

ग. 11-15 लोअर मिडिल (III)

घ. 5-10 ऊपरी निचला (IV)

ड. <5 लोअर (V)

| क्रमसंख्या | परिवार के मुखिया की शिक्षा | स्कोर | परिवार के मुखिया का व्यवसाय | स्कोर | रुपीज़ (2020) में निर्धारित मासिक पारिवारिक आय | स्कोर |
|---|---|---|---|---|---|---|
| 1. | स्नातकोत्तर या पेशेवर | 7 | पेशेवर | 10 | > 199,862 | 12 |
| 2. | स्नातक उपाधि | 6 | अर्ध पेशेवर | 6 | 99,931-199,861 | 10 |
| 3. | उच्च माध्यमिक प्रमाणपत्र | 5 | अंकगणित कौशल नौकरी | 5 | 74,755-99,930 | 6 |
| 4. | उच्च विद्यालय का प्रमाण पत्र | 4 | कुशल कामगार | 4 | 49,962-74,755 | 4 |
| 5. | मध्य विद्यालय का प्रमाण पत्र | 3 | अर्द्ध कुशल श्रमिक | 3 | 29,973-49,961 | 3 |
| 6. | साहित्य, मध्य विद्यालय के प्रमाण पत्र से कम | 2 | अनिपुण कामगार | 2 | 10,002-29,972 | 2 |
| 7. | निरक्षर | 1 | बेरोज़गार | 1 | 1 10, 001 | 1 |

8. परिवार का प्रकार: -

क. एकल परिवार

ख. संयुक्त परिवार

ग. विस्तृत परिवार

9. किसी भी स्वास्थ्य अभियान में भाग लिया?

क. हाँ

ख. नहीं

10. क्या आपका कोई इतिहास है? नशे की लत ?

क. हाँ

ख. नहीं

11. छात्र का बीएमआई: -

क. ऊँचाई ( cm में): - _____ ख. वजन (किग्रा): - _____

| | **बीएमआई** | **पोषण स्थिति** |
|---|---|---|
| क. | 18.5 से नीचे | वजन |
| ख. | 18.5-24.9 | सामान्य वज़न |
| ग. | 25.0-29.9 | पूर्व मोटापा |
| घ. | 30.0-34.9 | मोटापा वर्ग I |
| ड. | 35.0-39.9 | मोटापा वर्ग II |
| च. | 40 से ऊपर | मोटापा वर्ग III |

## APPENDIX IV

### STRUCTURED HEALTH PROMOTING BEHAVIOUR SCALE

**INSTRUCTIONS:** This questionnaire contains statements about your present way of life or personal habits. Please respond to each item as accurately as possible and try not skip any item. Indicate the frequency with which you engage in each behaviour by circling: **N for never, S for sometimes, R for routinely. (N-1, S-2, R-3)**

| ITEMS | SCORING | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| 1. Exercise for 30 minutes or more at least three times a week (such as brisk walking, bicycling, aerobic dancing, use stairs). | | | |
| 2. Eat poultry/fish/dried beans/eggs/and nuts group each day. | | | |
| 3. Takes part in the games/sports events. | | | |
| 4. Limited intake of sugars and food containing sugars (sweets). | | | |
| 5. Sleep for at least 8 hours daily. | | | |
| 6. Cooperate with others. | | | |
| 7. Do yoga for at least 30 minutes for relaxation each day. | | | |
| 8. Have regular breakfast. | | | |
| 9. Maintain adequate personal hygiene. | | | |
| 10. Drink 6-8 glasses of water daily. | | | |
| 11. Think of something good I had done during the daytime. | | | |
| 12. Have salad with each meal. | | | |
| 13. Discuss my problems with others. | | | |
| 14. Read the labels on the packed food items to identify nutrients, fat and sodium content in it. | | | |
| 15. Eat fruits daily. | | | |
| 16. Seek medical help, in case of illness. | | | |
| 17. Praise and feel happy in others achievements. | | | |
| 18. Have milk/yogurt or cheese each day. | | | |
| 19. Have balanced diet. | | | |

20. Brush before going to bed daily.

21. Include muscle and bone strengthening activities, at least 3 times per week.

22. Use internet sources for health maintenance (like MedlinePlus, Health finder govt. app etc).

23. Use seat belts and helmets every time while travelling.

24. Handle the conflicts through discussion with others.

25. Take part in free-time physical activities (like swimming/dancing/bicycling/gardening).

26. Accept the things in my life which I cannot change.

27. Perform necessary examination every month (i.e. Breast self-examination for girls).

28. Eat less salt and salty items (<5gm i.e. just under a teaspoon)

29. Go for regular health check-ups.

30. Follow the traffic rules.

31. Spend more than 60 minutes a day on physical activities such as fast walking.

32. Able to deal with stressful situation.

33. Avoid using saturated fats and fatty foods.

34. Spend time with my close friends.

35. Able to control the stresses of my life.

## परिशिष्ट - IV

## हेल्थ प्रोमोटिंग बीहीवियर स्केल

**निर्देश:** इस प्रश्नावली में आपके वर्तमान जीवन या व्यक्तिगत आदतों के बारे में कथन हैं। कृपया प्रत्येक आइटम का यथासंभव सटीक उत्तर दें, और किसी भी आइटम को छोड़ने का प्रयास न करें। उस आवृत्ति को इंगित करें जिसके साथ आप चक्कर लगाकर प्रत्येक व्यवहार में संलग्न हैं: कभी नहीं के लिए एन, कभी-कभी एस के लिए, नियमित रूप से आर के लिए। **(एन -1, एस -2, आर -3)**

| प्रश्न | स्कोरिंग | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| 1. मैं सप्ताह में कम से कम तीन बार 30 मिनट या इससे अधिक व्यायाम करती हूं (जैसे तेज चलना, साइकिल चलाना, एरोबिक डांसिंग, सीढ़ियों का उपयोग करना)। | | | |
| 2. मैं प्रत्येक दिन पोल्ट्री / मछली / सूखे बीन्स / अंडे / और नट्स खाती हूं। | | | |
| 3. खेल में भाग लेती हूं। | | | |
| 4. शक्कर और शक्कर युक्त भोजन (मिठाई) का सीमित में सेवन करती हूं। | | | |
| 5. रोजाना कम से कम 8 घंटे की नींद लेती हूं। | | | |
| 6. दूसरों के साथ सहयोग करती हूं। | | | |
| 7. प्रत्येक दिन विश्राम के लिए कम से कम 30 मिनट तक योग करती हूं। | | | |
| 8. नियमित नाश्ता करती हूं। | | | |
| 9. पर्याप्त व्यक्तिगत स्वच्छता बनाए रखती हूं। | | | |
| 10. रोज 6-8 गिलास पानी पीती हूं। | | | |
| 11. कुछ अच्छा सोचती हूं जो मैंने दिन के समय किया होता है। | | | |
| 12. प्रत्येक भोजन के साथ सलाद लेती हूं। | | | |
| 13. मैं अपनी समस्याओं पर दूसरों के साथ चर्चा करती हूं। | | | |
| 14. पोषक तत्वों, वसा और सोडियम सामग्री की पहचान करने के लिए पैक्ड खाद्य पदार्थों पर लेबल पढ़ती हूं। | | | |

15. रोजाना फलों का सेवन करती हूं ।

16. बीमारी की स्थिति में चिकित्सकीय सहायता लेती हूं।

17. प्रशंसा और दूसरों की उपलब्धियों में खुशी महसूस करती हूं।

18. प्रत्येक दिन दूध / दही या पनीर का सेवन करती हूं।

19. संतुलित आहार लेती हूं।

20. रोजाना बिस्तर पर जाने से पहले ब्रश करती हूं।

21. मांसपेशियों और हड्डियों को मजबूत करने वाली गतिविधियों को प्रति सप्ताह कम से कम 3 बार शामिल करती हूं।

22. स्वास्थ्य रखरखाव के लिए इंटरनेट स्रोतों का उपयोग करती हूं। (जैसे मेडलाइनप्लस, स्वास्थ्य खोजक सरकारी ऐप)

23. यात्रा करते समय हर बार सीट बेल्ट और हेलमेट का प्रयोग करती हूं।

24. दूसरों के साथ चर्चा के माध्यम से संघर्ष को संभालती हूं।

25. खाली समय में, शारीरिक गतिविधियों में (जैसे तैराकी / नृत्य / साइकिल चलाना / बागवानी) भाग लेती हूं।

26. मैं अपने जीवन में उन चीजों को स्वीकार करती हूं जिन्हें मैं बदल नहीं सकती।

27. हर महीने शरीर से जुड़ी आवश्यक परीक्षा करती हूं। (यानी लड़की के लिए स्तन की स्व-परीक्षा )

28. कम नमक और नमकीन चीजें खाती हूं। (<5g m यानी सिर्फ एक चम्मच से कम कम)

29. नियमित स्वास्थ्य जांच के लिए जाती हूं।

31. दिन में 60 मिनट से अधिक समय शारीरिक गतिविधियों जैसे तेज चलना पर खर्च करती हूं।

32. तनावपूर्ण स्थिति से निपटने में सक्षम रहती हूं।

33. संतृप्त वसा और वसायुक्त खाद्य पदार्थों के उपयोग से बचती हूं।

34. अपने करीबी दोस्तों के साथ समय बिताती हूं।

35. मेरे जीवन के तनावों को नियंत्रित करने में सक्षम रहती हूं।

## APPENDIX V

### STRUCTURED HEALTH PROMOTING BARRIERS QUESTIONAIRE

**INSTRUCTIONS: Tick mark the health promoting barriers that you face in implementing Health Promoting Behaviour.**

| HEALTH PROMOTING BARRIERS | Yes | No |
|---|---|---|
| 1. Lack of appropriate place of physical activity. | | |
| 2. Time management problems due to academic hours. | | |
| 3. Low self-esteem due to poor physical activity. | | |
| 4. Intake of less nutritious diet, due to poor economic status. | | |
| 5. Parents more focus towards academic achievement. | | |
| 6. Lack of motivation to consume healthy nutrition. | | |
| 7. Lack of information on healthy eating. | | |
| 8. Easy accessibility of outside food nearby college. | | |
| 9. Lack of knowledge towards maintaining healthy lifestyle. | | |
| 10. Lack of will-power. | | |
| 11. Irregular sleeping pattern due to late sleep time of roommate/family members. | | |
| 12. Spending more time on mobile phone. | | |
| 13. Negative influence of peer group. | | |

## परिशिष्ट – V

### स्वास्थ्य को बढ़ावा देने वाले अवरोध प्रश्नावली

**निर्देश: स्वास्थ्य को बढ़ावा देने वाले व्यवहार को लागू करने में आने वाली बाधाओं को रोकने वाले स्वास्थ्य को चिह्नित करें ।**

| स्वास्थ्य को बढ़ावा देने वाले अवरोध | हाँ | नहीं |
|---|---|---|
| 1. शारीरिक गतिविधि के उपयुक्त स्थान का अभाव। | | |
| 2. शैक्षणिक समय के कारण समय प्रबंधन की समस्याएं । | | |
| 3. कम शारीरिक गतिविधि के कारण कम आत्मसम्मान । | | |
| 4. कम पौष्टिक आहार का सेवन, खराब आर्थिक स्थिति के कारण। | | |
| 5. माता-पिता शैक्षणिक उपलब्धि की ओर अधिक ध्यान केंद्रित करते हैं। | | |
| 6. स्वस्थ पोषण का उपभोग करने के लिए प्रेरणा का अभाव। | | |
| 7. स्वस्थ भोजन पर जानकारी का अभाव। | | |
| 8. पास के कॉलेज के बाहर के भोजन की आसान पहुँच । | | |
| 9. स्वस्थ जीवन शैली को बनाए रखने के लिए ज्ञान की कमी । | | |
| 10. इच्छा-शक्ति का अभाव। | | |
| 11. रूममेट / परिवार के सदस्यों के देर से सोने के कारण अनियमित नींद का पैटर्न। | | |
| 12. मोबाइल फोन पर अधिक समय बिताना। | | |
| 13. सहकर्मी समूह का नकारात्मक प्रभाव । | | |
| यदि कोई अन्य है, तो उल्लेख करें _____ | | |

## APPENDIX VI

## LETTER REQUESTING OPINION AND SUGGESTION FROM EXPERTS FOR CONTENT VALIDITY OF TOOL

**A LETTER REQUESTING OPINION AND SUGGESTION FROM EXPERTS FOR CONTENT VALIDITY OF TOOL**

From:
Pratibha Sharma
M.Sc. Nursing, 1st year
College of Nursing, AIIMS, Jodhpur
To,

_____

_____

Subject: Expert Opinion on Validity of self-structured tool

Respected Sir/Madam
I, Pratibha Sharma, student of M.Sc. Nursing 1st year of College of Nursing, AIIMS, Jodhpur, have undertaken the following topic for research project: **"**Health promoting behavior and its barriers among nursing students of AIIMS, Jodhpur.**"** under the supervision of Mrs. Remiya Mohan, Assistant Professor, College of Nursing, AIIMS Jodhpur

**Objectives of the study are**:

1. To assess the health promoting behaviour among nursing students of AIIMS., Jodhpur..
2. To determine the barriers in health promoting behaviour among nursing students.
3. To find the association between health promoting behaviour of nursing students with selected socio-demographic variables.

I request you to kindly go through the tool and give your opinion for any modification and improvement needed. Your esteemed opinion and critical comments will provide the required direction and contribute immensely to the quality and content of my final research.

Looking forward to your expert guidance and suggestions.

Thanking you in anticipation.

Yours Sincerely
Pratibha Sharma
M.Sc. Nursing 1st year

**GUIDE**
Mrs. Remiya Mohan
Lecturer
College of Nursing
AIIMS, Jodhpur

**PRINCIPAL**
College of Nursing,
AIIMS, Jodhpur

## APPENDIX VII

## LIST OF EXPERTS OF TOOL VALIDATION

| S. No | Name of experts |
|---|---|
| 1 | Dr. Siyaram Didel<br>Assistant Professor<br>Department of Pediatric<br>AIIMS, Jodhpur |
| 2 | Mrs. Gomathi Arumugam<br>Associate Professor<br>College of Nursing<br>AIIMS, Jodhpur |
| 3 | Dr. Mrs. Rupinder Deol<br>Assistant Professor<br>Pediatric Nursing<br>AIIMS, Rishikesh |
| 4 | Mr. Hansmukh Jain<br>Associate Professor<br>College of Nursing<br>AIIMS, Patna |
| 5. | Dr. Theresa Leonda Mendoca<br>Laxmi memorial College of Nursing<br>Mangalore Karnataka |
| 6. | Mrs. Malar Kodi<br>Assistant Professor<br>College of Nursing<br>AIIMS, Rishikesh |
| 7. | Ms. Poonam Joshi<br>Lecturer<br>College of Nursing<br>AIIMS, New Delhi |

# APPENDIX VIII

# MASTER SHEET

**A. Demographical variables of subjects**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **2** | 1 | 4 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 1 |
| **3** | 2 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| **4** | 1 | 4 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| **5** | 2 | 4 | 2 | 1 | 2 | 1 | 3 | 1 | 1 | 2 | 2 |
| **6** | 1 | 3 | 1 | 2 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **7** | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | 2 |
| **8** | 3 | 4 | 2 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 1 |
| **9** | 2 | 4 | 2 | 1 | 1 | 3 | 3 | 2 | 2 | 2 | 2 |
| **10** | 1 | 3 | 1 | 1 | 1 | 1 | 4 | 2 | 2 | 2 | 2 |
| **11** | 1 | 4 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| **12** | 2 | 4 | 1 | 2 | 1 | 2 | 3 | 1 | 2 | 2 | 2 |
| **13** | 2 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | 2 | 2 | 2 |
| **14** | 2 | 4 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 1 |
| **15** | 1 | 4 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **16** | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 2 | 2 |
| **17** | 3 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 1 |
| **18** | 1 | 4 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **19** | 3 | 2 | 1 | 2 | 1 | 1 | 3 | 2 | 1 | 2 | 1 |
| **20** | 2 | 4 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 2 |
| **21** | 2 | 3 | 1 | 1 | 1 | 1 | 4 | 2 | 2 | 2 | 2 |
| **22** | 1 | 4 | 2 | 1 | 1 | 3 | 4 | 1 | 2 | 1 | 3 |
| **23** | 1 | 4 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **24** | 2 | 4 | 1 | 2 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **25** | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| **26** | 3 | 3 | 2 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | 6 |
| **27** | 3 | 3 | 1 | 1 | 1 | 2 | 4 | 1 | 2 | 2 | 1 |
| **28** | 1 | 3 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| **29** | 1 | 2 | 2 | 1 | 1 | 3 | 3 | 2 | 1 | 2 | 2 |
| **30** | 2 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 1 |
| **31** | 3 | 3 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **32** | 2 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 3 |
| **33** | 3 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **34** | 3 | 3 | 2 | 2 | 1 | 1 | 3 | 1 | 2 | 2 | 1 |
| **35** | 1 | 3 | 2 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **36** | 3 | 3 | 1 | 2 | 1 | 1 | 3 | 2 | 2 | 2 | 2 |
| **37** | 1 | 2 | 1 | 2 | 1 | 3 | 4 | 1 | 2 | 2 | 6 |
| **38** | 2 | 2 | 2 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 1 |
| **39** | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 3 |
| **40** | 1 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **41** | 2 | 2 | 1 | 1 | 1 | 2 | 4 | 1 | 2 | 2 | 2 |
| **42** | 2 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **43** | 3 | 2 | 1 | 1 | 1 | 3 | 4 | 1 | 2 | 2 | 2 |
| **44** | 2 | 2 | 2 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 1 |
| **45** | 2 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 1 |
| **46** | 1 | 2 | 2 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **47** | 2 | 2 | 2 | 1 | 1 | 1 | 4 | 2 | 2 | 2 | 2 |
| **48** | 1 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **49** | 3 | 2 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 4 |
| **50** | 1 | 3 | 2 | 1 | 1 | 3 | 3 | 2 | 2 | 2 | 2 |
| **51** | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 2 |
| **52** | 3 | 3 | 1 | 2 | 1 | 3 | 4 | 1 | 1 | 2 | 2 |
| **53** | 2 | 3 | 2 | 2 | 1 | 1 | 4 | 2 | 2 | 2 | 2 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **54** | 1 | 3 | 2 | 1 | 1 | 3 | 4 | 2 | 2 | 2 | 1 |
| **55** | 1 | 3 | 2 | 1 | 1 | 3 | 4 | 1 | 2 | 2 | 2 |
| **56** | 3 | 3 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 2 |
| **57** | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 2 |
| **58** | 2 | 3 | 1 | 2 | 1 | 1 | 4 | 1 | 1 | 2 | 1 |
| **59** | 3 | 3 | 2 | 2 | 1 | 1 | 4 | 1 | 2 | 1 | 3 |
| **60** | 2 | 3 | 2 | 1 | 1 | 1 | 4 | 2 | 2 | 2 | 2 |
| **61** | 2 | 3 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **62** | 2 | 3 | 1 | 2 | 1 | 3 | 4 | 2 | 2 | 2 | 2 |
| **63** | 2 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **64** | 3 | 2 | 2 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **65** | 2 | 2 | 2 | 1 | 1 | 2 | 4 | 1 | 2 | 2 | 2 |
| **66** | 2 | 2 | 1 | 1 | 1 | 2 | 4 | 2 | 2 | 2 | 1 |
| **67** | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **68** | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **69** | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 2 |
| **70** | 2 | 2 | 2 | 2 | 1 | 1 | 3 | 1 | 2 | 2 | 1 |
| **71** | 3 | 2 | 2 | 2 | 1 | 1 | 3 | 1 | 2 | 2 | 3 |
| **72** | 2 | 2 | 1 | 1 | 1 | 3 | 4 | 2 | 2 | 2 | 2 |
| **73** | 2 | 2 | 2 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 6 |
| **74** | 1 | 3 | 2 | 1 | 2 | 2 | 4 | 1 | 2 | 2 | 2 |
| **75** | 2 | 2 | 2 | 1 | 1 | 2 | 4 | 1 | 2 | 2 | 1 |
| **76** | 2 | 2 | 2 | 1 | 1 | 3 | 4 | 2 | 2 | 2 | 1 |
| **77** | 2 | 2 | 1 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | 1 |
| **78** | 3 | 4 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **79** | 3 | 3 | 2 | 1 | 2 | 2 | 3 | 1 | 1 | 2 | 1 |
| **80** | 3 | 4 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **81** | 3 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **82** | 3 | 4 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **83** | 3 | 4 | 2 | 2 | 1 | 3 | 4 | 1 | 2 | 2 | 2 |
| **84** | 3 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 1 | 2 | 2 |
| **85** | 3 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 1 | 2 | 2 |
| **86** | 3 | 4 | 2 | 1 | 1 | 1 | 4 | 2 | 2 | 2 | 1 |
| **87** | 3 | 4 | 2 | 1 | 1 | 2 | 4 | 1 | 2 | 2 | 2 |
| **88** | 3 | 3 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 1 |
| **89** | 3 | 4 | 1 | 2 | 1 | 1 | 3 | 1 | 2 | 2 | 1 |
| **90** | 3 | 4 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 3 |
| **91** | 3 | 4 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 1 |
| **92** | 3 | 2 | 2 | 1 | 2 | 2 | 3 | 1 | 2 | 2 | 3 |
| **93** | 1 | 3 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 2 |
| **94** | 1 | 4 | 2 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 6 |
| **95** | 2 | 4 | 1 | 2 | 1 | 3 | 4 | 1 | 2 | 2 | 2 |
| **96** | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| **97** | 3 | 3 | 2 | 2 | 1 | 1 | 3 | 1 | 2 | 2 | 6 |
| **98** | 3 | 3 | 1 | 1 | 1 | 2 | 4 | 1 | 2 | 2 | 1 |
| **99** | 2 | 3 | 2 | 1 | 1 | 3 | 3 | 1 | 1 | 2 | 2 |
| **100** | 2 | 2 | 2 | 1 | 1 | 3 | 3 | 2 | 1 | 2 | 2 |
| **101** | 2 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 1 |
| **102** | 1 | 4 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **103** | 1 | 4 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **104** | 1 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **105** | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| **106** | 2 | 3 | 1 | 2 | 1 | 3 | 3 | 2 | 1 | 2 | 2 |
| **107** | 1 | 4 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 3 |
| **108** | 2 | 4 | 1 | 1 | 1 | 1 | 4 | 2 | 2 | 2 | 2 |
| **109** | 2 | 3 | 2 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 6 |
| **110** | 1 | 4 | 2 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **111** | 2 | 4 | 1 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | 1 |
| **112** | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 1 |
| **113** | 2 | 2 | 2 | 1 | 1 | 2 | 3 | 1 | 1 | 2 | 2 |
| **114** | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 6 |
| **115** | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 1 |
| **116** | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **117** | 2 | 3 | 2 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **118** | 2 | 3 | 1 | 1 | 1 | 2 | 4 | 2 | 2 | 2 | 2 |
| **119** | 2 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **120** | 1 | 3 | 2 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **121** | 2 | 4 | 2 | 1 | 2 | 1 | 4 | 1 | 2 | 2 | 2 |
| **122** | 1 | 3 | 1 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **123** | 2 | 2 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | 2 |
| **124** | 3 | 4 | 2 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 1 |
| **125** | 2 | 4 | 2 | 1 | 1 | 3 | 3 | 2 | 2 | 2 | 2 |
| **126** | 1 | 3 | 1 | 1 | 1 | 3 | 4 | 2 | 2 | 2 | 2 |
| **127** | 1 | 4 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| **128** | 3 | 3 | 2 | 2 | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| **129** | 2 | 3 | 2 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **130** | 3 | 3 | 1 | 2 | 1 | 1 | 3 | 2 | 2 | 2 | 2 |
| **131** | 1 | 2 | 1 | 2 | 1 | 3 | 4 | 1 | 2 | 2 | 1 |
| **132** | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 3 |
| **133** | 3 | 2 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 2 | 2 |
| **134** | 1 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **135** | 2 | 2 | 1 | 1 | 1 | 2 | 4 | 1 | 2 | 2 | 2 |
| **136** | 2 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **137** | 2 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 1 |
| **138** | 2 | 3 | 1 | 2 | 1 | 3 | 4 | 1 | 2 | 2 | 1 |
| **139** | 1 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **140** | 3 | 2 | 2 | 1 | 1 | 1 | 4 | 2 | 2 | 2 | 2 |
| **141** | 2 | 2 | 2 | 1 | 1 | 2 | 4 | 1 | 2 | 2 | 2 |
| **142** | 2 | 2 | 1 | 1 | 1 | 2 | 4 | 2 | 2 | 2 | 4 |
| **143** | 3 | 4 | 2 | 2 | 1 | 3 | 4 | 2 | 2 | 2 | 2 |
| **144** | 3 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |
| **145** | 3 | 4 | 1 | 1 | 1 | 3 | 4 | 1 | 1 | 2 | 2 |
| **146** | 3 | 4 | 2 | 1 | 1 | 1 | 4 | 2 | 2 | 2 | 2 |
| **147** | 3 | 4 | 2 | 1 | 1 | 2 | 4 | 2 | 2 | 2 | 2 |
| **148** | 3 | 4 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 2 |
| **149** | 1 | 4 | 2 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 1 |
| **150** | 2 | 3 | 1 | 2 | 1 | 1 | 4 | 2 | 2 | 2 | 1 |
| **151** | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **152** | 3 | 3 | 2 | 2 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **153** | 3 | 3 | 2 | 1 | 2 | 2 | 4 | 1 | 2 | 2 | 2 |
| **154** | 2 | 2 | 2 | 1 | 1 | 2 | 4 | 2 | 2 | 2 | 1 |
| **155** | 2 | 2 | 2 | 1 | 1 | 1 | 4 | 2 | 2 | 2 | 1 |
| **156** | 2 | 2 | 1 | 2 | 1 | 3 | 3 | 1 | 2 | 2 | 1 |
| **157** | 3 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| **158** | 1 | 2 | 2 | 1 | 1 | 3 | 4 | 1 | 2 | 2 | 1 |
| **159** | 1 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 1 |
| **160** | 1 | 2 | 2 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 2 |

**B. Health promoting behaviour score of nursing students**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 3 | 2 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| **2** | 2 | 1 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 1 | 2 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 1 | 3 | 3 | 3 | 2 | 2 | 2 |
| **3** | 2 | 1 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 3 |
| **4** | 2 | 2 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 |
| **5** | 2 | 1 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 |
| **6** | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 2 | 3 | 2 | 3 |
| **7** | 2 | 2 | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 1 | 1 | 2 | 1 | 3 | 2 | 3 | 1 | 3 | 2 | 3 | 1 | 2 | 3 | 2 | 3 |
| **8** | 3 | 2 | 2 | 2 | 3 | 3 | 1 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 3 |
| **9** | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 2 |
| **10** | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 3 | 1 | 2 | 2 | 2 | 2 |
| **11** | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 1 | 3 | 3 | 3 | 3 | 2 | 1 | 3 | 2 | 2 |
| **12** | 1 | 3 | 3 | 2 | 3 | 3 | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 1 | 3 | 2 | 2 | 2 | 3 | 2 |
| **13** | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 3 |
| **14** | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 |
| **15** | 2 | 1 | 2 | 3 | 3 | 3 | 2 | 1 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 3 | 3 | 2 | 3 |
| **16** | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 |
| **17** | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 |
| **18** | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 |
| **19** | 2 | 1 | 2 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 3 |
| **20** | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 1 | 3 | 3 |
| **21** | 1 | 1 | 2 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 1 | 2 | 2 | 3 | 3 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 1 | 1 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 3 | 2 | 2 | 3 | 3 | 3 | 1 | 1 | 2 | 3 | 2 | 1 | 3 | 3 | 2 | 1 | 3 | 2 | 2 | 3 | 2 | 2 |
| **23** | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 |
| **24** | 2 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 1 | 2 | 2 | 3 | 3 |
| **25** | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 |
| **26** | 2 | 2 | 2 | 3 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 1 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| **27** | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 |
| **28** | 2 | 1 | 2 | 3 | 2 | 2 | 1 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 2 | 2 |
| **29** | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 |
| **30** | 1 | 1 | 2 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 1 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 2 |
| **31** | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 1 | 2 | 1 | 3 | 3 | 3 | 1 | 2 | 2 | 2 | 1 |
| **32** | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 3 | 2 | 3 |
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| **34** | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 |
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| **135** | 3 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 3 | 1 | 2 | 3 | 2 | 3 | 2 | 3 | 1 | 3 | 2 | 2 | 1 | 2 | 1 | 3 | 3 | 3 | 3 |
| **136** | 1 | 3 | 1 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 1 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 1 | 2 | 1 | 3 | 3 | 3 | 2 |
| **137** | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | 2 | 2 |
| **138** | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **139** | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 1 | 3 | 2 | 3 | 2 | 1 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 |
| **140** | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 1 | 3 | 3 | 2 | 2 | 2 | 3 | 1 | 1 | 3 | 2 | 1 | 2 |
| **141** | 3 | 2 | 2 | 2 | 3 | 1 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 |

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| **142** | 3 | 3 | 3 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 |
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| **147** | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 |
| **148** | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 1 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 1 |
| **149** | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 2 | 2 |
| **150** | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 1 | 2 | 2 | 2 | 3 | 1 | 3 | 2 | 3 | 1 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 1 | 2 |
| **151** | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 |
| **152** | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **153** | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 |
| **154** | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 1 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 |
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| **157** | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 1 | 1 |
| **158** | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 1 |
| **159** | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 2 | 2 | 3 | 1 |
| **160** | 3 | 3 | 1 | 2 | 3 | 3 | 2 | 3 | 1 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 |

**C. Health promoting barriers**

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
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| **1** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **2** | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
| **3** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
| **4** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 |
| **5** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **6** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 |
| **7** | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| **8** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| **9** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **10** | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **11** | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| **12** | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
| **13** | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 2 |
| **14** | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 |
| **15** | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 2 |
| **16** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **17** | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 2 |
| **18** | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
| **19** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 |
| **20** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
| **21** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| **22** | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
| **23** | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **24** | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **25** | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| **26** | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 |
| **27** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **28** | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 |
| **29** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
| **30** | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 |
| **31** | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 |
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| **35** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
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| **37** | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **38** | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| **39** | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 |
| **40** | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| **41** | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 2 |
| **42** | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 |
| **43** | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| **44** | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 1 |
| **45** | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| **46** | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 |

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| **47** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
| **48** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 |
| **49** | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
| **50** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 |
| **51** | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
| **52** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
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| **56** | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 |
| **57** | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
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| **59** | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
| **60** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| **61** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **62** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| **63** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
| **64** | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 |
| **65** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **66** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| **67** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| **68** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 |
| **69** | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 1 |
| **70** | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 1 |
| **71** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **72** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 |
| **73** | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
| **74** | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 |
| **75** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **76** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 |
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| **85** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **86** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **87** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 1 |
| **88** | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 |
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| **90** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 |
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| **92** | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
| **93** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
| **94** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 |

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| **95** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
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| **101** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
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| **106** | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 |
| **107** | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
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| **109** | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 |
| **110** | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
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| **112** | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
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| **115** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
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| **117** | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **118** | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 |
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| **120** | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 2 |
| **121** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| **122** | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **123** | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
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| **128** | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
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| **141** | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 |
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| **143** | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
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| **159** | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 2 |
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