**Health Behaviour and Health Locus of Control of the Students Studying at University Campus, Tribhuvan University, Nepal**

A Thesis Submitted for the Partial Fulfilment of the Requirement for the Degree

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**Declaration**

I, Khem Nath Pokhrel, hereby formally declare that this thesis entitled “**Health Behavior and Health Locus of Control of the Students Studying at University Campus, Tribhuvan University, Nepal**” is a genuine research work carried out under the guidance of Khem Raj Bhatta, PhD in the Department of Psychology, Kirtipur under Tribhuvan University. All sources referred to in this thesis are duly acknowledged. I want to declare that I have not used AI to generate content in the study. This research report has not been submitted to any other university or institution or any other publishers any time before this.

I also hereby declare that Tribhuvan University shall have the right to preserve, use and

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**Letter of Recommendation**

This is to certify that Mr. Khem Nath Pokhrel has completed the thesis entitled “**Health Behavior and Health Locus of Control of the Students Studying at University Campus, Tribhuvan University, Nepal**”under my guidance and supervision.

I, therefore, recommend this for the final evaluation and approval.

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This thesis entitled “**Health Behavior and Health Locus of Control of the Students Studying at University Campus, Tribhuvan University, Nepal**”submitted by Mr. Khem Nath Pokhrel has been evaluated and accepted as a requirement for the partial fulfilment for the Masters of Arts in Psychology.

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**Abstract**

This study examines the health behaviors and health locus of control (HLOC) among students studying at Tribhuvan University, Nepal. It explores differences in terms of sex and study streams health behaviors and Health Locus of control. Using a cross sectional-descriptive design, data were collected from 200 students across four Study Streams: Science, Management, Humanities and Education, through questionnaires on Health Behavior and Multidimensional Health Locus of Control. The findings revealed significant association of health behaviors like alcohol avoidance, exercise habits, sports and avoidance of smoking with their sex. The Female students were more likely to engage in health behaviors such as exercise, playing sports, not smoking and junk food avoidance, while male students showed higher tendencies to avoid alcohol. Health behaviors like alcohol avoidance, playing sports and stress coping was associated with the student’s study stream. The study could not find any association of Health Locus of Control with student’s sex and study stream. Predominantly, students demonstrate an internal HLOC, with humanities students scoring highest. But gaps were noted in preventive health practices, including low participation in meditation and irregular health checkups.

Key word: *Health Behaviour, HLOC, University Students, TU, Sex, Study Stream.*

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**List of Abbreviations**

APA : American Psychological Association

CHLC : Chance Health Locus of Control

IHLC : Internal Health Locus of Control

LOC : Locus of Control

MHLC : Multidimensional Health Locus of Control

PHLC : Powerful Others Health Locus of Control

SD : Standard Deviation

SPSS : Statistical Package for the Social Sciences

TU : Tribhuvan University

WHO : World Health Organization

**CHAPTER I**

**INTRODUCTION**

**1.1 Background of the Study.**

Health behaviour involve any actions, efforts, practices or habits that influence an individual’s health. According to Kasel and Cobb (1966), Health behaviour can be defined as “any activity undertaken by a person believing himself to be healthy for the purpose of preventing disease or detecting it at an asymptomatic stage”. Cockerham (2000) expands further and defines health behaviour as activities individuals engage to maintain or enhance their health, prevent health problems, or achieve a positive body image. From both definitions it can be understood that health behaviours are the deliberate efforts that individuals take for the promotion of their own health or prevention or manage illness or injury. For many individuals the typical approach to health behaviour involves engaging in activities aimed at maintaining, restoring, or improving their health, preventing illness, extending their lifespan, or attaining a favourable physical appearance. Common health behaviours can include consuming healthy foods, avoiding smoking, engaging in regular physical activity, maintaining oral hygiene, adhering to prescribed medications for managing blood pressure or lowering cholesterol levels, getting 7 to 8 hours of nightly sleep, and similar practices aimed at improving or sustaining health.

According to Eisenberg et al. (2013), university students must deal with notable changes in their lifestyles and routines that can have a significant effect on their long-term health and well-being. The rate of mental health problems including anxiety and depression, together with stress, is surprisingly high among university going students. Eisenberg et al. (2013) found that overwhelming anxiety affected 30% of students enrolled in universities. Hence, this transition to university life introduces students to multiple challenges since they must handle higher academic requirements together with changes in social relationships and influences in their environment. These students generally experience time constraints and heavy academic workload and time limited resources that can lead to the adoption of unhealthy lifestyle choices. Research has shown that this kind of stress is associated with poor sleep habits, unhealthy eating behaviours, and substance use among university students (Eisenberg et al., 2013). The health behaviour of university students is a complex issue influenced by various factors, including lifestyle choices, mental health concerns, peer influence, and access to healthcare and health promotion programs.

Health behaviour plays a crucial role in the prevention of many illnesses, and it is strongly associated with health promotion and disease prevention (Lee et al., 2012). Therefore, healthy lifestyle has inverse relationships with chronic diseases such as cancer, high blood pressure, diabetes, and heart disease. Hence, understanding and promoting a healthy lifestyle behaviour of university students is important for fostering, restoring or maintaining long term wellbeing.

Locus of control is another psychological construct that influence health behaviours. It can be defined as an individual's belief about the extent to which they can control over the events and outcomes in their lives. According to Rotter (1996), individuals can have either an internal locus of control or an external locus of control.  An internal locus of control refers to the belief that one's own actions and decisions significantly influence the outcomes and events in their life because of which these people tend to attribute success or failure to their own abilities, efforts, or choices. However, an external locus of control refers to the belief that external factors, such as luck, fate, or powerful others, have a greater influence on the outcomes and events in one's life because of which they tend to attribute success or failure to luck, chance, or circumstances beyond their control. Contextualizing the concept to the health, health locus of control refers to an individual's beliefs about the extent to which they can control their health outcomes. Those with internal health locus of control believe they can control the health outcomes whereas people with external health locus of control believe the health outcomes are beyond their control and determined by external factors like powerful others and luck or fate.

During the transitional phase of university students’ life it is essential to study the health behaviours and health locus of control among them because they deal with unique challenges. Moreover, analysing factors like sex and study stream of students regarding demographics of such variables certainly enlightens greater insights into how various groups of students view and manage their health. For example, male and female students may show different health behaviours and health locus of control across various academic disciplines can mirror the disparity in their socialization, stress levels and access to health resources. Having in-depth understanding of these subtle factors can inform targeted interventions and health promotion programs crafted to needs of various students' population.

Therefore, the study on university students is important to address the health challenges they encounter and uplifting long term wellbeing. By investigating on factors related to sex and study stream of students, this study seeks to give input to the additional nuanced understanding of the determinants of health behaviours in this group of students, eventually advocating the development of effective approaches to promote their health and academic performance.

**1.2 Statement of the Problem**

Students in university are expected to engage in daily activities that enhance the physical and mental wellbeing regarding the facilities connected to health-related information and their educational background. On the contrary, several research show that university students often acquire detrimental behaviours such as unhealthy dietary habits, less sleep, smoking, alcohol abuse, and inadequate physical activities (Peltzer & Pengpid, 2016; Steptoe et al., 2002; El Ansari et al., 2011).   The dynamic nature of university life often escalates such behaviours, where the determinants like extended academic pressure, social challenges, and newfound freedom may cause disturbances in scheduled routines and health preferences (Eisenberg et al., 2013; Mikolajczyk et al., 2008).

Furthermore, health behaviour is intertwined with different psychological constructs for example HLC the idea where a person believes that health outcomes are internally controlled and determined by outer factors like luck or powerful others (Wallson et al., 1978). Researchers have found that people with internal HLC practice preventive health measures (Grotz et al., 2011; Luszczynska & Schwarzer, 2005), on the other hand, those with external HLC are often lenient to risky behaviours. However, there is limited research available, to students' demographics like sex and study stream, exploring if these belief systems and health behaviours especially in the context of South Asia, and more importantly, Nepal. The association of sex and faculty of students on both the health-related behaviour and health locus of control is found to be under explored particularly in the context of Nepal. Past studies have found health behaviour and health beliefs can vary significantly between male and female due to gender roles, coping mechanism, access to resources (von Bothmer & Fridlund, 2005; Buckworth & Nigg, 2004). Furthermore, evidence suggests higher awareness and healthier behaviour on students belonging to health-related faculties than non-health faculties (Ansari et al., 2011). However, such comparative data is lacking in university setting particularly in the context of Nepal.

Therefore, exploring health behaviour and HLOC among university going students of Tribhuvan University, this study aims to address this research gap. Based on sex and student’s study stream, this study aims to analyse how this variable differs, thereby contributing to more subtle knowledge on the components shaping students’ health.

**1.3 Research Questions**

Considering the above concerns and research gaps, this study seeks to answer the following research questions: -

* What common health related behaviours are practiced by the university going students at TU, Nepal?
* Are the health behaviours associated with the sex and student’s study stream?
* What type of health locus of control is dominant in the students studying at university campus TU, Nepal?
* Is dominant health locus of control associated with sex and student’s study stream?

**1.4 Objective of the Study**

The objectives of the study are as follows: -

* To explore the health behaviors of the students studying at university campus, Tribhuvan University, Nepal in terms of sex and student’s study stream.
* To explore the association of Health behaviours with sex and study stream of the students studying at university campus TU, Nepal.
* To explore Health Locus of control of the students studying at university campus, Tribhuvan University, Nepal in terms of sex and study stream of students.
* To explore the association between the dominant health locus of control with sex and the study stream of students studying at university campus TU, Nepal.

**1.5 Hypothesis**

Null hypothesis (H0): There will be no significant association between health behaviour and sex of students studying at university campus. TU.

Alternative Hypothesis (H1): There will be a significant association between health behaviour and sex of the students studying at university campus, TU.

Null hypothesis (H0): There will be no significant association between dominant health locus of control and study stream of the students studying at university campus, TU. .

Alternative hypothesis (H1): There will be a significant association between dominant health locus of control and study stream of the students studying at university campus, TU. .

**1.6 Rationale of the Study**

Health Behaviors are prominent to maintaining and promoting well-being of individuals, to a great degree university students who are going through significant life transitions are heavily affected by them. Multiple factors like academic, social and personal challenges highly influence the students' mental and physical well-being (Eisenberg et al., 2013).

Often these changes occur due to independent lifestyle, increased academic pressures like deadline and assignments to complete on and hyped stress levels, these changes can lead to the acquiring unhealthy practices like poor diet, not enough sleep, substance use, and sluggish. If these kinds of habitual pattern is not addressed, it can have long-term negative effects on overall health and causes to lose the productivity over time.

Parallel to behavioral patterns, Health Locus of Control, highly affects the health outcomes of individual that is shaped by how they see their ability which is psychological. Although the situation is alarming and needs outrageous global attention on student health, there exist a significant gap in research especially in South Asian contexts, particularly in Nepal, where the dynamics of socio-economy, education, and culture vary and influence differently in terms of health behaviors and beliefs. In Nepal, limited studies have showed the relationship between health behaviors and HLC along with their sex and study stream. The results of health outcomes may vary on various students groups in regard to gender roles, study related pressures, and accessibility to health-related information and resources.

This research is essential because it focuses on students at Tribhuvan University, Nepal's biggest and oldest university. Looking into similar health-related behaviors and stronger HLC trends among the university students, and inquiring into the behavioral and psychological determinants in different sex and study stream in the university context can provide us with nuanced insights. These ideas can support many other researchers to make evidence-based plan of actions for targeted student population related to health, policies and crafted interventions to meet the specific needs of diverse groups of students.

In conclusion, the rationale for this study is motivated by acknowledging the urgent need to investigate health-related practices and intrinsic belief systems across university students in Nepal. It aims to bridge the gap of current knowledge by looking into the how the relationship between different demographic factors such as sex and study stream affect health behaviors and HLC, finally contributing to the advocacy of healthier lifestyles and refined well-being within students.

**1.7 Operational Definition.**

Health behaviours:

Health behaviours in this research mean those behaviours that improve or maintain one’s health. The health behaviours included in this research are avoiding junk food, avoiding sweets, avoiding intake of alcohol, avoiding smoking, adequate physical activity, playing sports, adequate sleep routines, maintaining hygiene and sanitation, practicing yoga/meditation, gardening and coping with stress. To measure these health behaviours, a self-made health behaviour questionnaire is used that includes items relating to positive health behaviour patterns covering all the above-mentioned areas.

 Health locus of control:

Health locus of control is the individuals’ belief of what controls their health (Wallston et al., 1976). Therefore, it could be said that Health locus of control means the individual’s beliefs about the influence of internal and external factors on health. Health locus of control in this research can be internal locus of control, chance locus of control and powerful others locus of control. For the measurement of health locus of control, a standardized instrument Multidimensional health locus of control is used that measures health locus of control of the respondents in these three dimensions.

**CHAPTER II**

**LITERATURE REVIEW**

**2.1 Health Behaviours of Students**

Several studies around the world have found that university students engage in unhealthy and risky behaviors (Peltzer & Pengpid, 2016; Steptoe et al., 2002). According to a study by Pelletier et al., (2012), university students tend to have low levels of physical activity and unhealthy eating habits. Another study in Nepal found that several medical students at Patan Academy of Health Sciences are not participating in health-promoting lifestyle behaviors (Paudel et al., 2017). A cross-sectional study by Nepal et al. (2024) highlighted a significant prevalence of health risk behaviors among medical and nursing students at Lumbini Medical College in Nepal. The findings revealed extensive engagement in poor health behaviors, including inadequate physical activity, poor dietary habits, substance use, and insufficient sleep (Nepal et al, 2024)

Shrestha et al., (2022) found significant number (89.5%) of the college students in Pokhara consume junk food. Al Ali and Khazaaleh (2023) study on college students in Jordan found significant number of students consuming unhealthy and junk foods (54%). Bohara et al., (2021) found that the consumption of junk food was notably high among adolescent students in both public and private schools of Pokhara. The study revealed that over 60% of participants consumed junk food consumption with public school students (65.1%) being more likely to do so than private school students (56.3%). Additionally, more than half of the participants reported eating salty snacks (58.7%) and sweets (57.5%). According to Singh et al. (2021), adolescents in Kathmandu are consuming a high amount of junk food. A study on university students of Cambodia also found high consumption of unhealthy foods (Sok et al., 2020).

Sok et al., (2020) discovered alcohol consumption was very high among the university students of Cambodia, but smoking and Tobacco consumption was low. Shrestha et., (2022) found college students in Pokhara are engaged in poor health behaviors with 8.5% smoking, 3.3% using tobacco, 11.5% consuming alcohol. Giri et al. (2012) conducted a cross-sectional study among 159 medical students at Tribhuvan University Teaching Hospital in Nepal to assess cardiovascular health behaviors and perceptions found a high prevalence of risk behaviors, including smoking (22%), heavy drinking (35%). A community based cross sectional study in central Nepal found a high prevalence of risk factors for non-communicable diseases among both men and women in Central Nepal in which Tobacco and alcohol consumption were significant behaviors observed along with insufficient intake of fruits and vegetables (Adhikari et al., 2014).

According to Singh et al. (2021), adolescents in Kathmandu tend to engage in low levels of physical activity, and experience sleep issues. A nation wise cross-sectional study on estimates of Physical Activity of Nepal showed the high prevalence of Physical activity in the nationally representative population comprising adults of both gender and both urban and rural people (Pedisic et al, 2019). Giri et al. (2012) conducted a cross-sectional study among 159 medical students at Tribhuvan University Teaching Hospital in Nepal to assess cardiovascular health behaviors and found insufficient physical activity (79%). Al Ali and Khazaaleh (2023) study on college students in Jordan found significant number of students (65%) are not engaged in any kind of physical activity.

Lund et al. (2010) conducted a survey on college students with 1100 students and found that only 27% reported of getting adequate sleep (i.e. at least 7 hours of sleep). Taylor et al. (2013) in his survey done among 1845 students found 38% of the students reported they are experiencing sleep disturbances and 25% met criteria for insomnia symptoms. A study on the University students from Norway revelled that 60% of the students are practicing irregular sleep patterns that is disturbing their circadian rhythms (Bjorvatn et al, 2017).

According to Maheshwari & Joshi (2012) only 10% of Indian college students reported they practice yoga regularly despite familiarity with yoga. Khalsa et al. (2011) found 15-20% of music students involve in practice of yoga and meditation regularly. Students do not wash their hands before meals (Judah et al., 2009).

According to Van den Berg & Custers (2011), engagement in gardening promotes positive neuroendocrine activity and restoration from stress. In the same study he found low prevalence of gardening among students (Van den Berg & Custers, 2011). Waliczek et al. (2005) also found very low prevalence of student’s engagement in gardening.

**2.2 Health Behaviors and Sex of Student**

Dawson et al. (2016) found that male university students have poor health behaviors and engage in more risky health behaviors than females. Another study of Nepal found that male college students of Pokhara were more likely to engage in cardiovascular health risk behaviors such as smoking, cigarette usage, and alcohol consumption than females (Shrestha et al., 2022).

A community based cross sectional study in central Nepal found a significant gender difference in terms of alcohol consumption, cigarette consumption and physical activity where male were higher in alcohol and cigarette consumption than females (Adhikari et al., 2014). In the same study females demonstrated higher levels of fruit and vegetable consumption adequacy than males.

According to Kremers et al. (2013) more females than male students avoid junk foods and sweets because they possess greater awareness on nutrition and are more likely to read food labels. Other reason for more women avoiding junk food are body image concern and dietary restriction as a coping mechanism (Hunt et al., 2020). Higher junk food consumption among male students compared to female students were prominent (Keller at al., 2018). Males consume more junk food than females because males are less concerned about controlling weight that leads to less restriction on junk food (Wardle et al., 2004). Similarly, more females than males are consuming sweets (Keller at al., 2018). Females consume use sweets as a coping mechanism for stress or negative emotions (Michels et al., 2012)

Smith et al. (2021) found more females than male students avoid smoking in his meta-analysis of 27 longitudinal studies. He further found males tend to underestimate long term consequences of smoking (Smith et al., 2021). Another study by Patrick et al. (2022) found less females than male students of United States are engaged in both regular and experimental alcohol use. Patrick et al. (2022) claims the reason for this is that female face stronger social sanctions for substance use compared to males. Giri et al. (2012) found males were more likely to smoke and drink heavily than female medical students at Tribhuvan University Teaching Hospital in Nepal. In another study, Nepal et al. (2024) reported that female students exhibited higher rates of health risk behaviors compared to their male counterparts among medical and nursing students at Lumbini Medical College in Nepal.

Keating et al (2005) found significant association between sports participation and sex in which more males than female students participated in sports and team activities. According to Eime et al. (2013), more males than females show participation in sports, especially in competitive and team-based sports because of socio-cultural barriers they encounter like gender stereotypes, lake of female role models in sports and social pressures prioritizing appearance over athleticism. Vella et al. (2014) also found males engagement on sports more than females. The reason for this disparity are socio-cultural factors, gender stereotypes, poor excess to female friendly sports programs and varying social expectations (Slater & Tiggemann, 2011)

Al Ali and Khazaaleh (2023) study on college students in Jordan found student’s cigarette smoking, alcohol consumption and physical activity significantly associated with sex of the students in which more males than females consumed alcohol, smoking and engaged in physical activity. Research have found that female are more likely to engage in moderate-intensity activities like walking and yoga, while male prefer to engage in vigorous-intensity exercise (CDC, 2022). Khalsa et al. (2011) found more females than males practice yoga and meditation. Females are more likely to encounter barriers to exercise, including time constraints due to caregiving roles and safety concerns (Eyler et al., 2002). According to Aiello et al. (2008) more females than males wash their hands before meals.

**2.3 Health Behaviours and Student’s Study Stream**

Cigarette smoking and physical activity was significantly associated with student’s study stream in which more students from non-health majors are physically active than health majors but in case of avoiding smoking, more students from health majors avoid cigarette smoking than from non-health majors (Al Ali & Khazaaleh, 2023)

A cross sectional study on health related behaviors among university students found practice of healthier behaviors more among the students of health related majors than non-health related majors (Ansari et al., 2011). Students of health related majors like medicine, nursing, public health, practiced health behaviors like maintaining balanced diet, regular exercise, avoiding alcohol and smoking, than students of non-health related majors like arts, management and humanities (Ansari et al., 2011).

**2.4 Locus of Control and Sex of Students.**

According to Marshall (1991) women have external HLOC, especially the dimension called “powerful others” which means they believe health care professionals significantly impact their health consequences. Norman et al., (1998) found females tend to score higher on chance HLOC and explain health consequences to fate or luck. Some studies show males have stronger internal HLOC and believe having more sense of control over their health outcomes (Courtenay et al., 2002). Lau et al., (1986) found no significant gender difference in HLOC and suggests that socio-cultural and contextual factors can impact these associations. For instance, in case of collectivist’s culture both male and females may have higher “Powerful Others” HLOC due to trust in health care professionals (Zhang & Liu, 2019).

A study on the locus of control among male and female students at the Nepal Academy of Tourism and Hotel Management (NATHM) found gender difference in the locus of control, with females having a marginally higher internal locus of control on average than males (Raut, 2024).

Akhtar and Saxena (2014) found that male adolescents had a significantly more internal locus of control than females, with boys believing more in personal decision and effort over outcomes, while girls tended to attribute results to external factors like luck or societal influences.

Kalechstein & Nowicki (1997) found gender difference in college and university students’ locus of control in which he found more males than females have internal locus of control.

However, studies suggest that culture and contextual environment play an important role than gender, for instance Dağ and Şahin (2011) found no significant difference in terms of gender of Turkish University students. Similarly, Trice (1985) presented a slight difference in locus of control scores of male and female university students.

Another study on gender differences in locus of control among accounting students at a South African university found that females exhibited higher internal Locus of control, which was also associated with better performance compared to male students (Callaghan & Papageorgiou, 2015).

**2.5 Locus of Control and Students’ Study Stream**

According to Yilmaz and Karaca (2016), students from health majors like nursing, public health, medicine reported higher Internal Health Locus of control scores than non-health majors because of accessibility to health knowledge and health promoting environments. Alongside study stream, locus of control can be associated with the cultures. Western university students have higher internal Health Locus of control than students from collectivists cultures (Shreedevi, et al., 2013).

Students belonging to business and medicines have internal locus of control, as those disciplines demand autonomy, goal setting and performance (Gifford et al., 2006). Findley and Cooper (1983), found locus of control associated with students’ study stream in which students belonging to science and technology disciplines reported an internal locus of control in contrast to the students of arts and humanities.

According to Furnham &Steel (1993), students belonging to social sciences like arts and humanities report more external locus of control because of the subjective assessment and focus on analytic, rather than result and performance orientation.

**2.6 Summary and Gap**

Past literatures on health behaviours of the university and college students reveal a global concern about poor health behaviours. The student’s involvement on health risk behaviours like junk food, alcohol and tobacco consumption is prominent. Literature showed low engagement of students on health behaviours like adequate physical activity, practice of yoga and meditation, gardening and adequate sleep routines. The high involvement of student on health risk behaviours also provide a clue that these students are not practicing health behaviours like avoiding alcohol, tobacco and junk foods.

More males than females are found to be engaged in alcohol consumption, tobacco consumption. Health behaviours like participation on sports and physical activities are more prominent in male students compared to females. More males than females are practicing in health behaviours like alcohol avoidance and smoking avoidance. Females are likely to practice health behaviours that include hand washing, practice of yoga, even though some findings are contradictory.

Health behaviours in terms of study stream reveal students from non-health majors like Arts, Humanities, Management are less likely to engage in practice of health behaviours compared to the students of health related majors like Nursing and Public health.

Studies on locus of control and sex of students have mixed findings in the literatures. Most of the findings report males having higher internal locus of control, while others claim females having higher internal locus of control, or the difference is negligible. Similarly, studies on locus of control and study stream suggest health-related and performance oriented disciplines like medicine, business and science are associated with higher internal locus of control, whereas social science disciplines like arts and humanities associated with external locus of control.

The researcher have performed limited studies on Health behaviours in Nepal by different faculties. Some studies examine health behaviours, however, a few studies distinctly compare such behaviours across various academic streams. Sex differences in locus of control are not in accord with findings and are contradicting in regard to having more locus of control between males or females. Thus Nepal needs more context-specific researches. There is limited data available on positive health behaviours because most studies heavily focus on negative aspects of health behaviours such as junk food, alcohol, smoking etc. and such studies loosely look after positive behaviours like yoga, meditation, gardening, and proper sleep. Even though, there are some studies on locus of control, the specific study on health locus of control is lacking in the past literatures. Since Nepal has unique cultural background, minimal researches have performed focusing on context-based differences in HLC, the cultural and contextual impacts are unchartered territories to be explored in the past studies.

**CHAPTER III**

**RESEARCH METHODOLOGY**

**3.1. Research Design**

A quantitative methods and descriptive research design is adopted for this study. It has used questionnaire method in which self-made health related behaviour questionnaire is used to study health behaviours of the university going students. It has also used standardized testing method in which Multidimensional Health Locus of Control is used to collect data on beliefs associated with their health. The study attempts to observe health related behaviour and health locus of control across demographic variables like sex and faculty of the students studying at university campus, Tribhuvan University.

**3.2. Universe of the Study**

The research was done at university campus at Tribhuvan University of Nepal. Tribhuvan University is Nepal's oldest and largest public institution in terms of student enrolment. As being at capital city, it includes students from diverse population of Nepal. It is located at the Bagmati province of Nepal. Currently, there are approximately 5300 students studying at university campus Tribhuvan University, Nepal.

**3.3. Sampling and Sample Design**

A total of 200 students are the sample size of the study where 100 males and 100 females are the respondents. The sample for the study is taken from the four faculties of TU namely Science, Management, Humanities and Education (i.e 50 from each department). The location of the study included the Central Department of Physics, Central Department of Chemistry, Central Department of Botany, Central Department of Mathematics, Central Department of Economics, Central Department of Psychology, Central Department of Education and Central Department of Management. Non-probability sampling technique is used to collect the data from primary sources. For this, convenient sampling is adopted as researcher has selected participants according to proximity and accessibility. Through this convenient sampling method, the researcher has collected data by visiting to these different locations, departments, getting inside to their classes, outside compound and canteens.

**3.4. Inclusion and Exclusion Criteria**

**3.4.1. Inclusion Criteria**

* Those students who are currently studying at master's level at University Campus, TU and belong to any of the four faculties; Science, Management, Humanities and Education are included in this study
* Those students who were willing to participate in the study and provide informed consent are included in this study

**3.4.2. Exclusion criteria**

* Students studying on Post graduate Diploma course , M Phill and PhD are excluded in this study
* Students who refused to provide informed consent were also excluded from the study

**3.5. Conceptual Framework**

The conceptual framework below in Figure 3.1, explores the interplay between key variables Health Behavior and Health Locus of Control associated with the students studying at university campus, TU with attention to sex and faculty of students as associating factors. The key concepts involved in this study are Health Behaviors, Health Locus of Control and Demographic variables.

Health Behaviors are the actions that individuals perform to maintain, improve or restore health, which is operationalized in terms of Nutritious diet, physical activity, substance use (e.g., smoking, alcohol), Hygiene practices, Sleep habits, Stress management, Yoga/mediation practices, Health check-ups.

Health Locus of Control is the psychological construct that includes individuals' beliefs about factors influencing their health. Three subscales are identified as Internal HLOC, Powerful Others HLOC and Chance HLOC. Internal HLOC means belief that personal actions control health. Powerful Others HLOC indicates the belief that health outcomes are controlled by medical professionals or influential people. Chance HLOC indicates perception that health outcomes are influenced by luck or fate.

Demographic Variables include the influences such as sex (male vs. female) and faculty of students (Science, Management, Humanities, Education) as factors of comparison for HLOC.

Health Behaviors

Avoid junk food, Avoid sweets, Avoid Alcohol, Exercise, Cycling and Walking, Play sports, Adequate sleep, Washing Hands, Stress management, Yoga/meditation practice, Health check-ups, Avoid smoking, Gardening.

Demographic Variables

Sex: Male, Female

Study Stream: Science, Management, Arts, Humanities.

Health Locus of Control

Internal HLOC

Powerful Others HLOC

Chance HLOC

Figure 1: Conceptual Framework

**3.6. Data Collection Tools**

The data collection tool included a demographic profile section where the information on age, sex, ethnicity, marital status, occupational status, TU faculty of students, and residence type of students was used to collect student’s background. For Health Behavior, a 15-item questionnaire on Health-Related Behaviors was designed with the guidance of supervisor and through literature reviews on previous studies on the same topic. The Health-Related Behavior Questionnaire comprise items that could be responded in 4-point rating scale. However, few items could be responded on yes/no format Health related Behaviors responses and their ratings included Always (4), Often (3), Sometimes (2), Rarely (1), Never (0). In yes/no format, the responses included Yes (1), No (0). Higher the score signifies healthy behaviors

For the study of the health locus of control, the Multidimensional Health Locus of Control (MHLC) questionnaire (Wallston et al., 1978) was used. This tool has altogether 18 statements, that consists of three subscales (each consisting of six items) representing Internal, Powerful others and chance locus of control. Each item comprises a scale which ranges from strongly disagree (1) to strongly agree (6). All items are rated on a 6-point scale that comprises a scale ranging from strongly disagree (1) to strongly agree (6). Items are scored from which the Internal Health Locus of Control (IHLC), Chance Health Locus of Control (CHLC) and Powerful Others Health Locus of Control (PHLC) could be analysed.

According to Kuwahara, et al. (2004) MHLC has sufficient reliability and validity among the Japanese population. Kuwahara, et al. (2004) found the Cronbach alpha of the MHLC within the range 0.62-0.76 which indicates the internal consistency of the scale. Wallston (2005) found Cronbach alphas of the MHLC in the .60–.75 range and test–retest stability coefficients ranging from .60–.70.  The reliability and validity of the Persian Form of MHLC were acceptable and respectable, and it is indicated as an applicable criterion for similar studies in Iran (Moshki, et. al. 2007). In the study, it validated the Persian translation's content by translating (and then back-translating) each item from the English version into the Persian version. Moskhi, et al. (2007) found the concurrent validity of the questionnaire was.57 (P.001),.49 (P.01), and .53 (P.001) for IPC, respectively, as determined by Levenson's IPC scale. The exploratory principal component analysis indicated a three-factor structure with items loading appropriately on each factor (Moshki, et. al. 2007).

**3.7 Data Collection Procedure**

At first the proposal for the study was accepted by the supervisor after which the data collection for the study was started. The researcher along with one assistant visited to the classes of the students, canteens, and hostel and introduced himself, informed about the purpose of the study, and the intention of the researcher. For more clarification, the informed consent form was distributed to all the respondents which included all the required information. Then the respondents were also told that this information will be kept confidential, will only be used for the study. In this way each respondent was assured for the privacy and confidentiality of the information provided by them. After that, those who signed this informed consent form were given the response sheet including health behaviour questionnaire and MHLOC. Before they start to respond to the items, each of them was properly instructed about the response they can make on these items. The meaning of the sentences or items are also translated for the convenience of respondents. After they have completed responding to each form, the researcher assured if all items were completed. Then each of these respondents were thanked for their valuable responses, their participation and time. Data was collected within a 2-month period between August and September, 2023.

**3.8 Ethical Consideration**

The research was carried out ethically and in compliance with procedural guidelines. Prior to the commencement of the study, consent was submitted to an authorized thesis supervisor for finalizing the complete research proposal. For the consideration of academic integrity, all sources were cited properly. An in-text citation with a detailed reference list was written. The overall benefits were maximized, potential risks to participants were minimized for the participants and were focused entirely on their well-being. As the research purpose was clearly expressed and informed consent provided, ethical conduct and transparency persisted throughout data collection.

All the respondents in this study provided informed consent that indicates they have understood the nature and purpose of this study and their willingness to participate in this study. The personal information and responses provided by the respondents are not disclosed to unauthorized individuals and kept secure. Each of the respondents participated voluntarily without any kind of pressure or influence to join. These respondents also had the autonomy and right to withdraw from their consent and stop participating in this study. As far as the permission for the test tool is concerned, the founder of MHLOC has declared that the tool can be used for the purpose of research and needs no permission. As far as the permission for the test tool is concerned, the founder of MHLOC has declared that the tool can be used for the purpose of research and needs no permission.

**3.9 Data Analysis**

Before beginning to analyze the data, the collected data were systematically cleaned, confirming the accuracy and integrity of the dataset. Microsoft Excel (version 2010) was used for initial data entry and organization. For the initial data entry and organization, Microsoft Excel (version 2010) was used. The cleaned data were then exported to Statistical Package for the Social Sciences (SPSS) version 22.0 for analysis.

Both descriptive and inferential statistical methods were employed to address the research objectives. Descriptive statistics, including frequencies, percentages and cross tabulation, were computed to provide an overall understanding of the demographic characteristics and health behaviours of the participants. Cross-tabulation analyses were performed to explore the relationships between key variables such as health behaviours, health locus of control, sex, and faculty of the students. Further, to explore the association between the variables chi square test have been used.

**CHAPTER IV**

**RESULTS AND INTERPRETATION**

**4.1 Socio demographic Variables of the Participants**

**Table 4.1**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Demographic profile of the Participants* | | | | | | | |
| Demographic variables | | Frequency(n) | | Percent (%) | |  |  |
|  | Sex  Male  Female  Marital status  Married  Unmarried  Family type  Nuclear  Extended  Occupational status  Employed  Unemployed  Residence type  Own house  Rent  Study Stream  Science  Management  Education  Humanities | | 100  100  31  169  143  57  18  182  48  152  50  50  50  50 | | 50  50  15.5  84.5  71.5  28.5  9  91  24  76  25  25  25  25 | |  |
|  | |  | |  | |  |

Note. N = 200. Participants were on average 25.67 years old (SD = 2.075)

From Table 4.1, it is observed that the study included participants from various demographics such as age, sex, marital status, family type, occupational status, residence type, and study stream of students. The participation was equally distributed based on sex and study stream of the students. However, for the other variables, the participation was not equally distributed.

**4.2 Cross Tabulation of Sex and Health Behaviors**

**Table 4.2**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and avoidance of Junk food.* | | | | | | | | |
|  | | | I avoid the intake of junk food | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 5 | 16 | 52 | 19 | 8 | 100 |
| % | 5.0% | 16.0% | 52.0% | 19.0% | 8.0% | 100.0% |
| Female | N | 6 | 11 | 57 | 20 | 6 | 100 |
| % | 6.0% | 11.0% | 57.0% | 20.0% | 6.0% | 100.0% |
| Total | | N | 11 | 27 | 109 | 39 | 14 | 200 |
| % | 5.5% | 13.5% | 54.5% | 19.5% | 7.0% | 100.0% |

From Table 4.2, more males than females (8% vs. 6%) reported they always avoid junk food, and the proportion of males who avoid junk food ‘often’ to ‘always’ is slightly higher than females (27% vs. 26%). The proportion of females who never avoid junk food is higher than males (6% vs. 5%), even though those who reported ‘never’ to ‘rare’ avoidance of junk food is higher among males (21% vs. 17%). Altogether, 7% of the students reported they always avoid junk food whereas 5.5% of the students reported they never avoid junk food. Further analysis didn’t show any significant association of sex and junk food avoidance (p=0.816)

**Table 4.3**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and avoidance of sweets* | | | | | | | | |
|  | | | I avoid the intake of sweets | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 12 | 19 | 37 | 22 | 10 | 100 |
| % | 12.0% | 19.0% | 37.0% | 22.0% | 10.0% | 100.0% |
| Female | N | 9 | 16 | 49 | 21 | 5 | 100 |
| % | 9.0% | 16.0% | 49.0% | 21.0% | 5.0% | 100.0% |
| Total | | N | 21 | 35 | 86 | 43 | 15 | 200 |
| % | 10.5% | 17.5% | 43.0% | 21.5% | 7.5% | 100.0% |

From Table 4.3, more male than female students (10% vs. 5%) reported they always avoid sweets, and the proportion of males who avoid sweets ‘often’ to ‘always’ is slightly higher than females (32% vs. 26%). The proportion of males who never avoid sweets is higher than females (12% vs. 9%), and those who reported ‘never’ to ‘rare’ avoidance of sweets is higher among males (31% vs. 25%). Altogether, 7.5% of the students reported they always avoid sweets whereas 10% of the students reported they never avoid sweets. Further analysis didn’t show any significant association between sex and avoidance of sweet (p=0.39)

**Table 4.4**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and avoidance of alcohol* | | | | | | | | |
|  | | | I avoid the intake of alcohol | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 13 | 4 | 7 | 13 | 63 | 100 |
| % | 13.0% | 4.0% | 7.0% | 13.0% | 63.0% | 100.0% |
| Female | N | 12 | 14 | 18 | 16 | 40 | 100 |
| % | 12.0% | 14.0% | 18.0% | 16.0% | 40.0% | 100.0% |
| Total | | n | 25 | 18 | 25 | 29 | 103 | 200 |
| % | 12.5% | 9.0% | 12.5% | 14.5% | 51.5% | 100.0% |

From Table 4.4, more males than females (63% vs. 40%) reported they always avoid alcohol, and the proportion of males who avoid alcohol ‘often’ to ‘always’ is higher than females (76% vs. 56%). The proportion of males who never avoid alcohol is slightly higher than females (13% vs. 12%), even though those who reported ‘never’ to ‘rare’ avoidance of alcohol is higher among females (17% vs. 26%). Altogether, 51.5% of the students reported they always avoid alcohol whereas 12.5% of the students reported they never avoid alcohol. Further analysis showed a significant association between sex and avoidance of alcohol (p=0.003).

**Table 4.5**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and habit of exercise* | | | | | | | | |
|  | | | I exercise daily | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 7 | 26 | 37 | 20 | 10 | 100 |
| % | 7.0% | 26.0% | 37.0% | 20.0% | 10.0% | 100.0% |
| Female | n | 4 | 12 | 44 | 18 | 22 | 100 |
| % | 4.0% | 12.0% | 44.0% | 18.0% | 22.0% | 100.0% |
| Total | | N | 11 | 38 | 81 | 38 | 32 | 200 |
| % | 5.5% | 19.0% | 40.5% | 19.0% | 16.0% | 100.0% |

From Table 4.5, more Females than males (22% vs. 10%) reported they exercise always, and the proportion of females who exercise often to always is higher than males (40% vs. 30%). The proportion of males who never exercise is slightly higher than females (7% vs. 4%), and those who reported ‘never’ to ‘rare’ habit of daily exercise is higher among males (33% vs. 16%). Altogether, 16% of the students reported they always get involved in daily exercise whereas 5.5% of the students reported they never get involved in daily exercise. Further analysis showed a significant association between sex and habit of daily exercise (p=0.025)

**Table 4.6**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and using cycle/walking* | | | | | | | | |
|  | | | I walk/use cycle instead of driving or taking a bus. | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 20 | 23 | 21 | 21 | 15 | 100 |
| % | 20.0% | 23.0% | 21.0% | 21.0% | 15.0% | 100.0% |
| Female | N | 22 | 18 | 22 | 24 | 14 | 100 |
| % | 22.0% | 18.0% | 22.0% | 24.0% | 14.0% | 100.0% |
| Total | | N | 42 | 41 | 43 | 45 | 29 | 200 |
| % | 21.0% | 20.5% | 21.5% | 22.5% | 14.5% | 100.0% |

From Table 4.6, slightly more males than females (15% vs. 14%) reported they always walk or use cycle, even though the proportion of females who walk or use cycle often to always is higher than males (38% vs. 36%). The proportion of females who never walk or use cycle is slightly higher than males (22% vs. 20%), even though those who reported ‘never’ to ‘rare’ habit of cycling or walking is higher among males (43% vs. 40%). Altogether, 14.5% of the students reported they always walk and use their cycle whereas 21% of the students reported they never get involved in walking or cycling. Further analysis didn’t show any significant association between sex and cycling or walking habit (p=0.915)

**Table 4.7**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and sleep habits* | | | | | | | | |
|  | | | I get at least 7 hours of sleep every night | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | n | 0 | 1 | 11 | 26 | 62 | 100 |
| % | 0.0% | 1.0% | 11.0% | 26.0% | 62.0% | 100.0% |
| Female | n | 2 | 3 | 17 | 23 | 55 | 100 |
| % | 2.0% | 3.0% | 17.0% | 23.0% | 55.0% | 100.0% |
| Total | | N | 2 | 4 | 28 | 49 | 117 | 200 |
| % | 1.0% | 2.0% | 14.0% | 24.5% | 58.5% | 100.0% |

From Table 4.7, more males than females (62% vs. 55%) reported they always sleep for at least 7 hours every night, and the proportion of males who sleep for at least 7 hours every night often to always is higher than females (88% vs. 78%). The proportion of females who never sleep for at least 7 hours every night is slightly higher than males (0% vs. 2%), and those who reported ‘never’ to ‘rare’ sleep habits for at least 7 hours every night is slightly higher among females (5% vs. 1%). Altogether, 58.5% of the students reported they always sleep for at least 7 hours every night whereas only 1% of the students reported they never get sleep for at least 7 hours every night. Further analysis didn’t show any significant association between sex and sleep habits for at least 7 hours every night (p=0.299)

**Table 4.8**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and sleep/waking same cycle* | | | | | | | | |
|  | | | I go to bed and wake up every day at the same time | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 8 | 12 | 29 | 34 | 17 | 100 |
| % | 8.0% | 12.0% | 29.0% | 34.0% | 17.0% | 100.0% |
| Female | N | 9 | 14 | 25 | 32 | 20 | 100 |
| % | 9.0% | 14.0% | 25.0% | 32.0% | 20.0% | 100.0% |
| Total | | N | 17 | 26 | 54 | 66 | 37 | 200 |
| % | 8.5% | 13.0% | 27.0% | 33.0% | 18.5% | 100.0% |

From Table 4.8, slightly more females than males (20% vs. 17%) reported they always maintain same sleep/waking cycle every day, and the proportion of females who maintain same sleep/awaking cycle often to always is higher than males (52% vs. 51%). The proportion of females who never maintain same sleep/waking cycle is slightly higher than males (9% vs. 8%), and those who reported ‘never’ to ‘rare’ habit of maintaining same sleep/waking cycle is higher among females (23% vs. 20%). Altogether, 18.5% of the students reported they always maintain the same sleep/waking cycle whereas 17% of the students reported they never maintain the same sleep/waking cycle. Further analysis didn’t show any significant association between sex and cycling or walking habit (p=0.937)

**Table 4.9**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and washing hand before meal* | | | | | | | | |
|  | | | I wash my hand before taking my meal. | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 0 | 1 | 1 | 3 | 95 | 100 |
| % | 0.0% | 1.0% | 1.0% | 3.0% | 95.0% | 100.0% |
| Female | N | 1 | 1 | 5 | 10 | 83 | 100 |
| % | 1.0% | 1.0% | 5.0% | 10.0% | 83.0% | 100.0% |
| Total | | N | 1 | 2 | 6 | 13 | 178 | 200 |
| % | 0.5% | 1.0% | 3.0% | 6.5% | 89.0% | 100.0% |

From Table 4.9, more males than females (95% vs. 83%) reported they always wash their hands before meal, and the proportion of males who wash their hands before meal often to always is higher than females (98% vs. 93%). The proportion of females who never wash their hands before meal is slightly higher than males (1% vs. 0%), and those who reported ‘never’ to ‘rare’ habit of washing hands before meals is higher among females (2% vs. 1%). Altogether, 89% of the students reported they always wash their hands before meal whereas only 1% of the students reported they never wash their hands before meal. Further analysis didn’t show any significant association between sex and habit of washing hands before meal (p=0.083).

**Table 4.10**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and practicing mediation/yoga* | | | | | | | | |
|  | | | I practice meditation /yoga | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 13 | 28 | 35 | 16 | 8 | 100 |
| % | 13.0% | 28.0% | 35.0% | 16.0% | 8.0% | 100.0% |
| Female | N | 22 | 20 | 29 | 23 | 6 | 100 |
| % | 22.0% | 20.0% | 29.0% | 23.0% | 6.0% | 100.0% |
| Total | | N | 35 | 48 | 64 | 39 | 14 | 200 |
| % | 17.5% | 24.0% | 32.0% | 19.5% | 7.0% | 100.0% |

From Table 4.10, slightly more males than females (8% vs. 6%) reported they always practice mediation/yoga, even though the proportion of females who practice yoga/mediation often to always is higher than males (29% vs. 24%). The proportion of females who never practice yoga/meditation is higher than males (22% vs. 13%), and those who reported ‘never’ to ‘rare’ habit of practicing yoga/mediation is higher among females than males (44% vs. 41%). Altogether, 7% of the students reported they always practice yoga/meditation whereas 17.5% of the students reported they never practice yoga/mediation. Further analysis didn’t show any significant association between sex and cycling or walking habit (p=0.218).

**Table 4.11**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and Playing sports.* | | | | | | | | |
|  | | | I play sports | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 17 | 25 | 38 | 17 | 3 | 100 |
| % | 17.0% | 25.0% | 38.0% | 17.0% | 3.0% | 100.0% |
| Female | N | 2 | 8 | 41 | 32 | 17 | 100 |
| % | 2.0% | 8.0% | 41.0% | 32.0% | 17.0% | 100.0% |
| Total | | N | 19 | 33 | 79 | 49 | 20 | 200 |
| % | 9.5% | 16.5% | 39.5% | 24.5% | 10.0% | 100.0% |

From Table 4.11, more females than males (17% vs. 3%) reported they always play sport, and the proportion of females who play sports ‘often’ to ‘always’ is higher than males (49% vs. 20%). The proportion of males who never play sports is higher than females (17% vs. 2%), and those who reported ‘never’ to ‘rare’ habit of playing sports is higher among males than females (42% vs. 10%). Altogether, 10% of the students reported they always play sports whereas 9.5% of the students reported they never play sports. Further analysis showed highly significant association between sex and habit of playing sports (p=0.000).

**Table 4.12**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and involvement in gardening* | | | | | | | | |
|  | | | I get involve in gardening | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Sex | Male | N | 11 | 18 | 38 | 21 | 12 | 100 |
| % | 11.0% | 18.0% | 38.0% | 21.0% | 12.0% | 100.0% |
| Female | N | 12 | 20 | 44 | 20 | 4 | 100 |
| % | 12.0% | 20.0% | 44.0% | 20.0% | 4.0% | 100.0% |
| Total | | N | 23 | 38 | 82 | 41 | 16 | 200 |
| % | 11.5% | 19.0% | 41.0% | 20.5% | 8.0% | 100.0% |

From Table 4.12, more males than females (12% vs. 4%) reported they get involved in gardening, and the proportion of males who get involved in gardening often to always is higher than females (33% vs. 24%). The proportion of females who never get involve in gardening is higher than males (12% vs. 11%), and those who reported ‘never’ to ‘rare’ habit of getting involved in gardening is higher among females than males (32% vs. 29%). Altogether, 8% of the students reported they get involved in gardening whereas 11.5% of the students reported they never get involved in gardening. Further analysis showed no significant association between sex and engagement in gardening (p=0.329)

**Table 4.13**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and whole body checkup* | | | | | |
|  | | | I take a whole-body checkup once a year | | Total |
| No | Yes |
| Sex | Male | n | 64 | 36 | 100 |
| % | 64.0% | 36.0% | 100.0% |
| Female | n | 62 | 38 | 100 |
| % | 62.0% | 38.0% | 100.0% |
| Total | | n | 126 | 74 | 200 |
| % | 63.0% | 37.0% | 100.0% |

From Table 4.13, more females than males (38% vs. 36%) reported they do whole-body checkup once a year, and the proportion of males who reported they don’t take a whole-body checkup once a year is higher than females (64% vs. 62%). Altogether, 37% of the students reported they do a whole-body checkup once a year whereas 63% of the students reported they do not take a whole-body checkup once a year. Further analysis showed no significant association between sex and engagement in gardening (p=0.77)

From Table 4.14, slightly more males than females (70% vs. 68%) reported they cope well with stress, and the proportion of females who cope well with stress is higher than males (32% vs. 30%). Altogether, 69% of the students reported they cope well with stress whereas 31% of the students reported they don’t cope well with stress. Further analysis showed no significant association between sex and student’s coping with stress (p=0.76)

**Table 4.14**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and coping with stress* | | | | | |
|  | | | I cope well with stress | | Total |
| No | Yes |
| Sex | Male | N | 30 | 70 | 100 |
| % | 30.0% | 70.0% | 100.0% |
| Female | N | 32 | 68 | 100 |
| % | 32.0% | 68.0% | 100.0% |
| Total | | N | 62 | 138 | 200 |
| % | 31.0% | 69.0% | 100.0% |

From Table 4.15, more females than males (94% vs. 80%) reported they do not smoke cigarette, and the proportion of males who smoke cigarette is higher than females (20% vs. 6%). Altogether, 87% of the students reported they do not smoke whereas 13% of the students reported they smoke cigarettes. Further analysis showed significant association between sex and cigarette smoking (p=0.003)

**Table 4.15**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and avoidance of Smoking* | | | | | |
|  | | | I do not smoke cigarette | | Total |
| No | Yes |
| Sex | Male | N | 20 | 80 | 100 |
| % | 20.0% | 80.0% | 100.0% |
| Female | N | 6 | 94 | 100 |
| % | 6.0% | 94.0% | 100.0% |
| Total | | N | 26 | 174 | 200 |
| % | 13.0% | 87.0% | 100.0% |

**4.3 Cross Tabulation of Student’s Study Stream and Health Behaviors**

**Table 4.16**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and junk food avoidance* | | | | | | | | |
|  | | | I avoid the intake of junk food | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | n | 2 | 6 | 31 | 7 | 4 | 50 |
| % | 4.0% | 12.0% | 62.0% | 14.0% | 8.0% | 100.0% |
| Management | n | 6 | 3 | 29 | 9 | 3 | 50 |
| % | 12.0% | 6.0% | 58.0% | 18.0% | 6.0% | 100.0% |
| Education | n | 1 | 7 | 24 | 13 | 5 | 50 |
| % | 2.0% | 14.0% | 48.0% | 26.0% | 10.0% | 100.0% |
| Humanities | n | 2 | 11 | 25 | 10 | 2 | 50 |
| % | 4.0% | 22.0% | 50.0% | 20.0% | 4.0% | 100.0% |
| Total | | n | 11 | 27 | 109 | 39 | 14 | 200 |
| % | 5.5% | 13.5% | 54.5% | 19.5% | 7.0% | 100.0% |

From Table 4.16, more students from education faculty than science, management and humanities (10% vs. 8% vs. 6% vs. 4%) reported they always avoid junk food, and the proportion of students from education faculty who avoid junk food often to always is slightly higher than management, humanities and science (36% vs. 24% vs. 24% vs. 22%). The proportion of students from management stream who never avoid junk food is higher than students from science, humanities and education (12% vs. 4% vs. 4% vs. 2%), even though those who reported ‘never’ to ‘rare’ avoidance of junk food is higher among the students of humanities faculty than management, science and education (26% vs. 18% vs. 16% vs. 16%). Further analysis didn’t show any significant association between faculty of students and avoidance of junk food (p=0.254).

**Table 4.17**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Faculty and avoidance of sweets* | | | | | | | | |
|  | | | I avoid the intake of sweets | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Faculty | Science | N | 8 | 8 | 19 | 10 | 5 | 50 |
| % | 16.0% | 16.0% | 38.0% | 20.0% | 10.0% | 100.0% |
| Management | N | 5 | 7 | 26 | 6 | 6 | 50 |
| % | 10.0% | 14.0% | 52.0% | 12.0% | 12.0% | 100.0% |
| Education | N | 3 | 8 | 24 | 12 | 3 | 50 |
| % | 6.0% | 16.0% | 48.0% | 24.0% | 6.0% | 100.0% |
| Humanities | N | 5 | 12 | 17 | 15 | 1 | 50 |
| % | 10.0% | 24.0% | 34.0% | 30.0% | 2.0% | 100.0% |
| Total | | N | 21 | 35 | 86 | 43 | 15 | 200 |
| % | 10.5% | 17.5% | 43.0% | 21.5% | 7.5% | 100.0% |

From Table 4.17, more students from management study stream than science, education and humanities (12% vs. 10% vs. 6% vs. 2%) reported they always avoid the intake of sweets, and the proportion of students from humanities stream who avoid sweets often to always is slightly higher than science, education and management (32% vs. 30% vs. 30% vs. 24%). The proportion of students from science stream who never avoid sweets is higher than students from management, humanities and education (16% vs. 10% vs. 10% vs. 6%), even though those who reported ‘never’ to ‘rare’ avoidance of sweets is higher among the students of humanities stream than science, management, and education (34% vs. 32% vs. 24% vs. 22%). Further analysis didn’t show any significant association between study stream of students and avoidance of sweets (p=0.271).

**Table 4.18**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and avoidance of the intake of alcohol* | | | | | | | | |
|  | | | I avoid the intake of alcohol | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | n | 7 | 3 | 6 | 11 | 23 | 50 |
| % | 14.0% | 6.0% | 12.0% | 22.0% | 46.0% | 100.0% |
| Management | n | 10 | 8 | 7 | 3 | 22 | 50 |
| % | 20.0% | 16.0% | 14.0% | 6.0% | 44.0% | 100.0% |
| Education | n | 7 | 0 | 3 | 3 | 37 | 50 |
| % | 14.0% | 0.0% | 6.0% | 6.0% | 74.0% | 100.0% |
| Humanities | n | 1 | 7 | 9 | 12 | 21 | 50 |
| % | 2.0% | 14.0% | 18.0% | 24.0% | 42.0% | 100.0% |
| Total | | n | 25 | 18 | 25 | 29 | 103 | 200 |
| % | 12.5% | 9.0% | 12.5% | 14.5% | 51.5% | 100.0% |

From Table 4.18, more students from education study stream than science, management and humanities (74% vs. 46% vs. 44% vs. 42%) reported they always avoid alcohol, and the proportion of students from education stream who avoid alcohol often to always is higher than science, humanities and management (80% vs. 68% vs. 66% vs. 50%). The proportion of students from management stream who never avoid alcohol is higher than students from science, education and humanities (20% vs. 14% vs. 14% vs. 2%), and those who reported ‘never’ to ‘rare’ avoidance of alcohol is higher among the students of management stream than science, humanities and education (36% vs. 20% vs. 16% vs. 14%). Further analysis showed a significant association between study stream of students and avoidance of alcohol (p=0.00).

**Table 4.19**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and Exercise habits* | | | | | | | | |
|  | | | I exercise daily | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | N | 4 | 14 | 17 | 7 | 8 | 50 |
| % | 8.0% | 28.0% | 34.0% | 14.0% | 16.0% | 100.0% |
| Management | N | 4 | 10 | 20 | 8 | 8 | 50 |
| % | 8.0% | 20.0% | 40.0% | 16.0% | 16.0% | 100.0% |
| Education | N | 1 | 8 | 19 | 11 | 11 | 50 |
| % | 2.0% | 16.0% | 38.0% | 22.0% | 22.0% | 100.0% |
| Humanities | N | 2 | 6 | 25 | 12 | 5 | 50 |
| % | 4.0% | 12.0% | 50.0% | 24.0% | 10.0% | 100.0% |
| Total | | N | 11 | 38 | 81 | 38 | 32 | 200 |
| % | 5.5% | 19.0% | 40.5% | 19.0% | 16.0% | 100.0% |

From Table 4.19, more students from education study stream than science, management and humanities (22% vs. 16% vs. 16% vs. 10%) reported they always exercise, and the proportion of students from education stream who exercise often to always is higher than humanities, management and science (44% vs. 34% vs. 32% vs. 30%). The proportion of students from science and management stream who never exercise is higher than students from humanities and education (8% vs. 8% vs. 4% vs. 2%), even though those who reported ‘never’ to ‘rare’ engagement in exercise is higher among the students of science stream than management, education and humanities (36% vs. 28% vs. 18% vs. 16%). Further analysis didn’t show any significant association between study stream of students and engagement in exercise (p=0.45).

**Table 4.20**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross tabulation between Study Stream and using cycle/walk instead of driving or taking a bus.* | | | | | | | | |
|  | | | I walk/use cycle instead of driving or taking a bus. | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | n | 6 | 11 | 11 | 14 | 8 | 50 |
| % | 12.0% | 22.0% | 22.0% | 28.0% | 16.0% | 100.0% |
| Management | n | 13 | 10 | 11 | 8 | 8 | 50 |
| % | 26.0% | 20.0% | 22.0% | 16.0% | 16.0% | 100.0% |
| Education | n | 10 | 10 | 9 | 14 | 7 | 50 |
| % | 20.0% | 20.0% | 18.0% | 28.0% | 14.0% | 100.0% |
| Humanities | n | 13 | 10 | 12 | 9 | 6 | 50 |
| % | 26.0% | 20.0% | 24.0% | 18.0% | 12.0% | 100.0% |
| Total | | n | 42 | 41 | 43 | 45 | 29 | 200 |
| % | 21.0% | 20.5% | 21.5% | 22.5% | 14.5% | 100.0% |

From Table 4.20, more students from science and management study stream than education and humanities (16% vs. 16% vs. 14% vs. 12%) reported they always use cycle or walk, and the proportion of students from science stream who walk or use cycle often to always is slightly higher than education, management and humanities (44% vs. 42% vs. 32% vs. 30%). The proportion of students from management and humanities stream who never practice cycling or walking is higher than students from education and science (26% vs. 26% vs. 20% vs. 12%), and those who reported ‘never’ to ‘rare’ practice of walking or cycling is higher among the students of management and humanities stream than education and science (46% vs. 46% vs. 40% vs. 34%). Further analysis didn’t show any significant association between study stream of students and avoidance of junk food (p=0.87).

**Table 4.21**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and Sleep* | | | | | | | | |
|  | | | I get at least 7 hours of sleep every night | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | N | 0 | 0 | 5 | 12 | 33 | 50 |
| % | 0.0% | 0.0% | 10.0% | 24.0% | 66.0% | 100.0% |
| Management | n | 0 | 1 | 7 | 8 | 34 | 50 |
| % | 0.0% | 2.0% | 14.0% | 16.0% | 68.0% | 100.0% |
| Education | n | 1 | 2 | 9 | 11 | 27 | 50 |
| % | 2.0% | 4.0% | 18.0% | 22.0% | 54.0% | 100.0% |
| Humanities | n | 1 | 1 | 7 | 18 | 23 | 50 |
| % | 2.0% | 2.0% | 14.0% | 36.0% | 46.0% | 100.0% |
| Total | | n | 2 | 4 | 28 | 49 | 117 | 200 |
| % | 1.0% | 2.0% | 14.0% | 24.5% | 58.5% | 100.0% |

From Table 4.21, more students from management study stream than science, education and humanities (68% vs. 66% vs. 54% vs. 46%) reported they always sleep adequately, and the proportion of students from science stream who sleep adequately often to always is slightly higher than management, humanities and education (90% vs. 84% vs. 82% vs. 76%). The proportion of students from humanities and education stream who sleep adequately is higher than students from science and management (2% vs. 2% vs. 0% vs. 0%), even though those who reported ‘never’ to ‘rare’ adequate sleep habits is higher among the students of education stream than humanities, management, science (6% vs. 4% vs. 2% vs. 0%). Further analysis didn’t show any significant association between study stream of students and adequate sleep habits (p=0.43).

**Table 4.22**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and Regular sleep/awake timing* | | | | | | | | |
|  | | | I go to bed and wake up every day at the same time | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | N | 3 | 8 | 14 | 18 | 7 | 50 |
| % | 6.0% | 16.0% | 28.0% | 36.0% | 14.0% | 100.0% |
| Management | N | 7 | 4 | 15 | 14 | 10 | 50 |
| % | 14.0% | 8.0% | 30.0% | 28.0% | 20.0% | 100.0% |
| Education | N | 3 | 7 | 15 | 15 | 10 | 50 |
| % | 6.0% | 14.0% | 30.0% | 30.0% | 20.0% | 100.0% |
| Humanities | N | 4 | 7 | 10 | 19 | 10 | 50 |
| % | 8.0% | 14.0% | 20.0% | 38.0% | 20.0% | 100.0% |
| Total | | N | 17 | 26 | 54 | 66 | 37 | 200 |
| % | 8.5% | 13.0% | 27.0% | 33.0% | 18.5% | 100.0% |

From Table 4.22, more students from management, education and humanities than science (20% vs. 20% vs. 20% vs. 14%) reported they always maintain same sleep/awake timing, and the proportion of students from humanities stream who maintain same sleep/awake cycle often to always is slightly higher than science, education and management (58% vs. 50% vs. 50% vs. 48%). The proportion of students from management stream who never maintain same sleep/awake timing is higher than students from humanities, science and education (14% vs. 8% vs. 6% vs. 6%), even though those who reported ‘never’ to ‘rare’ maintenance of same sleep/awake timing is higher among the students of management, science and humanities stream than education (22% vs. 22% vs. 22% vs. 20%). Further analysis didn’t show any significant association between study stream of students and maintenance of circadian rhythms (p=0.86).

**Table 4.23**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and washing hands before meals* | | | | | | | | |
|  | | | I wash my hand before taking my meal. | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | n | 0 | 0 | 1 | 3 | 46 | 50 |
| % | 0.0% | 0.0% | 2.0% | 6.0% | 92.0% | 100.0% |
| Management | n | 1 | 1 | 2 | 3 | 43 | 50 |
| % | 2.0% | 2.0% | 4.0% | 6.0% | 86.0% | 100.0% |
| Education | n | 0 | 0 | 2 | 2 | 46 | 50 |
| % | 0.0% | 0.0% | 4.0% | 4.0% | 92.0% | 100.0% |
| Humanities | n | 0 | 1 | 1 | 5 | 43 | 50 |
| % | 0.0% | 2.0% | 2.0% | 10.0% | 86.0% | 100.0% |
| Total | | n | 1 | 2 | 6 | 13 | 178 | 200 |
| % | 0.5% | 1.0% | 3.0% | 6.5% | 89.0% | 100.0% |

From Table 4.23, more students from science and education study stream than management and humanities (92% vs. 92% vs. 86% vs. 86%) reported they always wash their hands before meals, and the proportion of students from science stream who wash hands before meals often to always is slightly higher than education, humanities and management (98% vs. 96% vs. 96% vs. 92%). The proportion of students from management stream who never wash hands before meal is slightly higher than students from science, education and humanities (2% vs. 0% vs. 0% vs. 0%), and those who reported ‘never’ to ‘rare’ hand washing before meal is higher among the students of management stream than humanities, education and science (4% vs. 2% vs. 0% vs. 0%). Further analysis didn’t show any significant association between study stream of students and washing hands before meal (p=0.83).

**Table 4.24**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and yoga/meditation practice* | | | | | | | | |
|  | | | I practice meditation /yoga | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | n | 8 | 13 | 18 | 8 | 3 | 50 |
| % | 16.0% | 26.0% | 36.0% | 16.0% | 6.0% | 100.0% |
| Management | n | 10 | 10 | 14 | 12 | 4 | 50 |
| % | 20.0% | 20.0% | 28.0% | 24.0% | 8.0% | 100.0% |
| Education | n | 9 | 14 | 15 | 8 | 4 | 50 |
| % | 18.0% | 28.0% | 30.0% | 16.0% | 8.0% | 100.0% |
| Humanities | n | 8 | 11 | 17 | 11 | 3 | 50 |
| % | 16.0% | 22.0% | 34.0% | 22.0% | 6.0% | 100.0% |
| Total | | n | 35 | 48 | 64 | 39 | 14 | 200 |
| % | 17.5% | 24.0% | 32.0% | 19.5% | 7.0% | 100.0% |

From Table 4.24, more students from management and education study stream than science and humanities (8% vs. 8% vs. 6% vs. 6%) reported they always practice meditation/yoga, and the proportion of students from management stream who practice meditation/yoga often to always is slightly higher than humanities, education and science (32% vs. 28% vs. 24% vs. 22%). The proportion of students from management stream who never practice meditation/yoga is higher than students from education, science and humanities (20% vs. 18% vs. 16% vs. 16%), even though those who reported ‘never’ to ‘rare’ practice of meditation/yoga is higher among the students of education stream than management, humanities and science (46% vs. 40% vs. 38% vs. 36%). Further analysis didn’t show any significant association between study stream of students and practice of meditation/yoga (p=0.99).

**Table 4.25**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and Playing sports* | | | | | | | | |
|  | | | I play sports | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | n | 4 | 2 | 29 | 11 | 4 | 50 |
| % | 8.0% | 4.0% | 58.0% | 22.0% | 8.0% | 100.0% |
| Management | n | 6 | 12 | 14 | 12 | 6 | 50 |
| % | 12.0% | 24.0% | 28.0% | 24.0% | 12.0% | 100.0% |
| Education | n | 3 | 7 | 20 | 12 | 8 | 50 |
| % | 6.0% | 14.0% | 40.0% | 24.0% | 16.0% | 100.0% |
| Humanities | n | 6 | 12 | 16 | 14 | 2 | 50 |
| % | 12.0% | 24.0% | 32.0% | 28.0% | 4.0% | 100.0% |
| Total | | n | 19 | 33 | 79 | 49 | 20 | 200 |
| % | 9.5% | 16.5% | 39.5% | 24.5% | 10.0% | 100.0% |

From Table 4.25, more students from education study stream than management, science and humanities (16% vs. 12% vs. 8% vs. 4%) reported they always play sports, and the proportion of students from education stream who play sports often to always is slightly higher than management, humanities, and science (40% vs. 36% vs. 32% vs. 30%). The proportion of students from management and humanities stream who never play sports is higher than students from science and education (12% vs. 12% vs. 8% vs. 6%), even though those who reported ‘never’ to ‘rare’ engagement in sports is higher among the students of management and humanities stream than education and science (36% vs. 36% vs. 20% vs. 12%). Further analysis showed a significant association between study stream of students and playing sports (p=0.05)

**Table 4.26**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and Involvement in Gardening* | | | | | | | | |
|  | | | I get involve in gardening | | | | | Total |
| Never | Rarely | Sometimes | Often | Always |
| Study Stream | Science | n | 8 | 12 | 17 | 9 | 4 | 50 |
| % | 16.0% | 24.0% | 34.0% | 18.0% | 8.0% | 100.0% |
| Management | n | 6 | 7 | 20 | 15 | 2 | 50 |
| % | 12.0% | 14.0% | 40.0% | 30.0% | 4.0% | 100.0% |
| Education | n | 0 | 11 | 21 | 11 | 7 | 50 |
| % | 0.0% | 22.0% | 42.0% | 22.0% | 14.0% | 100.0% |
| Humanities | n | 9 | 8 | 24 | 6 | 3 | 50 |
| % | 18.0% | 16.0% | 48.0% | 12.0% | 6.0% | 100.0% |
| Total | | n | 23 | 38 | 82 | 41 | 16 | 200 |
| % | 11.5% | 19.0% | 41.0% | 20.5% | 8.0% | 100.0% |

From Table 4.26, more students from education study stream than science, humanities and management (14% vs. 8% vs. 6% vs. 4%) reported they always get involve in gardening, and the proportion of students from education stream who get involve in gardening often to always is slightly higher than management, science and humanities (36% vs. 34% vs. 26% vs. 18%). The proportion of students from humanities stream who never get involve in gardening is higher than students from science, management and education (18% vs. 16% vs. 12% vs. 0%), and those who reported ‘never’ to ‘rare’ involvement in gardening is higher among the students of science faculty than humanities, management and education (40% vs. 34% vs. 26% vs. 22%). Further analysis didn’t show any significant association between study stream of students and involvement in gardening (p=0.08).

**Table 4.27**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and whole body check up* | | | | | |
|  | | | I take a whole body checkup once a year | | Total |
| No | Yes |
| Study Stream | Science | N | 36 | 14 | 50 |
| % | 72.0% | 28.0% | 100.0% |
| Management | N | 28 | 22 | 50 |
| % | 56.0% | 44.0% | 100.0% |
| Education | N | 27 | 23 | 50 |
| % | 54.0% | 46.0% | 100.0% |
| Humanities | N | 35 | 15 | 50 |
| % | 70.0% | 30.0% | 100.0% |
| Total | | N | 126 | 74 | 200 |
| % | 63.0% | 37.0% | 100.0% |

From Table 4.27, slightly more students from education study stream than management, humanities and science (46% vs. 44% vs. 30% vs. 28%) reported they take a whole-body checkup, and the proportion of students from science stream who take a whole-body checkup is higher than humanities, management and education (72% vs. 70% vs. 56% vs. 54%). Altogether, 69% of the students reported they perform whole body checkups once a year whereas 31% of the students reported they perform a whole-body checkup once a year. Further analysis showed no significant association between study stream of students and whole-body checkup (p=0.13).

**Table 4.28**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and coping with stress* | | | | | |
|  | | | I cope well with stress | | Total |
| No | Yes |
| Study Stream | Science | n | 12 | 38 | 50 |
| % | 24.0% | 76.0% | 100.0% |
| Management | n | 25 | 25 | 50 |
| % | 50.0% | 50.0% | 100.0% |
| Education | n | 9 | 41 | 50 |
| % | 18.0% | 82.0% | 100.0% |
| Humanities | n | 16 | 34 | 50 |
| % | 32.0% | 68.0% | 100.0% |
| Total | | n | 62 | 138 | 200 |
| % | 31.0% | 69.0% | 100.0% |

From Table 4.28, more students from education study stream than science, humanities and management (82% vs. 76% vs. 68% vs. 50%) reported they cope well with stress, and the proportion of students from management stream who do not cope well with stress is higher than the students from humanities, science and education stream (50% vs. 32% vs. 24% vs. 18%). Altogether, 69% of the students reported they cope well with stress whereas 31% of the students reported they don’t cope well with stress. Further analysis showed a significant association between study stream of students and coping with stress (p=0.004).

**Table 4.29**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study stream and Avoidance of Smoking* | | | | | |
|  | | | I do not smoke cigarette | | Total |
| No | Yes |
| Study Stream | Science | N | 7 | 43 | 50 |
| % | 14.0% | 86.0% | 100.0% |
| Management | N | 5 | 45 | 50 |
| % | 10.0% | 90.0% | 100.0% |
| Education | N | 7 | 43 | 50 |
| % | 14.0% | 86.0% | 100.0% |
| Humanities | N | 7 | 43 | 50 |
| % | 14.0% | 86.0% | 100.0% |
| Total | | N | 26 | 174 | 200 |
| % | 13.0% | 87.0% | 100.0% |

From Table 4.29, slightly more students from management study stream than science, education and humanities (90% vs. 86% vs. 86% vs. 86%) reported they do not smoke cigarette, and the proportion of students from science, education and humanities who smoke cigarettes is higher than management (14% vs. 14% vs. 14% vs. 10%). Altogether, 87% of the students reported they do not smoke whereas 13% of the students reported they smoke cigarettes. Further analysis showed no significant association between study stream of students and no smoking habit (p=0.25)

**4.4 Cross Tabulation of Sex and Dominant Health Locus of Control**

**Table 4.30**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Sex and Dominant Health Locus of Control* | | | | | | | |
|  | | | Dominant Health Locus of Control | | | | Total |
| Internal Health LOC | Chance Health LOC | Powerful Others Health LOC | Not clearly dominant |
| Sex | Male | n | 66 | 3 | 28 | 3 | 100 |
| % | 66.0% | 3.0% | 28.0% | 3.0% | 100.0% |
| Female | n | 68 | 2 | 22 | 8 | 100 |
| % | 68.0% | 2.0% | 22.0% | 8.0% | 100.0% |
| Total | | n | 134 | 5 | 50 | 11 | 200 |
| % | 67.0% | 2.5% | 25.0% | 5.5% | 100.0% |

From Table 4.30, slightly more female students have Internal Health Locus of Control than males (68% vs. 66%). And the proportion of male students belonging to Chance Health Locus of Control is slightly more than female (3% vs. 2%). However, the proportion of male students belonging to Powerful Others Locus of Control is more than the females (28% vs. 22%). Altogether, 67% of the students have Internal Health Locus of Control, 2.5% of the students have Chance Health Locus of Control and 25% of the students have Powerful Others Health Locus of Control as their dominant health LOC. Further analysis didn’t show any significant association between sex of students and dominant health locus of control (p=0.35).

**4.5 Cross Tabulation of Student’s Study Stream and Dominant Health Locus of Control**

**Table 4.31**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Cross Tabulation between Study Stream and Dominant Health Locus of Control* | | | | | | | |
|  | | | Dominant Health Locus of Control | | | | Total |
| Internal HLOC | Chance HLOC | Powerful Others HLOC | Not dominant |
| Study Stream | Science | n | 31 | 1 | 16 | 2 | 50 |
| % | 62.0% | 2.0% | 32.0% | 4.0% | 100.0% |
| Management | n | 31 | 2 | 15 | 2 | 50 |
| % | 62.0% | 4.0% | 30.0% | 4.0% | 100.0% |
| Education | n | 35 | 1 | 11 | 3 | 50 |
| % | 70.0% | 2.0% | 22.0% | 6.0% | 100.0% |
| Humanities | n | 37 | 1 | 8 | 4 | 50 |
| % | 74.0% | 2.0% | 16.0% | 8.0% | 100.0% |
| Total | | n | 134 | 5 | 50 | 11 | 200 |
| % | 67.0% | 2.5% | 25.0% | 5.5% | 100.0% |

From Table 4.31, more students from humanities study stream have Internal Health Locus of Control than education, management and science (74% vs. 70% vs. 62% vs. 62%). And the proportion of students from management stream belonging to Chance Health Locus of Control is slightly more than science, education and humanities (4% vs. 2% vs. 2% vs. 2%). However, the proportion of students from science belonging to Powerful Others Locus of Control is more than the management, education and humanities (32% vs. 30% vs. 22% vs. 16%). Altogether, 67% of the students have Internal Health Locus of Control, 2.5% of the students have Chance Health Locus of Control and 25% of the students have Powerful Others Health Locus of Control as their dominant health LOC. Further analysis didn’t show any significant association between study stream of students and dominant Health Locus of Control (p=0.77).

**CHAPTER V**

**DISCUSSION AND CONCLUSION**

**5.1 Discussion**

Most of the male population disclosed avoiding sweets and junk foods for which no significant association was recorded in the study. This idea opposes some literature (e.g., Kremers et al., 2013; Hunt et al., 2020), which tells that avoiding junk food is higher in females due to higher awareness of nutritional foods and physical figure perturbation. The lower significant differences in this research could have occurred due to unique contextual factors of students in Nepal, where gender stereotypes loosely determine dietary habits.

A higher level of significant association was noticed between sex and alcohol avoidance, more boys than girls reported they always avoided alcoholic beverage. This matches with previous studies by Giri et al. (2012) and Shrestha et al. (2022), which show very high consumption of alcohol in male students in Nepal. However, female students who eluded alcohol were still considerable, which shows the contextual and cultural factors of consuming less alcohol are changing or are trending to acquire healthier food choices.

The study found significant association between sex and exercise in which more females than males are engaging themselves in exercise. This contradicts with (CDC, 2022) which claimed more males than females prefer to engage in vigorous to intense exercise.

The study found students are sleeping adequately, and no significant difference was observed between male and female students. This contradicts the findings of Lund et al. (2010), which showed unhealthy sleeping habits among university students around the world. Comparatively better sleeping habits of the students at Tribhuvan University could be due to less academic pressure or diverse university lifestyle demand.

The study found highly significant difference between students’ sex and participation on sports, with more females reporting their engagement in sports, this contradicts findings from Keating et al. (2005) and Eime et al. (2013). This disparity may be closely related to the particular context of Nepalese students, where more female students may be driven in healthful pursuits because of growing health awareness and institutional advocacy.

Males' poor hygiene practices than females, aligned with Aiello et al. (2008). However, no notable distinctions were observed in yoga/ meditation habits, unlike Khalsa et al. (2011), where girls were more likely to participate in these activities. This tells that Student’s sex does not play an important role in deciding stress management practices like practice yoga and meditation in the researched participants.

The study found a significant association between sex and avoidance of cigarette smoking among the university going students which corresponds to Adhikari et al. (2014), who also found more females than male students avoid smoking. The study also found significant number of students are avoiding smoking which corresponds to Sok et al. (2020), who also reported low smoking prevalence among university students of Cambodia.

The study found students of non-health majors like humanities and Management also consume healthy diet, engage in regular exercise, and avoid alcohol and smoking. This contradicted with Ansari et al (2001) that health related majors’ practice these health behaviors more than the non-health majors.

The study found no significant association between sex and HLOC of university-going students which matches with Lau et al. (1986) and Dağ & Şahin (2011), who concluded that contextual factors and sociocultural factors mostly supersede gender in forming HLOC. This emphasizes the concept of HLOC being context-based, differentiating by cultural values and norms, study level, and healthcare accessibility instead of strongly intertwined to sex of students.

Fractionally, more internal HLOC was found in females than males in the study. This corresponds with Raut (2024) and Callaghan & Papageorgiou (2015) studies, which discovered that females having slightly more internal HLOC may be because of higher self-regulation in health behaviors. However, the finding does not correspond with Courtenay et al. (2002) and Kalechstein & Nowicki (1997), who discussed the contradictory idea that males usually possess stronger internal HLOC, referring to health consequences to personal control. In academic settings, increasing women's empowerment and health awareness points to some degree of dominance among females having higher internal HLOC according to Callaghan & Papageorgiou (2015).

The research also showed that the concept of Powerful Others HLOC was higher in males than females, attributed to the greater reliance on health professionals or third-party personnel for health commitment or choices. This contradicts Marshall (1991), suggesting that women tend to have a higher "Powerful Others" HLOC because of greater involvement with the health care systems. In this study, male students' reliability on "Powerful Others" could hint towards the cultural trust of medical professionals in Nepal, as claimed by Zhang & Liu (2019) in collectivist societies. The greater Powerful Other HLOC in males could reflect the opposing traditional idea of males having higher self-dependence, also caused by cultural factors that have strongly shaped belief in health personnel in Nepal.

The research showed slightly greater chance HLOC in males than female’s even though the difference was minimal. This contrasts with Norman et al. (1998) findings, which discovered females attribute health outcomes to fate or luck. In this study, the almost equal disposition tells that gender variation in health beliefs is minimal. This little difference in the chance HLOC indicates that modern education could be a reason for reducing gender-based fatalism regarding health.

A few pieces of research coincide with previous research, such as females' internal HLOC. On the other hand, they depend on "Powerful Others" attributing to challenging ideas on conventional gender-based HLOC postulations. The lack of significant gender differences reinforces the statement that HLOC is being heavily affected by cultural and environmental components rather than by only student’s sex. Upcoming studies should delve into how education, societal rules, and regional healthcare systems form such beliefs across different genders.

The research discovered no significant association between students' study stream and HLOC. However the results pointed that students from humanities reported for the highest internal HLOC, sequenced by education, management and science. This opposes the existing literature advising that students in health-related and science/technology streams prefer to keep a higher internal locus of control because of their systematic and performance-focused curricula (Findley & Cooper, 1983; Gifford et al., 2006). Students from humanities backgrounds showing higher locus of control could be due to the demands of their academics like self-reflection, critical thinking and free analysis (Furnham & Steel, 1993). While previous studies related to an external locus of control in humanities and arts streams caused by subjective assessments, contemporary findings show that the students could acquire a strong sense of individual autonomy in health-related choices, probably because of the added lens of psychological and behavioral health ideas.

On the contrary, students from the science stream showed a greater tendency toward Powerful Others HLOC than other faculties. This corresponds partly with Yilmaz and Karaca's (2016) argument that health and science students get bigger disclosure of health-related information, however, it also shows that they probably put strong trust in doctors or systemic health authorities.

The overall dominance of Internal HLOC across all faculties supports the notion that university going students, regardless of discipline, generally perceive personal control over their health. However, the lack of a statistically significant association between Student’s study stream and dominant HLOC implies that other factors—such as cultural background, personal experiences, or institutional influences—may play a more substantial role in shaping locus of control orientations than academic discipline alone. This aligns with Shreedevi et al.’s (2013) observation that cultural differences (individualistic vs. collectivistic) significantly influence HLOC, suggesting that future research should consider these broader sociocultural dimensions alongside academic stream.

While prior literature emphasizes discipline-specific differences in locus of control, the current study highlights a more complex interplay, where humanities students exhibit stronger internal control beliefs than expected, and science students demonstrate greater reliance on external health authorities. Further qualitative research could explore the underlying reasons for these trends, particularly how curriculum design, career expectations, and cultural factors shape students' health-related control beliefs.

**5.2 Limitations of the Study:**

The study used convenience sampling, which is a non-probability sampling technique because of which findings from this study may not be generalized to the broader student population at Tribhuvan University or other university of Nepal. The sample also have excluded the academic levels such as undergraduate, PhDs and Postgraduates. Therefore, it has its limitation in terms of sample representation. Another limitation could be on the reliance of self-reported data, which may introduce biases such as social desirability affecting the accuracy of the responses. Thirdly, it has limited scope of health behaviors because it has not cover sexual health behaviors of the students. This study also have used MHLOC scale that is a standardized tool but its application in Nepalese context may not capture local nuances in health beliefs and behaviors.

**5.3 Conclusion**

In conclusion, health behaviors like alcohol avoidance, exercise habits, sports and avoidance of smoking have association with the university going student’s sex. The Female students more likely to engage in health behaviors such as exercise, playing sports and junk food avoidance, while male students showed higher tendencies to avoid alcohol. Health behaviors like alcohol avoidance, playing sports and stress coping was associated with the student’s study stream. The study could not find any association of Health Locus of Control with student’s sex and study stream. Predominantly, students studying at university campus, TU demonstrate an internal HLOC, with humanities students scoring highest. But gaps were noted in preventive health practices, including low participation in yoga/meditation and irregular health checkups.

**5.4 Implications**

The study has emphasized the importance of targeted health promotion programs that considers sex-specific and study stream-specific health behaviors. Universities should integrate health education in their curriculum, especially for non-health study streams and foster positive health behaviors. The researchers must employ mixed methods, larger and more diverse samples to further explore these dynamics. Having some limitation, this study contributes to the understanding of health behaviors and HLOC among students studying at university campus of TU, Nepal which offers a foundation research for policy interventions aimed at improving student well-being.

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**Annex-1**

**Participant information sheet and Informed consent form.**

**INFORMATION SHEET**

Title of research: **Health Behaviors and Health Locus of Control of the students of Tribhuvan University, Kirtipur.**

The researcher involved in this study are:

Khem Nath Pokhrel

4th semester student,

Master in Clinical Psychology,

Tribhuvan University, Kirtipur, Nepal

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**What is this study about?**

You are being invited to participate in a research study investigating “Health locus of control and health related behaviors of the students of Tribhuvan University, Kirtipur”. The results of this study will provide the information on the health related behaviors and contribute significantly in understanding the relationship between health locus of control and health related behaviors of the Tribhuvan university students.

**PROCEDURE:**

In the first portion, you need to provide demographic information that includes questions about your age, sex, occupation, information about the household, etc. Then you will have to fill the two forms (a) form containing your health related behaviors (b) form containing the locus of control on your health behaviors. You will be given proper instruction before the procedure. It will take around 10 minutes to fill all the forms. If you need help with this, the researcher can assist you.

**RISKS AND BENEFITS:**

There are no risks associated with your participation in this study. There are no direct benefits to the participants, but results from the study will help us to understand the relationship between the health locus of control and health related behaviors of the students.

**COSTS AND PAYMENTS:**

You will not need to pay to take part in this research. It is free of cost.

**CONFIDENTIALITY:**

The records that identify you will be kept confidential as required by law. All the records about your involvement in this research will be stored in a locked file on a password protected, secure computer. A case number will indicate your identity on these records. The information will only be accessible to the investigators listed on the first page of this document. All your information will be handled confidentially and will not be specifically identified in any publication of research results. The study results will be retained in our research records and may be used in further research studies.

**VOLUNTARY PARTICIPATION AND RIGHTS TO WITHDRAW:**

Your participation is completely voluntary and not under any obligation to participate in this research study. You can withdraw your participation at any time by informing the researchers. There will be No any consequences or penalties for withdrawing from the study. Please ask the researcher if you have any questions about the study.

**INFORMED CONSENT FORM**

The purpose of this study is to understand the relationship between health locus of control and health related behaviors among the students of Tribhuvan University, Kirtipur. I confirm I have been provided with a participant information sheet and that I have been explained all of my questions that I had about the research. I understand that any future questions I will have about the research will be answered by the researcher(s) or the investigators listed on the participant information sheet.

I confirm that my participation in this study is completelyvoluntary, and I also understand that I am free to withdraw from the study whenever I want. I have understood the purpose,benefits, risks and cost associated with this study and I agree to participate in this study.

I don't have any objections and I am willing to support the researchers as I have been explained that all my information will be kept confidential.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_                                                             \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of researcher                                                                Signature of participant

**Annex-2**

**Demographic Profile**

Name:

Age:

Ethnicity:

Sex:  Male                  Female                          Prefer not to say

Marital Status:  Married               Unmarried

Family type: Nuclear                  Extended

Occupational status: Employed (having a paid job)                    Unemployed

Average family income/month :

Faculty: Science                 Management                   Humanities                  Education

Residence type: Own house                          Rent

Do you have any chronic illness?  Yes                No

**Health related behavior questionnaire:**

Each item below is a statement about your health related behavior with which you may select the frequency of your involvement. Beside each statement is a scale which ranges from Always (4) to Never (0). For each item we would like you to circle the number that represents the frequency of your involvement to that behavioral statement.This is a measure of your current practicing health behavior; obviously, there are no right or wrong answers.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| S.N | I have following health related behaviors:- | Always | Often | Sometimes | Rarely | Never |
| 1. | I avoid the intake of junk food. | 4 | 3 | 2 | 1 | 0 |
| 2. | I avoid the intake of sweets | 4 | 3 | 2 | 1 | 0 |
| 3. | I avoid the intake of alcohol. | 4 | 3 | 2 | 1 | 0 |
| 4. | I exercise daily. | 4 | 3 | 2 | 1 | 0 |
| 5. | I walk/use cycle instead of driving or taking a bus. | 4 | 3 | 2 | 1 | 0 |
| 6. | I get at least 7 hours of sleep every night | 4 | 3 | 2 | 1 | 0 |
| 7. | I go to bed and wake up every day at the same time | 4 | 3 | 2 | 1 | 0 |
| 8. | I wash my hands before taking my meal | 4 | 3 | 2 | 1 | 0 |
| 9. | I practice meditation/yoga | 4 | 3 | 2 | 1 | 0 |
| 10. | I play sports | 4 | 3 | 2 | 1 | 0 |
| 11. | I get involved in gardening | 4 | 3 | 2 | 1 | 0 |

|  |  |  |  |
| --- | --- | --- | --- |
| S.N | Statements | Yes | No |
| 12. | I take a whole body checkup once a year. | 1 | 0 |
| 13. | I cope well with stress. | 1 | 0 |
| 14. | I am health conscious. | 1 | 0 |
| 15. | I do not smoke. | 1 | 0 |

**Annex-3**

**Multidimensional Health Locus of control**

Each item below is a belief statement about your medical condition with which you may agree or disagree. Beside each statement is a scale which ranges from strongly disagree (1) to strongly agree (6). For each item we would like you to circle the number that represents the extent to which you agree or disagree with that statement. The more you agree with a statement, the higher will be the number you circle. The more you disagree with a statement, the lower will be the number you circle. Please make sure that you answer EVERY ITEM and that you circle ONLY ONE number per item. This is a measure of your personal beliefs; obviously, there are no right or wrong answers.

1= Strongly Disagree (SD). 2= Moderately Disagree (MD). 3= Disagree (D).

4= Agree (A). 5= Moderately Agree (MA). 6= Strongly Agree (SA).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S.N | Question | SD | MD | D | A | MA | SA |
| 1. | If I get sick, it is my own behavior which determines how soon I get well again. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. | No matter what I do, if I am going to get sick, I will get sick. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. | Having regular contact with my physician is the best way for me to avoid illness | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. | Most things that affect my health happen to me by accident. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. | Whenever I don't feel well, I should consult a medically trained professional. | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. | I am in control of my health. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. | My family has a lot to do with my becoming sick or staying healthy. | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. | When I get sick, I am to blame. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. | Luck plays a big part in determining how soon I will recover from an illness. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. | Health professionals control my health. | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. | My good health is largely a matter of good fortune. | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. | The main thing which affects my health is what I myself do. | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. | If I take care of myself, I can avoid illness. | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. | Whenever I recover from an illness, it's usually because other people (for example, doctors, nurses, family, friends) have been taking good care of me. | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. | No matter what I do, I 'm likely to get sick. | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. | If it's meant to be, I will stay healthy. | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. | If I take the right actions, I can stay healthy. | 1 | 2 | 4 | 5 | 5 | 6 |
| 18 | Regarding my health, I can only do what my doctor tells me to do. | 1 | 2 | 3 | 4 | 5 | 6 |