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Motivation and Attitude towards Studying Tourism among Students of Kaski District, Nepal

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Abstract

This study aimed to find the factors that motivate students to study tourism in the colleges of Nepal and to identify selection patterns for studying tourism subject through analysis of socio-demographic determinants according to gender, study level and college type. This study is designed as a descriptive and analytical study based on primary data. A total of 124 respondents collected from Kaski district as data input during November 2018 and data are collected using structure questionnaire. Chi-square test is used to determine factors associated with studying tourism in colleges of Nepal according to gender, study level and college type. Cronbach's alpha has been used to test reliability and validity. The result shows that gender has no association with all motivational variables for studying tourism in colleges of Nepal. Study level is associated with motivational variables such as learning value, self-efficacy, interest and emerging subject. College type is associated with motivational variables such as learning value, self-efficacy, social status and interest ($p < 0.05$). This study is particularly relevant for tourism subject teaching colleges and can help them for developing strategies for promotion of tourism subjects. Colleges studying tourism subjects must focus on the various opportunity areas that can be achieve by studying tourism subject to attract students.

Keywords: Attitude, Kaski, motivation, Nepal, tourism.

Introduction

Tourism is one of the most prevailing subjects in the field of management. Tourism is a social -economic phenomenon which has become the world's largest and fastest growing market. Tourism is considered as the most prominent area within the management and it attracts fewer students than other management subjects like account, finance and marketing. Most of the students perceived tourism as a non-significant subject during high school days and becomes more unwanted when they are in college and even more neglected subject in graduate education. With such discourse in the learning tourism education, students find it to have a negative attitude toward learning tourism subject because of its not computational exigency in everyday life problem sets. If they don't like the subject more often, they don't feel opportunities (Guido, 2013).

Motivation refers to those push factors that sustain student's desire to study tourism. Motivation is very important for school or college success, in its absence; the student never may make an effort to learn. Students not only have different quantities, but also different qualities of motivation that can vary from time to time depending on the learning and teaching context (Schlechty, 2001). Motivation is a multidimensional construct. Researchers in the field of motivation agree that a student engaging in any learning situation has to answer three fundamental questions: 'Can I do this activity?', 'Do I want to do this activity and why?' and 'What do I need to do to succeed?' (Wiegfield & Eccles, 2001). Students can also be extrinsically motivated to engage in an activity when they believe that working on the task will result in desirable outcomes like reward, good grade, parents' and teachers' approval, avoidance of punishment. Intrinsic motivation usually results in more cognitive engagement than extrinsic motivation (Ryan & Deci, 2000). Students respond differently to intrinsic and extrinsic motivation and each motivation type results in different form of engagement in and with their learning (Bowen, 2003). Using student voice, the researchers analyze the students' perceptions about their own motivation type and how these might impact the formation of authentic student engagement towards learning tourism. This research not only seeks to identify the relationship between student motivation and engagement in studying tourism subject and courses but also explores the different types motive base segment and cluster of students (Schlechty, 2011). Attitude is a psychological construct, a mental and emotional entity that inheres in or characterizes a person. Attitude can be formed from a person's past and present. An attitude can be a positive or negative. It could be concrete, abstract or just about anything in our environment. It was observed that the students who have negative attitude towards

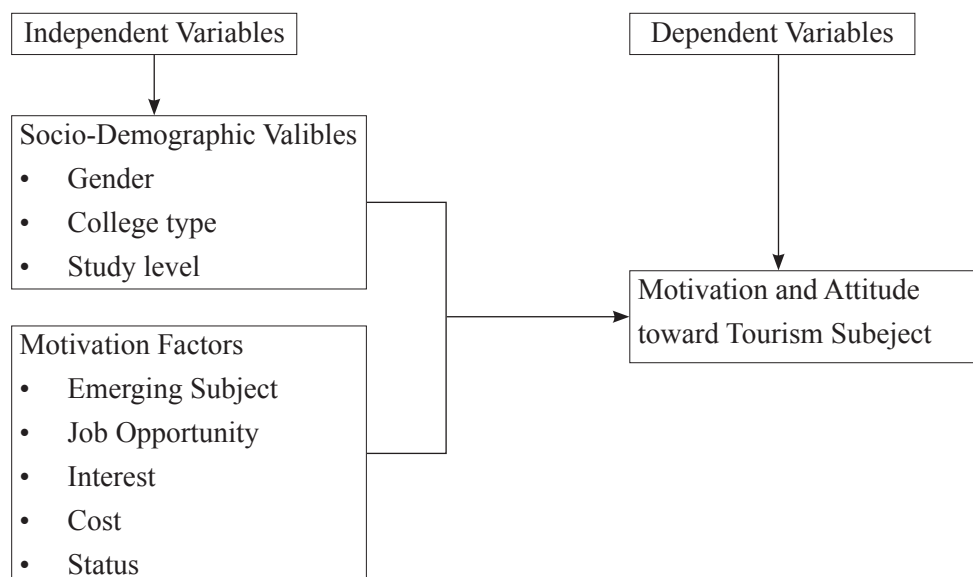
tourism have lack of motivation for enrollment and engagement and also the students who have positive attitudes towards tourism have less motivation for enrollment and engagement (Cracker, 2006). Therefore, this study is designed to understand students' perceptions about their own motivation type and how this may influence and impact on student engagement in learning tourism subject.

The Theory of Planned Behavior (TPB) was developed by Icek Ajzen as an attempt to predict human behavior. The TPB posits that attitude toward the behavior, subjective norm, and perceived behavioral control influence behavioral intention. The first construct of the theory is behavioral intention, which is the motivational factors that influence behavior. The stronger the intention to engage in a given behavior, the more likely it is to perform that behavior. The second construct is attitude towards the behavior which is the extent to which a person has a favorable or unfavorable appraisal of a given behavior. Attitude consists of behavioral beliefs and outcome evaluations. Subjective norm is the third construct which is a social pressure to perform or not to perform a given behavior. Combination of normative beliefs and motivation to comply constitute subjective norm. Perceived behavioral control also plays a key role in the TPB and it refers to people's perception of the ease or difficulty of performing the behavior of interest (Ajzen, 1991).

Hacieminoglu (2016) has done a research on Elementary School Students' Attitude toward Science and Related Variables with the objectives of explain the learning approach, motivational goal and show the effect and relation of gender and socio demographic variables towards the learning of science. Many students, especially females, have negative feelings and attitudes toward science, which discourages them from continuing with scientific inquiries. The correlation results revealed the positive relationship between attitude toward science and the other variables. Multiple regression analysis indicated that while students' meaningful learning, self-efficacy, and nature of science views have a positive contribution, rote learning contributed negatively to the model. The findings also showed that parents' income and education level had a significant effect on students' attitude toward science. Potvin and Hasni (2014) has done an extreme survey covering on last twelve years of educational research in an interest, motivation and attitude towards science and technology at K-12 levels: a systematic review of 12 years of educational research. The results show the relationship that exists between students and science & technology (S&T), is a complex and important one. The analysis revealed that boy/girl differences very frequently and that gender preferences were not as often linked to scientific disciplines as they were to pedagogical contexts or smaller-than-discipline

content objects. Guido (2013) has mention about physic in an article of the Attitude and Motivation towards Learning Physics. This study shows that there is no significant difference in the attitude and motivation of students towards learning physics. Furthermore, there is a negligible degree of relationship for attitude and motivation. The relationship between attitude and motivation is due to chance.

Figure1. Conceptual framework of motivation and attitude towards learning tourism



In earlier studies, attitudes and motivation were investigated as they were influencing components to learn and study various subject like math and physics. None of the previous literature and review was available which would address the motivation and attitude towards learning tourism subject by Nepalese students. Therefore, this study was done to enhance students' tourism literacy that help them to grasp essential tourism concepts, to understand the nature of tourism, to realize the relevance of tourism to their lives and to willingly continue their tourism study in colleges. This study focuses on the opportunity, scope and area of tourism subject to those students who have knowledge but not so much conviction towards it. So, this study is designed to determine motivational factors which are associated with learning tourism subject and also to select patterns that can be better understood and systematically analyzed through socio-demographic determinants according to gender, college type and study level. By studying literature, following conceptual framework was developed.

The figure shows the direct relationship of the predictive variables with the dependent

variable which is learning tourism subject and course. Selection of tourism subject and courses are influenced by gender, college type, study level and different motivational and attitudinal factors like emerging subject, job opportunity, interest, cost and social status which inspire for studying tourism subject. The figure demonstrates a model of selecting tourism subject and courses by students. It involves two categories of factors: socio demographic and motivational & attitude. It is conceptualized that selection of tourism subject and courses are affected by above two categorical factors. Therefore, it is hypothesized that these two factors have significant relationship with motivation towards studying tourism subject.

H₁: Gender, college type and study level have significant association with motivation towards studying tourism subject.

H₁: Interest, job opportunity, cost, social status, self-efficacy, learning values have significant association with motivation towards studying tourism subject.

Data and Methods

Descriptive and analytical research design was used to examine the association between studying tourism and other selected socio-demographic determinants. Bi-variate analysis had done separately to examine association. The study population was the students of management and tourism studying students of grade 12 and bachelor level in schools and colleges of Kaski District. This study was based on primary data collected from a sample of 124 students. The sampling techniques used are purposive sampling and stratified random sampling.

As Kaski district is popular for tourism in Nepal and many colleges in Kaski district are offering tourism course. So Kaski district was taken as sample area by using purposive sampling. Stratified sampling was used to select two public colleges, one tourism studying college and one private college that were registered in department of education in Pokhara. The sample of 62 students from public college, 27 students from tourism studying college and 35 students from private college were taken. The questionnaire was used as a data collection tool where questionnaire was opened and closed ended in nature.

After checking completeness and accuracy of the data obtained from field visit, the collected data were entered and analyzed by using statistical package for social science (SPSS) version 20.0. Descriptive statistics were conducted using frequencies. Reliability have been tested by Cronbach's alpha ($\alpha = 0.82$) by using SPSS where internal reliability of a set of items that measure a particular construct of independent variables to influence dependent of studying tourism courses. Validity is tested by test and re- test of questionnaire whether it covers all

the variables and items. Beside this, construct validity was measured by focusing all items related to construct of independent variables. It was checked by the help of expert researcher to analysis whether there was missed item of content validity or not.

For statistical analysis, chi-square test and multiple correlation were applied to examine factors that motivate students to study tourism in the colleges in Kaski district, Nepal and to identify selection patterns for studying tourism subject through analysis of socio-demographic determinants according to gender, college type and study level. The ethical value was consideration. For this, purposed colleges were visited and took special permission from administration to distribute and administer questionnaires to the student studying management and tourism subjects. The level of P-rular ($p < 0.05$, $p < 0.01$, and $p < 0.001$) was taken to be statistically significant.

Result and Discussion

It is essential to know some demographic and socio-economic characteristics of the population studies. This topic mainly deals with some important demographic characteristics such as, sex structure, education, occupation, income level and other economic characteristics of respondents.

Table 1

Distribution of Respondents on the Basis of Socio-demographic Characteristics

Characteristic	Frequency
Gender	
Male	65 (52.4)
Female	59(47.6)
Ethnicity/caste	
Nepali	101(81.5)
Gurung	3(2.4)
Magar	3(2.4)
Others	1(0.8)
No Response	16(12.9)
Religion	
Hindu	95(76.6)
Buddhist	20(16.1)

Christian	9(7.3)
College type	
Public college	89(71.8)
Private College	35(28.2)
Level	
+ 2	79(63.7)
Bachelor in Tourism	35(36.3)
Income	
0-10000	2(1.6)
10000-15000	8(6.5)
15000-20000	21(16.9)
20000-25000	51(41.1)
25000 above	42(33.9)
Occupation	
Service	35(28.2)
Own	47(37.9)
Foreign	28(22.6)
Agriculture	14(11.3)

Table 1 Shows that 52.4 percent of respondents male respondents and 47.6 percent is female respondent during the survey period. Above Table¹ shows that students studying tourism or non-tourism subject, 81.5 percent speak Nepali language. It also reveals that 76.6 percent respondents fall under the Hinduism. During the survey period for the motivation and attitude towards tourism subject, 71.8 percent respondents are taken from the public school and remaining from private college. Bachelor in tourism is unique and new subject in Kaski district as well as in Nepal. The sources of students are intermediate so that 63.7 percent of respondents are taken from those levels. Those who were studying in tourism subject in the college or studying “+ 2” level, most of the students’ family income is above 15000 per month. It reveals that 37.9 percent of respondents’ family has their own business.

For identifying selection patterns for learning tourism subject through analysis of socio-demographic determinants, social-economic background is used to determine the motivational attitude of respondent. By the help of cross tabulation, it is possible to make suitable segment by analyzing their attitude towards the tourism subject.

Figure 1. Motivation and Attitude Towards the Studying Tourism Subject



Figure 2. demonstrates that the motivational factors towards studying of tourism subject and courses. Figures indicates that students are motivated towards studying tourism subject due to fact that this subjects gives knowledge of tourism field. Therefore, it has given the highest mean among the items in motivation towards the studying tourism subject. Cost of studying this subject is more reasonabl has less mean.

Table 2

Mean, Standard Deviation, Reliabilities and Inter-correlation of Study Variables

Characteristics	Mean	S.D.	1	2	3	4	5	6	7	8
1.Motivation	2.5867	0.33	(.799)							
2.Emerging Subject	2.5867	0.36	.588**	(.809)						
3.Job Opportunity	2.1993	0.32	0.093	.194*	(.852)					
4.Interesting	2.369	0.41	.602**	.430**	0.138	(.783)				
5.Cost	2.2032	0.34	.292**	.300**	0.171***	.280**	(.834)			
6.Social Status	2.1886	0.43	.383**	.239**	.273**	.665**	.256**	(.806)		
7.Self-efficacy	2.4499	0.37	.484**	.448**	0.058	.485**	.357**	.393**	(.810)	
8.Learning Value	2.5867	0.45	.540**	.540**	0.033	.773**	.286**	.594**	.519**	(.788)

Note * $p < .05$, ** $p < .01$, *** $p < .001$ and reliabilities are in parenthesis

Table 2 demonstrates mean, standard deviation and correlation of the studying variables. First, finding indicates that students are moderately motivated towards the studying tourism subject ($M=2.5867$) but it has significantly less mean than a set of items of motivation of knowledge of tourism field ($M=2.88$, figure 2). Second, motivation towards studying of

tourism subject and course have less correlated to the motivational variables: emerging subject, cost, social status, self-efficacy and learning value. There is significant moderate correlation between motivation and interesting subject but there is low degree of relation to job opportunity. Third, there is high degree of reliability in to a set of items of variable construct. To test the hypothesis, $p < 0.05$, $p < 0.01$, and $p < 0.001$ are used to explore the significant of relationship.

Table 3

Hypothesis Test on the Basis of Gender Mix to the Factors Affecting Motivation Variables

Factors affecting selection of tourism subject	Gender mix(p-value)	Pearson Chi-Square	df
Learning Value	0.633	.914	2
Self-Efficacy	0.349	2.107	2
Social Status	0.231	2.928	2
Cost	0.876	.264	2
Interest	0.644	.879	2
Job Opportunity	0.591	1.053	2
Emerging subject	0.414	1.761	2

Note * $p < .05$

Table 3 demonstrates the test of hypothesis of gender mix to the factors affecting motivation variables. There is no significance difference between genders to all motivational as $p > .05$.

Table 4

Hypothesis Test on the Basis of Student Level to the Factors Affecting Motivation Variables

Factors affecting selection of tourism subject	p-value	Pearson Chi-Square	df
Learning Value	0.001*	15.199	2
Self-Efficacy	0.002*	12.895	2
Social Status	0.052	5.930	2
Cost	0.099	4.627	2
Interest	0.000*	16.790	2
Job Opportunity	0.249	2.778	2
Emerging subject	0.028*	7.122	2

Note * $p < .05$

Table 4 demonstrates the test of hypothesis of study level to the factors affecting motivation variables. There is no significance difference between study levels to all motivational variables except learning value, self-efficacy, interest and emerging subject as $p < .05$.

Table 5

Hypothesis Test on the Basis of College Wise to the Factors Affecting Motivation Variables

Factors affecting selection of tourism subject	College wise p-value	Pearson Chi- Square	df
Learning Value	0.000*	36.511	4
Self-Efficacy	0.022*	11.436	4
Social Status	0.000*	20.918	4
Cost	0.605	2.725	4
Interest	0.000*	28.505	4
Job Opportunity	0.408	3.985	4
Emerging subject	0.192	6.099	4

Note * $p < .05$

Table 5 demonstrates the test of hypothesis of college type to the factors affecting motivation variables. There is no significance difference between college type to all motivation all variables except learning value, self-efficacy, social status and interest as $p > .05$.

Conclusion

The major finding of present study is that gender has no association with all motivational variables for studying tourism in colleges of Nepal. Study level is associated with motivational variables such as learning value, self-efficacy, interest and emerging subject. Study shows that learning value, self-efficacy, interest and emerging subject are the motivational factors that are associated with studying tourism subject in colleges of Nepal from point of view of study level. College type is associated with motivational variables such as learning value, self-efficacy, social status and interest. This shows that learning value, self-efficacy, social status and interest are the motivational factors that are associated with studying tourism subject in colleges of Nepal from point of view of college type. Tourism is emerging subject therefore it is so popular that through studying tourism people can directly or indirectly involve in either pure tourism business such as hotel, restaurant, lodge or non-tourism related businesses. Colleges must focus on the various opportunity areas that can be achieve by studying tourism subject to attract students.

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Determinants of Households' Adaptation Practices against Climate Change Impact on Off-farm Activities in Nepal

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Abstract

Study on adaptation practices against climate change impact in agriculture sector have been explored extensively globally but adaptation practices against climate change impact on off farm activities are not studied in detail. This study aims to analyze the determinants of households' adaptation practices against climate change impact on off farm activities in Nepal. It utilizes the data generated from nationally representative samples of National Climate Change Impact Survey, 2016 conducted by Central Bureau of Statistics. Total sample size of this survey was 5060 households. But for this paper, total of 4114 samples were considered. Binary logistic regression analysis was carried out to analyze households' adaptation practices against climate change impact on off-farm activities in Nepal. Most of the respondents are male of age 40-54 years, from non-Brahmin/Chhetri caste/ethnicity, illiterate, with lowest income Quintile, from tropical climate zone and without getting any services from agricultural service center. Females are less likely to have adaptation practices towards off farm activities (started more off-farm activities; shifted to non-agricultural employment; and temporary out-migration) in compared with male. Non-Brahmin/Chhetri caste/ethnicity with reference to Brahmin/Chhetri is the determining factor for the adaptation practices (shifted to non-agricultural employment; and temporary out-migration). Status of receiving any services from agricultural service center, years of experience in agricultural sector and sub-tropical climate zone with reference to tropical zone are the common determining factors for households' adaptation practices towards off farm activities against climate change impact in Nepal.

Keywords: Adaptation, binary logistic regression, climate change, determinants, off farm based activities

Introduction

The continuous increase in greenhouse gas emission due to anthropogenic pressure would further amplify the rate of increase in temperature and intensify the frequency of extreme weather events including floods, droughts, changing rainfall pattern, water resources depletion, and severe heat/cold waves. Climate change refers to a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer (IPCC, 2007).

The scientific evidence has shown that climate change is a global challenge facing humans & their socio-economic activities, health, livelihood, and food security (Romieu et al., 2010 Amjath-Babu et al., 2016).

It is well understood that the farmers who entirely depend on farming activities need a varieties of adaptation practices to minimize the negative impact of climate change for their livelihood. Among the practices, an off farm activity may be one of the safe exits. Off farm activities are those activities which are done outside the agricultural activities. Several studies at globe have found that a large proportion of the off farm activities are in increasing trend (Oppong-Kyeremeh & Bannor, 2017).

Agriculture is one of the main economic activities of Nepal and about two-thirds of the population employs on it (CBS, 2017). Among the agricultural population, more than half (51.5%) holds less than 0.5 hector land; land is fragmented and no land management, while the poorest population are involved in agriculture and this section of the population are getting about 59.0 percent income from agriculture as compared with 21.0 percent of the richest quintiles (Satyal, 2010). Climate change is expected to significantly reduce agricultural productivity especially in tropical and subtropical regions (Jones & Thornton, 2003). The loss of yield for major crops that account for 80.0 percent of production in Africa and South Asia may reach 8.0 percent by the middle of this century. Agronomic research indicates that higher temperatures associated with climatic change will be very harmful to the production of many crop and livestock groups. The data trend from 1975 to 2005 shows that the mean annual temperature has been increasing by 0.06 °C while the mean rainfall has been decreasing by 3.7 mm (-3.2%) per month per decade in Nepal (PAN, 2009).

Adaptation to climate changes seems to be the most appropriate means for farmers to minimize the negative impact of climate change. Adaptation strategies such as; changing crop types, changing crops varieties, tree planting, soil and water conservation, changing planting date, fertilizer application and crop diversification are in practice (Tesfaye & Seifu,

2016). There are also other types of adaption practices to the climate change such as off farm based activities which are less discussed. Hence, this study aims to analyze the determinants of households' adaptation practices against climate change impact towards off farm based activities in Nepal. We hope this study is unique in Nepal's context and fulfills the gap on adaption activities to the impact of climate change in agriculture sector of Nepal.

Data and Method

This paper utilizes the data generated from nationally representative sample of National Climate Change Impact Survey, 2016 conducted by Central Bureau of Statistics. Total sample size of this survey was 5,060 households. The sample selection strategy adopted for the NCCIS was done in three stages - I stage: selection of the districts; II stage: selection of primary sampling unit (PSU), 253 PSUs from all 16 analytical domains; and III stage: random selection of households. Age of the respondents of the households was 45 years and above and residing at least 25 years in that area. But for this study, the respondents who denied saying about income, the utilization of service regarding agriculture from service center, as well as the chosen four off-farm activities for the adaptation of climate change were excluded and total of 4114 samples were considered.

The selected off-farm activities for the adaptation of climate change are changed on food consumption habit; started more off-farm activities; shifted to non-agricultural employment; and temporary out-migration. These components are taken as dependent variables. Further age, sex, educational status, caste/ethnicity of the respondents, per capita yearly income quintile, if agricultural service were received from agricultural service center, years of experience in agricultural sector and climate zone are considered as independent variables.

Binary logistic regression analysis was carried out to find the determinants of adaptation practices towards off-farm activities.

$$\ln \frac{P(Y_i = 1/X)}{P(Y_i = 0/X)} = \beta_0 + \sum_{k=1}^K \beta_k X_{ik}$$

This model is estimated by maximum likelihood estimation (MLE) method as the outcome variable is binary in nature i.e. if respondent has selected off-farm activities. If the respondent selected the activities, $Y = 1$, otherwise $Y = 0$. Similarly, X denotes independent variables. This study mainly focused if the respondents have selected off-farm activities for the adaptation of climate change.

Results and Discussion

Background Characteristics of Respondent

More than two third of the respondents (67.2%) are male whereas female accounts around one third of the total samples (32.8%). Majority of the respondents falls in the age group 45 to 54 years. Minimum age of the respondents is 45 years and the range is 50 years following the average age as 58.42 years with standard error as 0.16 years. Brahmin/Chhetri covers less than one third of the total respondents whereas other castes like Janajati, Madeshi, Dalit and others cover more than two third of the total. More than two fifth of the respondents are illiterate followed by informal education, basic education, and higher education. More than three forth of the respondents (77.4%) receive any service from agriculture service center. More than one third of the respondents have lowest income Quintile (22.8%). More than half of the respondents are from Tropical climate zone.

Table 1

Respondents Classified According to Selected Background Characteristics (in= 4114)

Characteristics	Number	Percent
Age(Years)		
45-54	1687	41.0
55-64	1257	30.6
65-74	835	20.3
75+	335	8.1
Minimum = 45 years, Maximum = 95 years, Average = 58.42 years, S.E.= 0.16 years		
Sex		
Male	2763	67.2
Female	1351	32.8
Caste/Ethnicity		
Brahmin/Chhetri	1245	30.3
Others	2869	69.7
Per Capita Yearly Income Quintile		
First Quintile (Lowest)	936	22.8
Second Quintile	893	21.7
Third Quintile	912	22.2
Fourth Quintile	771	18.7
Fifth Quintile (Highest)	602	14.6
Receive any Service from Agriculture Service Center		
Yes	930	22.6
No	3184	77.4

Education		
Illiterate	1881	45.7
Beginner/Informal education	871	21.2
Basic education	803	19.5
Higher education	559	13.6
Climate Zone		
Tropical	2245	54.6
Sub-Tropical	1564	38.0
Temperate	285	6.9
Sub-Alpine	20	0.5
Total	4114	100

Sources: NCCIS, 2016

Determinants of Adaptation Practices Towards Off-farm Activities

Change of Food Consumption Habit

The dependent variable i.e. change on food consumption habit has two responses i.e. yes and no. No is taken as reference category for finding the determinants of adaptation practices. Table 2 shows the odds ratio of logistic regression coefficients, their P values, and 95 percent confidence interval for odds ratios for each category. From the fitted model, with reference to illiterate, basic education as well as secondary and higher education have more chance to have adaptation practices. Similarly with reference to tropical climate zone, sub-tropical and temperate zone has less chance to have adaptation practices. With reference to the people getting agricultural service, the people without getting any agricultural service are less likely to have adaptation practices. Similarly as years of experiences on agriculture increase, there is less likely to have adaptation practices.

Table 2

Odds Ratio from Logistic Regression Model on Change of the Food Consumption Habits, (n= 4114)

Characteristics	Odds Ratio	Sig.	95% CI	
			Lower	Upper
Age	1.001	0.758	0.994	1.009
Sex				
Male (R)	1			

Female	0.919	0.306	0.781	1.080
Education				
Illiterate(R)	1			
Literate	1.108	0.269	0.924	1.330
Basic	1.587	0.000	1.285	1.961
Secondary and above	1.463	0.004	1.130	1.894
Caste/Ethnicity				
Brahmin/Chhetri(R)	1			
Others	0.939	0.425	0.804	1.096
Climate Zone				
Tropical(R)	1			
Sub-tropical	0.763	0.000	0.658	0.884
Temperate	0.391	0.000	0.301	0.506
Sub-alpine	7.163	0.998	0.000	.
Receiving any agricultural Service				
Yes(R)	1			
No	0.780	0.004	0.658	0.924
Per Capita Yearly Income Quintile				
First Quintile (Lowest) (R)	1			
Second Quintile	1.015	.885	.830	1.241
Third Quintile	0.965	.732	.789	1.181
Fourth Quintile	1.045	.691	.841	1.299
Fifth Quintile (Highest)	1.253	.080	.973	1.614
Years of experience on agriculture	0.994	0.018	0.988	0.999
Final -2loglikelihood =4849.10; Hosmer and Lemeshow - Chi-square value =13.92 (P <.070) ; Nagelkerke R ² = 0.054; Cox-Snell R ² = 0.038				

Start of More Off -farm Activities

The dependent variable i.e. started more off farm activities has two responses i.e. yes and no. No is taken as reference category for finding the determinants of adaptation practices. Table 3 shows the odds ratio of logistic regression coefficients, their P values, and 95 percent confidence interval for odds ratios for each category. From the fitted model, female are less likely to have adaptation practice than male. Further, with reference to illiterate, people with secondary and higher education have more chance to have adaptation practices. Similarly with reference to tropical climate zone, sub-tropical and temperate zone has less chance to have adaptation practices. The people with income as second quintile are less likely to have adaptation practices than the people with income as first quintile (lowest). With reference to the people getting agricultural service, the people without getting any agricultural service are less likely to have adaptation practices. Similarly as years of experiences on agriculture increase, there is less likely to have adaptation practices.

Table 3

Odds Ratio from Logistic Regression Model of Starting of More Off Farm Activities (n = 4114)

Characteristics	Odds Ratio	Sig.	95% CI	
			Lower	Upper
Sex				
Male (R)	1			
Female	.806	0.013	.681	.955
Education				
Illiterate(R)	1			
Literate	.953	.624	.784	1.157
Basic	.991	.930	.807	1.216
Secondary and above	1.438	.003	1.133	1.825
Caste/Ethnicity				
Brahmin/Chhetri(R)	1			
Others	1.139	.109	.971	1.335
Climate Zone				
Tropical(R)	1			
Sub-tropical	.548	.000	.471	.637
Temperate	.471	.000	.340	.651
Sub-alpine	.912	.855	.341	2.439
Receiving any agricultural Service				
Yes(R)	1			
No	0.564	0.001	.481	.662

Per Capita Yearly Income Quintile				
First Quintile(R)	1			
Second Quintile	0.763	0.013	0.616	.945
Third Quintile	0.879	0.228	0.713	1.084
Fourth Quintile	1.014	0.902	0.815	1.261
Fifth Quintile	1.169	0.201	0.920	1.485
Years of experience on Agriculture	0.977	0.001	.972	.982
Hosmer and Lemeshow: P = 0.048 Chi-square value = 15.645 Nagelkerke R ² = 0.112				
Cox-Snell R ² = 0.080		R=Reference	-2loglikelihood	
			=4776.09	

Shifting to Non-Agricultural Employment

The dependent variable i.e. shifted to non-agricultural employment has two responses i.e. yes and no. No is taken as reference category for finding the determinants of adaptation practices. Table 4 shows the odds ratio of logistic regression coefficients, their P values, and 95 percent confidence interval for odds ratios for each category. From the fitted model, with reference to illiterate, literate people have less chance to have adaptation practices. Similarly people with other caste than Brahmin/Chhetri are more likely to have adaptation practices. With reference to tropical climate zone, sub-tropical zone has less chance to have adaptation practices. The people with higher income are more likely to have adaptation practices than the people with lowest income. With reference to the people getting agricultural service, the people without getting any agricultural service are less likely to have adaptation practices. Similarly as years of experiences on agriculture increase, there is less likely to have adaptation practices.

Table 4

Odds Ratio from Logistic Regression Model of Shifting to Non-agricultural Employment (n = 4114)

Characteristics	Odds Ratio (B)	Sig.	95% CI	
			Lower	Upper
Age	1	.987	.993	1.007
Sex				
Male (R)	1			
Female	0.856	0.049	0.733	0.999
Education				
Illiterate(R)	1			
Literate	0.725	0.000	0.606	0.866

Basic	0.942	0.543	0.779	1.141
Secondary and above	0.967	0.777	0.768	1.218
Caste/Ethnicity				
Brahmin/Chhetri(R)	1			
Others	1.314	0.001	1.135	1.522
Climate Zone				
Tropical(R)	1			
Sub-tropical	0.660	0.000	0.575	0.759
Temperate	0.993	0.961	0.764	1.291
Sub-alpine	0.476	0.122	0.186	1.220
Receiving any agricultural Service				
Yes(R)	1			
No	0.788	0.002	0.677	0.918
Per Capita Yearly Income Quintile				
First Quintile (R)	1			
Third Quintile	1.526	0.000	1.258	1.852
Fourth Quintile	1.992	0.000	1.623	2.446
Fifth Quintile	2.198	0.000	1.747	2.765
Years of experience on agriculture	0.979	0.001	.974	.984
- Chi-square value =16.77 (p* < .05)				
Cox-Snell R ² = 0.077		R=Reference	Final -2loglikelihood =5330.194	

Adapting Temporary Out-Migration

The dependent variable i.e. temporary out-migration has two responses i.e. yes and no. No is taken as reference category for finding the determinants of adaptation practices. Table 5 shows the odds ratio of logistic regression coefficients with their P values and 95 percent confidence interval. Analyses reveal that, females are less likely to have adaptation practice than male. Educated people have less likely to have adaptation practices than illiterate people. Similarly people with other castes than Brahmin/Chhetri are more likely to have adaptation practices. With reference to tropical climate zone, sub-tropical and temperate zone have less chance to have adaptation practices. The people with second quantile income are less likely to have adaptation practices than the people with lowest income. With reference to the people getting agricultural service, the people without getting any agricultural service are less likely to have adaptation practices. Similarly as years of experiences on agriculture increase, there is less likely to have adaptation practices.

Table 5

Odds Ratio from Logistic Regression Model of Adapting Temporary Out-migration (n =4114)

Characteristics	Odds Ratio (B)	Sig.	95% CI	
			Lower	Upper
Age	1.002	.610	.995	1.009
Sex				
Male (R)	1			
Female	.759	.001	.648	.889
Education				
Illiterate(R)	1			
Literate	.793	.011	.663	.948
Basic	.679	.000	.558	.825
Secondary and above	.536	.000	.423	.679
Caste/Ethnicity				
Brahmin/Chhetri(R)	1			
Others	1.356	.001	1.167	1.575
Climate Zone				
Tropical(R)	1			
Sub-tropical	.442	0.001	.383	.509
Temperate	.259	0.001	.190	.355
Sub-alpine	2.176	0.117	.822	5.761
Receiving any agricultural Service				
Yes(R)	1			
No	0.782	0.002	.670	.914
Per Capita Yearly Income Quintile				
First Quintile (R)	1			
Second Quintile	.825	.056	.678	1.005
Third Quintile	.779	.013	.640	.949
Fourth Quintile	.927	.473	.754	1.140
Fifth Quintile	1.258	.051	.999	1.583
Years of experience on agriculture	0.994	0.01	.989	.998
Hosmer and Lemeshow- Chi-square value =8.662			Nagelkerke R ² = 0.099	
(P <.05)				
Cox-Snell R ² = 0.073		R= Reference	Final-2loglikelihood =5211.85	

Conclusion

Majority of the respondents considered for the study are male of age 40-54 years, from non-Brahmin/Chhetri caste/ethnicity, illiterate, with lowest income Quintile, from tropical climate zone and without getting any services from agricultural service center.

Among the variables; age, sex, educational status, caste/ethnicity, per capita yearly income quintile, service received from agricultural service center, years of experience in agricultural sector and climate zone considered as independent variables, age does not show a statistically significant relationship with the households' adaptation practices towards all off farm activities considered for the analyses. Female is less likely to have the adaptation practices towards off farm activities (started more off-farm activities; shifted to non-agricultural employment; and temporary out-migration) as compared with male while it does not matter for changed on food consumption habit. Non-Brahmin/Chhetri caste/ethnicity with reference to Brahmin/Chhetri is the common factor for determining the adaptation practices (shifting to non-agricultural employment; and temporary out-migration). Status of receiving any services from agricultural service center, years of experience in agricultural sector and sub-tropical climate zone with reference to tropical zone are the common determining factors for households' adaptation practices towards off farm activities against climate change impact in Nepal.

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Inter-generational Mobility in Occupations of People in Rural Nepal

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Abstract

This paper attempts to investigate the causal factors for occupational variation between father and son using Nepalese data from rural context. A well-structured questionnaire schedule was used to collect information from a total of 385 father son pairs in Gajuri rural municipality of Province No 3 in Dhading district of Nepal. Information was collected from those father and/or son, the senior son of a father who was married at the time of interview and whose father was alive. Three sets of variables were isolated as having an effect on the occupational relationships between father and son; father's characteristics, son's characteristics and household characteristics. Findings revealed that three fifths of all sons adopted occupations different than their fathers. Chi-square statistics revealed a statistically significant relationship between occupation of father and occupation of son revealing a high level of occupational persistence in between generations. Binary logistic regression revealed that sons of the fathers holding salaried job/business and trades as well as those having wage labour are more likely to catch father's occupation than the sons of farmers. Among all explanatory measures, sons' own level of education and migration experiences are powerful determinant for whether son adopts occupations different than their fathers or not.

Keywords: Father, inter-generational, mobility, occupations, son

Introduction

Occupation refers to the type of work done during the reference period by the person employed (or the kind of work done previously if unemployed), irrespective of the industry or the status in employment of the person. Information on occupation provides a description of a person's job. In the present context, a job is defined as a set of tasks and duties which are carried out by or can be assigned to a person. Persons are classified by occupations through their relationship to a job. A single job may have several different work activities or duties connected with it. For instance, different agricultural activities (weeding, herding cattle, and collecting water for cattle) are simply different aspects of the same job and do not count as separate jobs (Tiwari, 1998; CBS, 2008; CBS, 2018).

Intergenerational occupational change refers to change in occupation that occur between two generations that is of father and son or family members of one generation and the next. It shows the change in occupation of a person or persons which is different than the parental generation. Occupation along with income, education, gender, race, environment, culture are some of the determinants for potential social mobility. Among these, occupation plays a vital role in determining social mobility (Chakravarty, 2013; Redddy, 2015). There are many studies, covering developed and less-developed countries that have documented the persistence of economic and social inequalities across generations based on outcome indicators such as income, earnings, occupation and level of education. In the literature on social mobility, occupation is considered a good indicator of social status, incomes and living standards (Weeden 2002; Goldthorpe & McKnight 2006; Giddens 2009; Kunst & Roskam 2010; & Lambert and Bihagen 2011 cited in Reddy & Swaminathan, n. d). A low degree of intergenerational occupational mobility implies that the advantages and disadvantages inherent in the occupational status of one generation are transmitted to the next generation. A situation of low mobility across generations may be favorable for families that are in fortunate socio-economic circumstances but in the case of families that are less fortunate, low mobility often entails social exclusion, material and human capital impoverishment and restrictions on the opportunities and expectations that would otherwise widen their capability to make choices (Hancock *et al.* 2013).

In the underdeveloped world, the study on intergenerational occupational mobility is very few. Socio-economic analysis of intergenerational mobility in developing countries, however, remains a relatively unexplored terrain (Emran & Shilpi, 2010), even though the

importance of such analysis has been duly recognized in the recent literature. Some studies have been found in case of South Asian context like India, Bangladesh and China. It is to assert that African Studies related to intergenerational changes in occupations are very scarce; can be counted on fingers. On this background, the present study tries to investigate whether father and his son is adopting the same or different kind of occupations and analyze the causal factors for such occupational mobility in the rural context of Nepal.

Theoretical Frameworks

The term 'generation' known as procreation is the act of producing offspring. A generation can be a stage or degree in a succession of natural descent as a grandfather, father and father's son comprise three generations. Generations are defined as cohorts or thousands of persons who share similar, but not identical, experience because they are born, live and die within a common historical period (Marvin, 1974; Devkota, 2010). It is difficult to designate a precise generation span. However, new generation may be said to appear approximately every twenty to thirty years, time enough for one generation to reproduce and rear the next one to physical and social maturity (Marvin, 1974; Devkota, 2010). They may or may not live within the same society or locale. They may or may not experience the same socio-economic environment. But their times provide a common point of reference and central to their lives. As the society is changing, the mentality of new generation is also being seen changing possibly due to change in the economic structure of society. For example, as per rapid social and economic change, young generations are particularly less beholden to their parents and family authority than they had been (Hans, 1999 cited in Devkota 2010).

Many people favor equality of opportunity as an underlying goal of society; the idea that poor children should have the same opportunities for success as rich children. Those who work hard should be able to succeed, regardless of family background. However, zero intergenerational correlation is not necessarily the optimum. In order to determine a socially optimal level of mobility, it is important to understand the underlying causes or determinants of the intergenerational correlation in earnings or education. As noted in Solon (2004), children of wealthy parents earn higher incomes in part because they invest more in human capital and have more education. As a result, observing zero intergenerational correlation would suggest no return to human capital investment, and it would be a strange market economy if higher human capital was not rewarded with higher earnings. This does, however, highlight the importance of understanding the mechanisms underlying the observed intergenerational

correlations; if they are in fact due to differential human capital investment, this suggests a role for public provision or financing of education to equalize opportunities. In a similar manner, there may be genetic differences in ability that are transmitted from parent to child and that lead to intergenerational persistence in income or education. To the extent that this is the underlying cause of the intergenerational correlation in income or education, it may suggest a more limited role for policy.

Overall, differences in ability and human capital will tend to lead to an intergenerational correlation of greater than zero in any well-functioning market economy. Policies that compel employers to favor less qualified applicants in terms of employment or pay may reduce the intergenerational correlation but at a high cost to society in terms of efficiency and incentives for human capital accumulation. On the other hand, the use of connections to get jobs by the children of the wealthy when other candidates are better qualified is manifestly inefficient, and the component of the intergenerational correlation due to nepotism would be considered by most to be best eradicated (Black & Devereux, 2010).

Extending the seminal work of Becker and Tomes (1979), Solon (2004) provides an intuitive theoretical model of inter-generational mobility. According to this model, earnings levels can persist across generations because of heritable monetary and nonmonetary endowments and parental preferences for investment for the benefit of their children. The model assumes that parents derive utility from their own consumption and from the incomes of their children later in life and thus make decisions on investment in the human capital of their children based on the nature of their preferences and the returns available to human capital investment. A child's human capital is a function of parental and government investments, as well as an inherited human capital endowment, which represents the combined effect of many attributes of children influenced by nature, nurture, or both. Children are assumed to receive endowments of capital that are determined by the reputation and 'connections' of their families, the genetic constitutions of their families, and the learning, skills, goals, and other family commodities acquired through belonging to a particular family culture (Becker & Tomes, 1979 cited in Narayan et al. 2018).

Data and Methods

Gajuri rural municipality of Dhading district is the study area for the present study. This rural municipality lies along and/or uphill the Prithvi highway. Selection of the study rural

municipality is purposive but having good research rationale for the proposed topic. The study site lies along the Prithvi highway uphill the Mugling Kathmandu segment of it. This area is one of the drastically changing place in the context of Nepal inserted in between two highly urbanized city centers Kathmandu and Narayangarh. The in route to the highway and the hinterlands are highly influenced by the effects of the physical connectivity, communication, media, trade, commerce, education, migration and whole gamut of modernization.

The present study was carried out taking primary data needed to fulfill the objective of the study. Two sets of instruments; questionnaire schedule and checklist were developed. A well-structured questionnaire schedule was used to collect quantitative information from the respondents. The qualitative part of the investigation on the other hand comprises of checklist. The checklist in turn were used to collect information from the key informants about the pattern, trend and causes of occupational variability in between successive generations in the study area. The method of data was face to face interview with the purposively selected father and/or son as main respondent during June to September 2018.

According to the information obtained from the executive officer of Gajuri rural municipality, there are 560 households in Ward No 4, 1071 households in Ward No 5 and 1090 households in Ward No 6 of it (Sapkota, 2018). In an assumption that each household has a potentially one respondent father-son pair, there are 2721 father son pair which represent the maximum population size for the present study. The households which fulfill the criteria of having married eldest son with his father alive residing in Ward Nos 4, 5 and 6 of Gajuri rural municipality (former Pida VDC) is the population for this study. The criteria being the married eldest son of a household with his father alive at the time of interview. Some households might have father dead and in some other cases the eldest son might not get married or might be ineligible as a respondent due to some other reasons. Such kind of record keeping regarding married eldest son with his alive father is not maintained in any local level units in Nepal, so actual population size could not be figured out; however, 2721 represents the maximum potential population size in an assumption that each household in the rural context has married eldest son and his father is still alive.

In case of the population which is not well defined or well known for precision, a formula for a sample size of proportions can be applied (Cochran 1963; Israel 1992). By using sample size for proportion, a total of 385 father son pair were selected. This total sample size was not divided in to strata; however, it was covered all settlements with the aforementioned criteria for eligible respondents.

The investigation of outcome in this study is done using all three levels of analysis, e.g. univariate, bivariate and multivariate analytical tools. In addition to descriptive statistics of the study variables and bivariate cross tabulations, the outcome measure which is in the form of same or different occupation in between father and son is a binomial, binary logistic regression which is used as multivariate analytical tool. Five different models based on the clustering of the explanatory measures were constructed. The results were presented as unstandardized logistic regression coefficients and odds ratios. The unstandardized logistic regression coefficients are interpreted as the increase or decrease in the logged odds of the dependent variable due to a one unit change in the independent variable (Pampel, 2000).

Result and Discussion

Descriptive Statistics

Descriptive statistics include frequency, percentages, mean, standard deviation, and range among others. This statistics provides basic features of the data. In the data presented in table 1, about 40 percent of the sons adopt occupations same to their fathers; while 60 percent of them have different occupations than the father. In the parental generation, 64 percent fathers have adopted agriculture as their main occupation, while those adopting salaried job/business and trades and wage labor account for 12 percent and 23 percent respectively. The other characteristics of the father, son and household are as presented in table 1.

Table 1

Descriptive Statistics of Measures Used in the Analysis (n=385)

Variables	Descriptive statistics			
	Mean	Std. Dev.	Minimum	Maximum
Outcome Measures				
Father-son occupational mobility				
Same occupation (Ref)	0.39	0.48	0.00	1.00
Different occupation	0.60	0.48	0.00	1.00
Explanatory Measure				
Occupation of father				
Agriculture (Ref)	0.64	0.47	0.00	1.00
Salaried job/business and trades	0.12	0.32	0.00	1.00
Wage labor	0.23	0.42	0.00	1.00
Controls				
Father's characteristics				

Level of Education				
Illiterate (Ref)	0.67	0.47	0.00	1.00
Literate only	0.30	0.46	0.00	1.00
Educated	0.15	0.36	0.00	1.00
Monthly income				
No earning (Ref)	0.22	0.41	0.00	1.00
NRs. 1-5000	0.35	0.47	0.00	1.00
NRs. 5001-15000	0.21	0.40	0.00	1.00
NRs. 15001 and more	0.21	0.40	0.00	1.00
Social Network (Yes=1)	0.29	0.45	0.00	1.00
Number of sons of the father	2.77	1.43	1.00	9.00
Father-son age difference	27.97	7.34	14.00	60.00
Son's characteristics				
Level of Education				
Illiterate or literate only (Ref)	0.28	0.45	0.00	1.00
School level	0.53	0.49	0.00	1.00
Plus two and above	0.17	0.37	0.00	1.00
Migration (Yes=1)	0.57	0.49	0.00	1.00
Household characteristics				
Caste/ethnicity				
Brahmin/Chhetri/Newar (BCN) (Ref)	0.36	0.48	0.00	1.00
Janajatis	0.53	0.49	0.00	1.00
Dalits	0.09	0.29	0.00	1.00
Residential location				
Near to highway (Ref)	0.33	0.47	0.00	1.00
Places in between highway and remote locations	0.37	0.48	0.00	1.00
Remote locations	0.29	0.45	0.00	1.00
Land holding size				
0-10 ropani	0.40	0.49	0.00	1.00
11-20 ropani	0.36	0.48	0.00	1.00
21 ropani and above	0.23	0.42	0.00	1.00

Note 1 ropani of land = 0.0508 hectares

Occupationally, the sons are 19 percent in agriculture and allied sectors, 27 percent in salaried job, 18 percent in business and trades and 36 percent are in the wage labour sector. There seems growing attraction of youths in salaried jobs; while they switch to wage labour if not salaried positions. It reveals that the youths are desperately quitting agriculture in an effort to hold regular paying jobs from other sectors. There are several independent measures which are clustered around father's, son's and household characteristics. Sixty seven percent of the fathers are illiterate, 30 percent are simply literate who can make lettered signatures

while about 15 percent of them are well educated who can read or write simple sentences in Nepali language. The educated group include both having informal education and non-formal education which also include formally educated in the academic institutions. In fact, for father's generation, those having plus two and higher level education are very scanty. There is proportionate distribution of the respondents in case of not having any earning, earning monthly NRs. 5001-15000 and more than NRs. 15001 nearly equal to 21 percentage each except those having monthly income of NRs 1-5000 which is 35 percent in all. Almost 29 percent of the fathers are having social networks in the form of involvement in any local level groups, clubs, cooperatives or NGOs, while the corresponding 71 percent do not have such kind of connections. Each father in the study area is having 3 sons on an average, while there are maximum of 9 sons of a father. The mean difference in age structure between father and son is 28 years while the shortest age difference is 14 years and longest one is 60 years. There is some improvement in the level of education in son's generation depicting 28 percent is the mix of illiterate and simply literate individuals, 53 percent are having school level education up to SLC and 17 percent have plus two and above level of education. Leaving home by the son in search of study or employment opportunities is very high in the study area accounting 57 percent, the corresponding 43 percent have not left home yet. There is almost equal proportions of the respondents in terms of residential location in reference to highway ranging from 33, 37 and 29 percent respectively, from the near to highway, in between highway and remote places and remote places.. The proportion of Brahmin Chhetri Newar (BCN) is 36 percent; the Janajatis in the study area inclusive of Magar, Tamang and Chepang stand alone 53 percent and 9 percent are Dalits. As for land holding size, there is lesser percentages of larger holder farmers and vice versa; revealing that majority of the respondents in the study area are small holder subsistence farmers.

Binary Logistic Regression

Binary logistic regression analyzes the effects of causal factors for the occupational mobility in between father and the son. The outcome measure is whether the father-son occupation are the same or different. If father and son have different occupations, it has been coded as 1 and 0 otherwise. The variables in the father, son and household characteristics are treated for mediating the effects in between occupational variables. Each category of the variables are given separate model and final model includes all the explanatory measures. The partial model (model 1 through model 4) provide effect of each category of explanatory measures as

father, son and household characteristics while full model (model 5) provides aggregate effect of all explanatory measures simultaneously. The model fitting criteria and other statistics are presented at the bottom of each model. Odds ratios are presented against each coefficient which make interpretation easier for each variable.

Table 2

Odds Ratios Binary Logistic Regression Results Explaining Father-son Occupation Change by Father's Occupation Net of Controls (n=385).

Variables	Outcome: Father-son occupation change				
	Model 1	Model 2	Model 3	Model 4	Model 5
Explanatory Measure					
Occupation of father					
Agriculture (Ref)	-	-	-	-	
Salaried job/business and trades	-0.509 (0.601)	-0.491 (0.612)	-0.821 (0.440)**	-0.736 (0.479)**	-0.833 (0.435)*
Wage labor	-2.464 (0.085) ***	-2.437 (0.087)***	-2.359 (0.094)***	-2.723 (0.066)***	-2.675 (0.069)***
Controls					
Father's characteristics					
Level of Education					
Illiterate (Ref)	-	-			-
Literate only		0.602 (1.825)***			0.558 (1.747)*
Educated		0.044 (1.045)			-0.382 (0.683)
Monthly income					
No earning (Ref)	-	-			-
NRs. 1-5000		0.370 (1.448)			0.419 (1.521)
NRs. 5001-15000		0.034 (1.035)			-0.058 (0.944)
NRs. 15001 and more		-0.473 (0.623)			-0.781 (0.458)*
Social Network (Yes=1)		0.490 (1.632)*			0.241 (1.272)
Number of sons of the father		-0.062 (0.939)			-0.058 (0.944)
Father-son age difference		-0.015 (0.985)			-0.020 (0.980)
Son's characteristics					
Level of Education					

Illiterate or literate only (Ref)	-	-	-	-	-
School level		0.496 (1.642)*		0.602 (1.826)*	
Plus two and above		1.350 (3.858)***		1.760 (5.814)***	
Migration (Yes=1)		0.644 (1.904)**		0.644 (1.905)**	
Household characteristics					
Caste/ethnicity					
Brahmin/Chhetri/Newar (BCN) (Ref)			-	-	
Janajatis			-0.176 (0.838)	0.214 (1.239)	
Dalits			0.800 (2.227)	1.108 (3.029)	
Residential location					
Near to highway (Ref)			-	-	
Places in between highway and remote locations			-0.262 (0.770)	-0.411 (0.663)	
Remote locations			-0.146 (0.865)	-0.352 (0.703)	
Land holding size					
0-10 ropani			-	-	
11-20 ropani			-0.507 (0.602)*	-0.506 (0.603)	
21 ropani and above			-0.435 (0.647)	-0.552 (0.576)	
Intercept	1.077	1.325 (3.761)*	0.263 (1.301)	1.617 (5.035)***	1.157 (3.182)
Model chi-square	83.875***	98.198***	106.612***	94.518***	133.589***
Degrees of freedom	2	10	5	8	19
-2log likelihood ratio	432.679	418.355	409.942	422.035	382.965
Nagelkerke R square	0.265	0.305	0.327	0.295	0.397

Note: Figures in parenthesis as odds ratios. *** p<.001; ** p<.01; * p<.05

1 ropani of land = 0.0508 hectares

Occupation of Father

Occupation of father is the crucial variable for the father-son occupational mobility. In reference to the farming fathers, the binary logistic regression suggests that there is low occupational mobility of the sons in case of the father having salaried job/Business and trades as well as having wage labour. The finding revealed that compared to the fathers who are in agriculture,

those sons of fathers having salaried job/Business and trades are 40 percent less likely to catch occupation different than their fathers (odds ratio 0.601). This result is statistically significant in models 3, 4 and 5 indicate that net of all controls, the result supports the initial models (model 1 and model 2). The same direction of regression coefficient and decreased odds in case of wage earning fathers, also suggest that sons are 92 percent less likely to adopt occupations different than the fathers (odds ratio 0.085). This odds ratio is consistently lower than unity in all models and statistically highly significant confirms that this finding holds true for partial as well as for full model. To sum up, father son occupational mobility is high in case of farming father whose sons are desperately trying to exit from agriculture. Even though, odds ratios are lower than unity for salaried job/Business and trades and wage labour doing fathers; there might be two different reasons behind each one of them. In case of salaried job/Business and trades, it is due to more power, wealth and resources, the son is motivated to catch the occupation of father. In case of wage earning father, it is due to the lack of resources, wealth and income to get necessary preparation to escape from it, the sons are bound to hold the same occupation as the father.

Father's Characteristics

Besides, the occupation of father, the level of education, monthly income, social network, number of son and father son age differences are the variables used as controls to examine the effect on father on occupational mobility. In reference to illiterate fathers, the sons of just literate and simply educated fathers are having higher odds of occupational mobility (odds ratio for literate father 1.825, and for educated father 1.045). The odds ratio in case of educated father in the full model rather decreases lower than unity (odds ratio 0.683). It is surprising that the sons of educated fathers are having lower occupational mobility which may be due to that the educated fathers themselves come out from traditional farming to hold non-farming occupations, thereby reducing odds of occupational change. Monthly income of father has interesting effect on the occupational mobility of the son. Higher the level of income, lesser the occupational mobility with the son. This result is in line with the human capital theory that higher earning parent have more economic resources to invest in the child's development who again leave traditional farming thereby lowering occupational mobility in between parent and child. This finding holds true in case of partial (model 2) as well as full model (model 5). This finding rather suggests that sons of higher earning fathers are motivated to catch the occupation of their fathers. In line with the theoretical expectation, the social network of father

has acted positively well in promoting occupational mobility with the son. Table 2 depicts that in reference to the fathers who do not have social networks, the sons of the fathers having social networks are 63 percent more likely to catch occupations different than the fathers (odds ratio 1.632). The statistical significance of this finding disappear in the full model though.

Son's Characteristics

Level of education of son and his migration experience from the usual place of residence are instrumental in creating occupational mobility with the father. In reference to illiterate or simply literate sons, the ones who have at least school level of education are 64 percent more likely to catch occupations different than their fathers (model 3, odds ratio 1.642)). Moreover, those sons who have plus two and higher level of education, are almost four times more likely to leave parental occupation (odds ratio 3.858). In reference to the ones who do not have migration experience, the sons having migrated from parental place of residence have 90 percent more chances to catch occupations different than the fathers. This result is statistically significant as well as plausible in case of Nepalese rural context that migration offers individuals the opportunity of market place competition, new social networks and provides ground for hard work as well as helps crossing the border of narrow limitations imposed by traditional social structures.

Household Characteristics

Caste/ethnicity is one of the variables creating differential outcome in most of the socio-economic issues in Nepal. The composition of occupation of people is well connected with their castes in orthodox Nepalese society. In the present study, it has been evident from model 4 of table 2 that Janajati people have lowest odds of occupational variation of the sons with their fathers. It means that Janajatis in the study area are occupationally least mobile as evidenced by the lowest odds ratios in model 4 (odds ratio 0.838). Janajatis in the study area include mostly of Tamang, Magar, Chepang which are lagging behind than other caste/ethnicities in most of the socio-economic variables. Moreover, Chepang are the highly marginalized ethnic group dependent on subsistence farming and forest products for their survival for an extended period in a year (Aryal, 2016). Dalit people have higher odds of occupational mobility than the BCN (reference group) as seen in the partial model (model 4) who have aggressively trying out to leave the parental occupations in search of more lucrative enterprises. It is in response to the restrictions imposed by lower economic resources at their command as well as stigma

attached to untouchability with Dalits in rural societies. The policy for positive discriminations in favor of the Dalits people to assign special position in education and occupation might also have started showing some results.

The residential location also exerts an influence on occupational mobility in between the father and the son. In a context where socio-economic variables and developmental infrastructures change with the change in place, location is powerful determinant for the occupational mobility. In model 4 of table 2, it has been seen that farther from the highway, the lesser the odds of finding new occupations by the sons than those of their fathers. This result is not statistically significant, however the trend is consistent even in the full model. This has been due to the fact that highways and market places offer several opportunities for the youths to exit farming as well as to leave ancestral occupations, whereas the remote areas are dominated more by crop-livestock based subsistence farming systems having a limited opportunities for leaving parental occupations by the sons.

Landholding is a common resource for all the family members which is inherited to the family descent and also indicate family wealth in traditional social structure of Nepal (Bhandari, 2004). It has been witnessed from model 4 of table 2 that land holding size has posed constraint in father son occupational mobility in Nepalese rural context as suggested by several other studies. The larger the holding, the lower the odds of occupational variation of son with the father indicate that larger holders are bound to farming related enterprises. The result is consistent with Bhandari (2006) and Bhandari (2013) findings of the Chitwan Valley Family Study that larger holders are less likely to exit from agriculture. The result is not statistically significant in this study though.

Conclusion

This study has investigated the effects of different variables related to father, son and household for father-son occupational mobility in rural context. The binary logistic regression suggests that, in reference to the farming fathers, the sons of fathers doing salaried job, business and trades as well as those doing wage labour work are less likely to catch occupations different than their fathers, as compared to the sons of farmers. These findings are statistically significant suggesting that compared to the sons of farmers, the sons of non-farming fathers are more likely to pick up the parental occupation in the Nepalese rural context. Among other parental characteristics, social networks of father is statistically more meaningful in determining whether their sons can leave father's occupations. In case of occupational mobility, the son's

own level of education and migration experiences have more powerful roles in determining different occupations than the father as indicated by statistically significant odds ratios and higher R square among all cluster of explanatory measures. Household characteristics like caste/ethnicities, residential locations and landholding size do not have statistically meaningful effect in determining the father-son occupational mobility, in combination indicate positive scenario for an environment to create a meritocratic society in Nepal.

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Customer Satisfaction towards Paragliding Services in Pokhara

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Abstract

Customer satisfaction is an important aspect of successful business. So, every business should maintain a good relationship with its customers to enhance loyalty and increase profit. Many tourists participate in paragliding in Pokhara. Its revenue contribution is Rs. 300 million to Rs. 500 million per year. This research aims to assess the overall satisfaction of customers in paragliding through measurement of perceived service quality and perceived service value applying descriptive and analytical methods. The former is measured by the constructs: Reliability, Assurance, Tangibility, Empathy, and Responsiveness while the latter is measured by the constructs: Price, Scenery, and Thrill. The landing site near Phewa Lake was chosen as the study area. A convenient sample of 150 respondents was selected for the study. Questionnaire was constructed to elicit primary data on independent variables and was evaluated on five-point Likert Scale. Focused group discussions supplemented the study. Mean score of different variables revealed that the contribution of perceived service quality to customer satisfaction is higher than that of perceived service value. Among the four significant variables- Reliability, Price, Scenery, and Thrill, the Reliability has higher contribution in Perceived Service Quality measurement. Similarly, the Price has higher contribution in Perceived Service Value Measurement. Overall, the level of satisfaction in paragliding among customers is found good. Further studies are needed to establish causal relationship between customer satisfaction and other demographic variables.

Keywords: Customer satisfaction, paragliding, perceived, service quality, service value.

Introduction

Customer satisfaction is customer's reaction to the state of satisfaction and customer's judgment of satisfaction level (Kim, Park & Jeong, 2004). Satisfaction of the customers can help the brands to build long and profitable relationships with their customers (Eshghi, Haughton & Topi, 2007). Therefore, a firm should concentrate on the improvement of service quality and charge an appropriate fair price in order to satisfy their customers, which would ultimately help the firm to retain its customers (Gustafsson, Johnson & Roos, 2005). Satisfaction may influence the concerned company by repurchase, purchase of more products, positive word of mouth and willingness of a customer to pay more for the particular brand. Any business is likely to lose market share, customers and investors if it fails to satisfy customers as effectively and efficiently as its competitors is doing (Anderson, Fornell, & Mazvancheryl, 2004).

Now a day's measuring customer satisfaction becomes an important issue for most of the business organization. In this regard, there is a rumor by Lord Kelvin (19th century) 'If you cannot measure something, you cannot understand it'. In recent decades importance of customer satisfaction has increased. Thus, many organizations considered 'measuring customer satisfaction' should be set as a parameter of business success. 'It also considered as reliable feedback and it provides an effective, direct, meaningful and objective way of the customers' preferences and expectations.

Paragliding or parasailing is an increasingly popular hobby as people try to find new and more adventurous activities. A paraglider consists of a double-layered cloth with partitions. It attains its final profile only when air streams through the chambers and provides sufficient lift. The pilot is airborne when the glider has reached take-off speed. The glider has four to six risers and two brake lines. Pulling one-line results in a change of direction; pulling both lines acts as a brake. The low center of gravity provides for a high stability of the pendulum. The pilot sits in a harness suspended below a fabric wing. Wing shape is maintained by the suspension lines, the pressure of air entering vents in the front of the wing, and the aerodynamic forces of the air flowing over the outside. All one needs to fly is a foldable glider and a harness to sit in. It is a unique kind of soarable aircraft because it is highly portable – the entire kit can be packed into a large rucksack and carried on the pilot's back, making it considerably easier to access a number of soaring sites, and expanding the options for landing sites from which one can return (Rahman & Tator, 2008).

Oliver offers on his formal definition (p- 13), (as cited Zeithaml in et al.2013 p-86) "Satisfaction is the consumer's fulfillment response". It is a judgment that a product services

features, or the product or service itself, provides a pleasurable level of consumption-related fulfillment.

Customer satisfaction is one of the most important issues concerning business organizations of all types. Business organizations try to give the best service to the customer and also look for the reason that can increase the satisfaction level. According to Hokanson (1995, 13), these factors include friendly employees, knowledgeable employees, Helpful employees, the accuracy of billing, billing timeliness, competitive pricing, service quality, good value, billing clarity, and quick service.

"Service quality a critical element of customer perception in the case of pure services (e.g. health care, financial services education) service quality will be the dominant element in the customer's evaluation"(Zeithmal, Bitner, Gremler, Pndit, 2013 P- 93). Fisk, Brown & Bitner 1993, (as cited in Baron & Harris, 2003) "service quality has been identified as the single most researched area in service marketing till the date".

Parasuraman et al. (1988) defined reliability as the ability of a firm to perform the promised service dependably and accurately. Nguyen & Leblanc (2001) mentioned that considering the reputation about reliability, customers' past experiences are related to the reliability of service quality.

Tangibles have been defined as personal appearance, physical facilities like store decorations, display and equipment (Parasuraman et al., 1988). Tangibles are basic elements such as access to the facilities and the safety and convenience for customers (Bellin, 2005). Tangibles are used by firms to convey their image and signal quality (Zeithaml et al., 2006).

Parasuraman et al. (1988) and Zeithaml et al. (2006) defined empathy as the firms' personalized attention for their customers and for giving them care and assistance. This dimension is also more suitable to companies that are trying to build a relationship with customers as opposed to "transaction marketing". This ensures the firm's survival (Andaleeb & Conway, 2006). Empathy has several ways that can be shown to customers such as knowing the customer's name, preferences and needs. Many companies use this competence to provide customized services as a competitive advantage over other firms (Zeithaml et al., 2006).

According to Parasuraman et al. (1988), responsiveness is the employee's express willingness to help customers and provide quick service. This dimension is concerned with dealing with the customer's requests, questions and complaints promptly and attentively. When it communicates to its customers, a firm needs to know how to be responsive and how long it would take to get answers and solve problems. If companies want to be successful, they

need to look at the viewpoint of the customer rather than the company's perspective (Zeithaml et al., 2006).

Parasuraman et al. (1988) defined assurance as the trained courtesy of employees and also the ability to inspire trust and confidence from them. According to Zeithaml et al. (2006), assurance represented the personnel who link the customer to the organization by trust and confidence. It's about traditional selling and relationship marketing expressed information and shared an understanding to the customer (Ndubisi, 2006).

Perceived value has been defined as the benefit from services which customers believe they receive in consideration for the cost of that service (McDougall & Levesqu, 2000). Rust and Oliver (1994) stated that if the price was too high and service is of good quality, then customers rated it as a poor value service. Heskett (1997) found that high value was not necessarily associated with low prices, because services with a high perceived value may, in fact, have high or low prices. When perceived value increases, maybe customers will stay loyal and have increased expectations, whereas a decrease in value will result in customers being more receptive to competitors' marketing (Grönroos, 2000). Companies can employ two strategies, one is adding more benefits from their services, and another is reducing the costs associated with the purchase that will enhance the customers' perceived value (Lovelock and Wirtz, 2007). Perceived value is the trade-off between what customers receive and what they have to pay to obtain a service (Monroe, 1991; Zeithaml, 1988). Customer perceived costs are often represented and measured by price (Brady & Cronin, 2001). Other non-monetary costs include time and physical and mental effort (Zeithaml, 2009). These types of costs are different across individual consumers and situations (Tam, 2004).

Sweeney and Soutar, 2001(as cited in Raza, Siddiquei, Awan & Bukhari 2012) Suggested five dimensions of perceived value.

Emotional value	" The utility derived from the feelings or affective states that a product generates"
Social value (enhancement of social -concept)	"The utility derives from the products ability to enhance social self- concept"
Function value (price /value for money)	"The utility derived from the product due to the reduction of its perceived short term and long-term costs"
Functional Value (performance/ quality.)	"The utility derived from the perceived quality and expected performance of product.

Price is a major determinant of consumer choice (Kotler, 2009). That is it's the cost incurred in making a purchase (Tse, 2001), which together with perceived service quality and perceived value influence spending behavior (Rust & Oliver, 1994). Consumers will determine what price can be paid based upon their discretionary spending limits (Monroe, 1990). High price products and services are believed to be high-quality products and services and their prices are normally higher than lower-quality equivalent products or services as price impacts perceived quality (Curry & Riesz, 1988). If consumers have no experience in obtaining a service, they, therefore, make a decision based upon their expectation, image, perception of quality and price (Monroe, 1990). 2.6 Perceived Quality Perceived quality is judgment superiority by customers about a product's overall excellence or (Zeithaml, 1988) it's like an attitude (Zeithaml, 1988; Parasuraman, 1985). Perceived quality is defined as the customers compare between their expectation and perception of service performance (Lehtinen & Lehtinen, 1982; Gronroos, 1984; Parasuraman et al., 1988). Prior to purchase, customers may use price as an indicator of quality and set expectations in regard to the service. Although increasing customers' perception of service quality adds in high customer satisfaction and perceived value, the effect of perceived service quality on perceived value might be offset by high perceived sacrifice. (Tam, 2004)

Paragliding is an exciting form of air adventure that satisfies the tourists' need, thereby explaining why it has become a popular adventure activity ("Guide to Paragliding in Pokhara" n.d.).

Novelty and search for new knowledge are considered as important factors for adventure tourists (Weber, 2001). Exploratory, novelty and variety seeking behavior of adventure tourists increase the importance of this dimension of value in adventure tourism (Zuckerman, 1994).

Paragliding has become a center of attraction for both domestic as well as international tourists. Yearly, thousands of customers experience paragliding in Pokhara because, it is one of the top five commercial paragliding locations in the world, provided with all the proper and accurate elements such as the stable thermals, suitable landing and launching sites along with the safety of one of the biggest lake and mesmerizing mountain views ("Guide to Paragliding in Pokhara" n.d.).

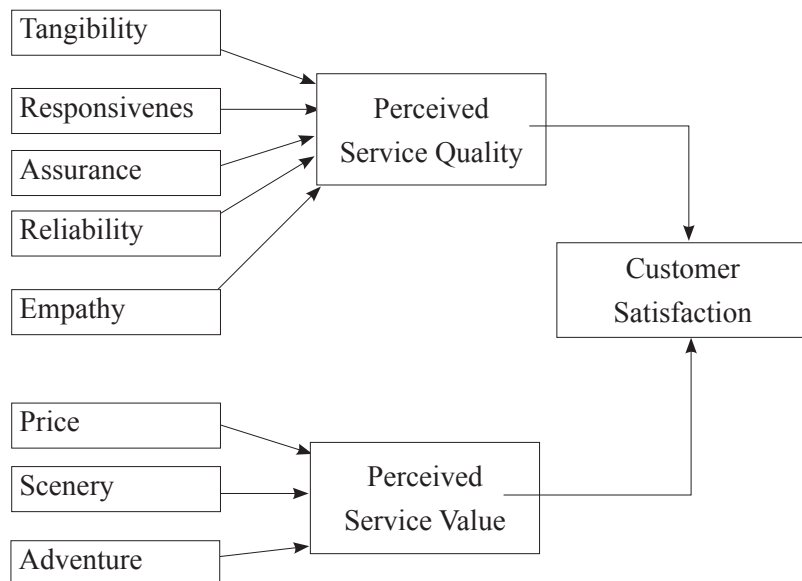
Nepal is one of the best paragliding venues after Switzerland. The climate & geographic similarities between the two countries have made it sound more relevant encouragingly; Pokhara has been nominated as the fifth best location to paraglide in the world in the context when paragliding is being seen as key product entrepreneurs. paragliding history is not very long the

first and only registered paragliding company in Nepal is sunrise paragliding based in Pokhara was established in 2000 AD with the help of Adam Hill, a British national and a paragliding pilot paragliding can be a perfect alternatives adventure sports in Nepal, geographically and climatically "Paragliding in Nepal", (n.d.). Yearly approximately 60 thousand people participate in paragliding event in Pokhara. Among them, 60 percent foreigners and 40 percent Nepali participate in paragliding. Currently, there are 50 paragliding companies running with the investments of 700 million rupees with the involvement of approximately 1000 employees, including the pilot and other staff. Its income is around 300 million to 500 million rupees per year which is a significant portion of the GDP of Nepal contributed by the tourism industry, (I.P.Bhandari, personal communication, April 20, 2019). Lack of sufficient research in such area, question arises whether customers are fully satisfied with the services provided by paragliding companies? This study aims to examine the service quality and services value of the company as perceived by the customer and determine their level of satisfaction.

Conceptual Framework

On the basis of literature review, the following conceptual model has been used for the study.

Figure1. Conceptual Framework showing the relationship between various variables



Data and Methods

This research aims to find out the overall satisfaction of paragliding customers through

perceived service quality and perceived service value. For this purpose, descriptive and analytical research designs were used to find out the result.

The only landing site near Phewa Lake was chosen as the study area. All paragliding customers were regarded as population and 150 customers (at 5% level of significance and 8% margin of error) were chosen in researchers' convenience for the survey of the study. Survey Questionnaire with structured questions was constructed to elicit information from the sample customers on independent explanatory variables RATER (Responsiveness, Assurance, Tangibility, Empathy, and Reliability) of "Perceived Service Quality" & PST (Price, Scenery, and Thrill) of "Perceived Service Value" (which jointly explain "Customer Satisfaction") so as to obtain the responses evaluated on five-point Likert Scale (1 = Strongly disagree, 5 = Strongly agree). Questionnaire was constructed based on SERVQUAL model and other review of literature. The Service Quality Model or SERVQUAL Model was developed and implemented by the American marketing gurus Valarie Zeithaml, A. Parasuraman and Leonard Berry in 1988. It is a method to capture and measure the service quality experienced by customers. Mulder, P. (2018). A smaller version of the SERVQUAL Model is the RATER model. Where the SERVQUAL Model works with 10 dimensions to measure the quality of service, the RATER model works with five dimensions. Mulder, P. (2018). FGD was conducted to verify the results obtained from the quantitative analysis.

Univariate (mean and standard deviation), bivariate (Pearson's correlation coefficient) and Multivariate (binary logistic regression) techniques were used to analyze the data.

Univariate descriptive statistical measures: such as mean & standard deviation and for bivariate analysis, Pearson's bivariate correlation coefficient between dependent dichotomous variable "Satisfaction" and different independent construct variables "RATER" and "PST" involved in this study were calculated and the results obtained were analyzed. Pearson's correlation coefficient ($P\text{-value} = 0.05$) were used to examine the association between variables under study and "level of satisfaction". In general, those variables, which had shown a statistically significant association in bivariate analysis, were selected for multivariate analysis. In multivariate analysis, a logistic regression model was used because Pearson's correlation coefficient only shows an association between explanatory and response variables, but it does not state the cause and effect relationship between them.

Customer satisfaction is measured in terms of perceived service quality and perceived service value. Perceived service quality is measured simultaneously by Responsiveness(R), Assurance (A), Tangibility (T), Empathy (E) and Reliability (R) whereas, perceived service

value is measured simultaneously by Price (P), Scenery (S) and Thrill (T). By using computer application SPSS (version 25.0), Perceived Service Quality Score (PSQS) was prepared from a mean score of RATER. Similarly, Perceived Service Value Score (PSVS) was prepared from a mean score of PST. Finally, the mean score of PSQS and PSVS was calculated and the satisfaction score was prepared. This variable (Satisfaction score) was re-coded into same but dichotomous variable as “high level of satisfaction” for the satisfaction scores more than mean satisfaction score and “low level of satisfaction” for the scores less than mean satisfaction score. Thus, level of satisfaction was dichotomized. In this situation, the logistic regression method is one of the best methods for analyzing data (Neter et al. 1996).

In binary logistic regression, the response variable contains two categories like true or false (yes or no), etc. The mathematical form of the binary logistic equation is given as;

$$P = \frac{1}{1 + \text{Exp}(-Z)} \quad \text{Where, } p = \text{estimated probability, } Z = \text{predictor}$$

But for the multivariate case, z can be expressed in terms of a linear combination of other predictor variables as $Z = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n$ then the logistics function reduces to the form;

$$P = \frac{1}{1 + \text{Exp}[-(b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n)]}$$

The ratio of probability of success and not success is also known as Odds

$$\text{Odds} = \frac{P}{1 - P}$$

Hence the binary logistic function reduces to the form

$$\text{Logit}P = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n$$

Logistic regression can also be expressed as in probability form

$$P(x) = \frac{\text{Exp}(b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n)}{1 + \text{Exp}(b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n)}$$

Odds ratio: Odd ratio has been used to compare the relative change in the response variable with respect to predictor variables. The odds ratio is given by

$$\frac{\Omega^*}{\Omega} = \text{Exp}(b) \quad \text{Which leads to } \log \frac{\Omega^*}{\Omega} = b$$

Where, Ω has its usual meaning.

This odd ratio gives the change in response variable when there is a unit change in one predictor variable keeping rest of the variable constant multiplying the odds by a certain exponential factor.

Content validity of the questionnaire was ascertained by consultation with subject-experts, researcher-advisor, faculties, stakeholders of paragliding, and colleagues. The issue of external reliability was addressed by pilot-survey on 15 customers in the similar settings before finalizing the questionnaire.

Purpose of data collection was explained to the respondents before interviewing. Privacy and confidentiality of all respondents were maintained regarding their information. To enhance higher response rate, verbal informed consent from respondents was taken and questionnaire was administered hand to hand.

Results and Discussion

Among the means of RATER, mean assurance score has a maximum value (4.6190) with standard deviation 0.64 and mean tangibility score has a minimum value (4.0794) with standard deviation 0.68. Tangibility scores and reliability scores have mean smaller than overall mean (4.494) of RATER (i.e. mean of PSQS) whereas assurance score, empathy score, and responsiveness score have mean greater than mean PSQS.

Among the means of PST, mean scenery score has a maximum value (4.6267) with standard deviation 0.6 and mean price score has a minimum value (3.92) with standard deviation 0.43. Scenery score has arithmetic mean, greater than overall mean (4.27) of PST (i.e. mean of PSVS) whereas price scores and thrill scores have mean smaller than mean PSVS. Similarly, the mean satisfaction score is 4.3603 with a standard deviation of 0.4. This means satisfaction score lies above mean PSVS and below mean PSQS. These results indicate that the contribution of perceived service quality to customer satisfaction is higher than that of perceived service value.

Table 1

Descriptive Statistics

S.N.	N	Mean	Std. Deviation
Responsiveness score (R)	149	4.5604	.67512
Assurance score (A)	147	4.6190	.64461
Tangibility score (T)	149	4.0794	.67606
Empathy score (E)	148	4.5878	.68937
Reliability score (R)	150	4.4133	.58344

Service quality score (Composite Mean score of RATER)	150	4.4494	.57106
Price score (P)	150	3.9206	.43246
Scenery score (S)	150	4.6267	.59974
Thrill score (T)	150	4.2667	.90240
Service value score (Composite Mean score of PST)	150	4.2713	.48808
Satisfaction score (Composite Mean score of Service quality score and service value score)	150	4.3603	.40071
Valid N (list wise)	147		

Note1=Extremely dissatisfied, 2=Somewhat dissatisfied,

3= Neither satisfied nor dissatisfied, 4= somewhat satisfied, 5= Extremely satisfied

Correlation table below shows that there is a positive and significant (at $P=0.01$) correlation between "Satisfaction score" (dependent variable) and each of the independent construct variables "Responsiveness", "Assurance", "Tangibility", "Empathy", "Reliability", "Price", "Scenery" and "Thrill". Correlation coefficient between "satisfaction score" and "reliability score" is the highest ($r = 0.591$) which implies that professionalism of office staff, pickup-drop service and performance of pilot play strongly positive role in making customers satisfied. Similarly, the lowest value ($r = 0.381$) of correlation coefficient between "satisfaction score" and "Scenery" shows comparatively less important role of scenery in making customers satisfied. This signifies the need of study of cause-effect relationship among the constructs under consideration by using regression model.

Table 2

Pearson's Correlation of 'Satisfaction Score' with RATER & PST

Satisfaction score		Score	Score	Score	Score	Score	Score	Score	Score
		(R1)	(A)	(T1)	(E)	(R2)	(P)	(S)	(T)
Satisfaction core	Pearson	1	.532	.504	.396	.539	.591	.426	.381
	Correlation								
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
N		150	149	147	149	148	150	150	150

NoteR₁ = Responsiveness, A = Assurance, T₁ = Tangibility,

E = Empathy, R₂ = Reliability, P = Price, S = Scenery, T₂ = Thrill

To the satisfaction scores, thus prepared by calculating mean between PSQS and PSVS, "high level of satisfaction" is assigned to the values above mean satisfaction score and "Low level of satisfaction" is assigned to the values below the mean satisfaction score. Thus, we

prepared the dichotomous outcome of the dependent variable "satisfaction". The cause and effect relationship between independent construct variables (RATER and PST separately) on "satisfaction" is studied through binary logistic regression model by using SPSS (version 25.0).

Binomial Logistic Regression Analysis

i) Dependent variable: satisfaction (Value "1" = low level of satisfaction and "2" = high level of satisfaction).

Independent variables: Responsiveness(R), Assurance (A), Tangibility (T), Empathy (E) and Reliability (R). Under Omnibus Tests of Model Coefficients, we see that our model is significant. Nagelkerke $R^2 = 0.617$ means 62 percent of total variation in satisfaction level is explained by the predictor variables RATER (Also, $-2 \text{ Log likelihood} = 110.625$).

Table 3

Logistic Regression Analysis between RATER and Satisfaction

Variables in the Equation	B	S.E.	Wald	Df	Sig.	Exp(B) 95% C.I. for EXP(B)	
						Lower	Upper
Responsiveness score(R)	1.445	.908	2.530	1	.112	4.242	.715 25.164
Assurance score(A)	.508	.700	.527	1	.468	1.662	.422 6.550
Tangibility score(T)	-.425	.499	.725	1	.394	.654	.246 1.739
Empathy score(E)	.961	.662	2.107	1	.147	2.615	.714 9.575
Reliability score(R)	2.860	.790	13.094	1	.000	17.455	3.709 82.148
Constant	-24.348	4.038	36.355	1	.000	.000	

The Wald test ("Wald" column) is used to determine statistical significance for each of the independent variables. The statistical significance of the test is found in the "Sig." column. From these results it can be seen that only Reliability score (at $p < .05$) added significantly to the model/prediction.

The Exp (B) column presents odds ratio and indicates that reliability is 17.455 times more likely to make customers feel high level of satisfaction than feel low level of satisfaction. In other words, unit change in reliability score is accompanied by 17.455 times change in probability of making customers satisfied in the same direction. The confidence interval for reliability is 3.709 to 82.148 which indicate that reliability is between 3.709 to 82.148 times as likely to make the customer feel a high level of satisfaction than, feel a low level of satisfaction. This variable has a higher confidence interval compared to other variables. This is because it is the only variable which is significant. This shows that the variable has explanatory power

compared to others.

From the table, reliability, assurance, empathy and responsiveness are positively related to customer satisfaction because of the positive sign of their regression coefficient (*B*). Furthermore, their odds ratio is greater than 1. One variable, tangibility has a negative relationship with satisfaction as its odds ratio is below 1.

- ii) **Dependent variable: satisfaction,** value “1” = low level of satisfaction
value “2” = high level of satisfaction

Independent variables: Price (P), Scenery (S) and Thrill (T).

Under Omnibus Tests of Model Coefficients, we see that our model is significant. Nagelkerke $R^2 = 0.555$ means 56 percent of total variation in satisfaction level is explained by the predictor variables PST (Also, $-2 \text{ Log likelihood} = 125.969$).

Table 4

Odds Ratios from Logistic Regression Analysis between PST and Satisfaction

Variables in the Equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
						Lower	Upper	
Price score(P)	1.814	.679	7.140	1	.008	6.134	1.622	23.204
Scenery score(S)	1.512	.514	8.657	1	.003	4.538	1.657	12.428
Thrill score(T)	1.716	.359	22.888	1	.000	5.564	2.754	11.239
Constant	-21.371	3.724	32.934	1	.000	.000		

From these results of Wald's test, all of PST scores (at $p < .05$) added significantly to the model/prediction. The Exp (B) column presents odds ratio and indicates that Price is 6.134 times more likely to make customers feel a high level of satisfaction than feel a low level of satisfaction. In other words, unit change in price score is accompanied by 6.134 times change in probability of making customers satisfied in the same direction. Scenery is 4.538 times more likely to make customers feel a high level of satisfaction than feel a low level of satisfaction. Moreover, Thrill is 5.564 times more likely to make customers feel a high level of satisfaction than feel a low level of satisfaction. The confidence interval for Price is 1.622 to 23.204 which indicate that Price is between 1.622 to 23.204 times as likely to make a customer feel a high level of satisfaction than, feel a low level of satisfaction. Similarly, those of Scenery and Thrill are between 1.657 to 12.428 and 2.754 to 11.239 respectively. Price has a higher confidence interval compared to other variables. This shows that Price has explanatory power compared to others.

From the table/model, Price, Scenery and Thrill are positively related to customer

satisfaction because of the positive sign. Furthermore, their odds ratio is greater than unity.

Moreover, divergent views of customers during FGD were found to verify the result of quantitative analysis.

Conclusion

Data revealed that overall average satisfaction score was found good. Still, there is much space for paragliding companies to improve basic physical facilities and to perform the promised service accurately. Poor scores in variables Price and Thrill indicate the need for revising price or service to increase the level of satisfaction. Likewise, the positive and significant value of correlation coefficient between satisfaction and constructs/variables (RATER and PST) showed that improved response in these variables leads to an increase in the level of satisfaction of customers. Among these variables; Reliability, Price, Scenery and Thrill play a key role in the improvement of customer satisfaction.

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Extended Spectrum β -Lactamase Producers in Mobile Phones and Nosocomial infections: Risk Factors for Infection Control Practices

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Abstract

Extended Spectrum β -Lactamase Producers (ESBLs) isolates contaminating the healthcare workers (HCWs) mobile phones may cause threat to not only the life of hospital staffs, patients and visitors but also to the people in the community. This study was conducted to determine whether mobile phones of HCWs harbor ESBLs with their antibiotic susceptibility pattern. Isolation, identification and antimicrobial susceptibility test of bacteria were done using standard microbiological procedures. Further screening and confirmation of ESBLs were done according to Clinical Laboratory Standard Institutes (CLSI) guidelines. Out of the 100 mobile swab samples cultured, 97 (97%) showed bacterial growth. Frequency distribution of the total 67 isolates showed that the most prevalent Gram negative bacteria identified was Klebsiella spp 29.85%, followed by Escherichia coli 22.38%, Acinetobacter spp 14.93%, Proteus spp 13.43%, Pseudomonas aeruginosa 8.96%, Enterobacter spp 7.46% and Citrobacter spp 2.99%. The prevalence of ESBLs among the Gram negative isolates in this study was 29.85%. The most effective drug of choice were Amikacin, Nitrofurantoin and Imipenem for many gram negative isolates. These results showed that HCWs' mobile phones were contaminated with various types of pathogenic multi drug resistant microorganisms. Mobile phones used by HCWs in daily practice may be a source of hospital acquired infections in hospitals. Indeed, HCWs mobile phones contaminated with ESBLs increase the risk for infection may be the key factor in epidemiology of ESBLs producing bacterial infection not only in a hospital setting

but also in community. Therefore, regular surveillance, disinfection with suitable agent at regular interval would minimize the colonization and transmission of pathogens like ESBLs.

Keywords: Extended Spectrum β -Lactamase Producers (ESBLs), hospital acquired infection, mobile phone.

Introduction

Mobile phone of healthcare workers (HCWs) could be colonized by potential bacterial pathogens and could become vectors of hospital acquired infections in healthcare facilities (Brady et al., 2006). As mobile phone acts as good habitat for microorganisms to thrive, especially in humid and warm environment, HCWs' mobile phones may serve as reservoirs of microorganisms that could be easily transmitted from the mobile phones to the HCWs' hands and therefore facilitate the transmission of bacterial isolates from one patient to another in different hospital wards (Elkholy & Ewees, 2010). The constant handling of mobile phones by users in hospitals (by patients, visitors and HCWs, etc) makes it an open breeding place for transmission of microorganisms as well as health care associated infections (HAIs) (Tagoe et al., 2011). Mobile phones are potential threats in infection control practices and could exaggerate the rate of hospital acquired infections.

HAIs are a major challenge to the healthcare system and are associated with significant mortality, morbidity and high economic burden (WHO, 2011). Sources of HAI can be endogenous or exogenous. Exogenous sources which can serve as reservoir of infection are patients, HCWs, inanimate objects like computer keyboards, faucet handles, stethoscopes, wrist watches, mobile phones, and other items present in the immediate vicinity of the patient. Cell phones are more problematic compared to other stationary objects (fomites) in that they facilitate inter wards transmission and are very difficult to get rid of pathogens (Famurewa & David, 2009).

ESBL isolates contaminating the HCWs mobile phones may cause threat to not only the life of hospital staffs, patients and visitors but also to the people in the community. Indeed, the delay in detection and reporting such pathogens may lead to prolonged hospitalization of patients, increased morbidity and mortality as well as increased cost of health care (Lautenbach et al., 2001). Members of family Enterobacteriaceae able to produce extended spectrum of beta-lactamase which is responsible to hydrolyze the third generation of cephalosporin

group antibiotics resulting treatment failure (Reyes et al., 2013; Huddleston et al., 2014). The increasing use of broad spectrum cephalosporins has become one of the major factors responsible for the high rate of ESBL producing microorganisms (Mirza et al., 2006).

Therefore, monitoring and evaluation of mobile phone is vital procedure for infection control in hospital setting. Mobile phones are used in hospital without restriction and the majority of HCWs neither cleans their mobile phones regularly nor wash hands after using mobile phones (Jagadeesan et al., 2013). Besides, there are no guidelines for disinfection of mobile phones that meet hospital standards. Further sharing of mobile phones between HCWs and non HCWs may distinctly facilitate the spread of potentially pathogenic bacteria to the community (Trivedi, 2011).

These pathogenic organisms can be detrimental to the health of the patients especially those in critical care units and if the organisms transferred happen to be drug-resistant; the situation becomes even more grave as it becomes difficult to treat because of the limited drug options available (Angadi et al., 2014). This study, thus aims to determine whether the mobile phones of HCWs are contaminated with pathogens like ESBLs and whether mobile phones could play a role in the spread of bacterial pathogen and to offer possible control or preventive measures that could be instituted to avoid this likely vehicle of infection in a tertiary hospital of Pokhara, Nepal.

Data and Methods

Study Design, Sample Size and Study Setting

This cross sectional study was carried out from the beginning of April 2017 till the end of December 2017 after obtaining ethical clearance from Gandaki Medical College and Teaching Hospital's Institutional Ethical Committee. A total of 100 samples (mobile phone's swabs) were randomly collected from the mobile phones of Health care workers (which include doctors, nurses, laboratory technicians and helpers) working at various departments of Gandaki Medical College and Teaching Hospital, Prithivichowk, Pokhara, Nepal and these samples were processed in the microbiology laboratory of same institution. Verbal consent was taken from each participant and all samples were collected after he/she accepted and knew that they were participating in clinical study.

Collection and Processing of Samples

The health care worker's mobile phone swab samples were collected by means of sterile cotton

swabs moistened in sterile saline water (0.85%). The swabs were wiped firmly on the entire surface of the the mobile phones. The sterilized cotton buds were rotated onto the overall surface area of the mobile phone by keeping the mobile phone in two fingers. The cotton bud swabs after swabbing the mobile phone were kept in the sterile small tube containing Brain Heart Infusion (BHI) broth separately, labeled and was immediately transported to the microbiology laboratory of Gandaki Medical College and Teaching Hospital (GMC) for further processing.

All the swabs were cultured directly on Blood agar, MacConkey agar and Mannitol salt agar (Himedia) after enrichment in BHI for 24 hrs at 37°C. All cultured plates were incubated aerobically at 37°C for 24 hours. The primary isolates were subcultured on nutrient agar (Himedia). Isolates were identified on the basis of colonial appearance, Gram stain, and conventional biochemical tests (Colle et al., 1996). Antibiotic disc susceptibility testing was done to compare isolates recovered from both mobile phones by using Clinical Laboratory Standards Institute guidelines (CLSI, 2000). Extended Spectrum Beta Lactamase (ESBL) production among Gram negative bacilli was performed by standard methods according to CLSI (CLSI, 2017).

Data Collection and Analysis

All the data were entered into a computer database using standard format, checked for errors and verified. Data maintained in the computer sheets were organized and analyzed by using GraphPad Prism software for Windows (Version 8). Data were presented in appropriate table, figures by calculating percentage, frequency etc.

Results

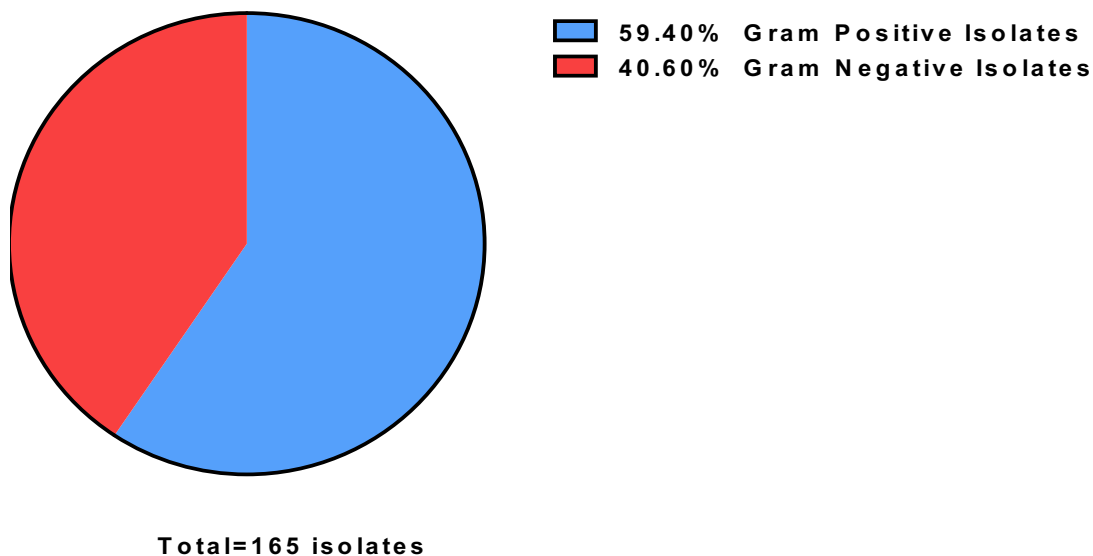
A total of 100 mobile swabs were collected from Health care workers of Gandaki Medical College and Teaching Hospital. Among 100 swab samples cultivated, 97 (97%) swabs yielded bacterial growth while rest, 3 (3%) swabs showed no bacterial growth. The bacterial isolates obtained in this investigation were classified on the basis of their cultural characteristic, cell morphology, Gram staining reaction and their biochemical properties (Colle et al., 1996).

Identification of Isolated Gram-positive and Gram- Negative Bacteria

Further analysis was conducted to identify the number of Gram positive and Gram negative

bacteria among the total of 165 isolates found on the mobile swabs obtained from 97 culture positive samples. The Gram stain identified that (98/165) 59.39% of the bacteria found on the mobile swabs were Gram positive and (67/165) 40.60% of the isolates were Gram negative (Figure 1).

Figure 1. Percent number of Gram positive and Gram negative bacteria among the total isolates obtained from the mobile swabs.



Distribution Pattern of Gram-Negative Bacteria Isolated From Various Mobile Swabs Collected From HCWs.

The total numbers of Gram-negative bacteria isolated in this study was 67/165 (40.60%) isolates. The most common Gram-negative organism isolated in this study was *Klebsiella spp* 20 (29.85%), followed by, *Escherichia coli* 15 (22.38%), *Acinetobacter spp* 10 (14.93%), *Proteus spp* 9 (13.43%), *Pseudomonas aeruginosa* 6 (8.96%), *Enterobacter aerogens* 5 (7.46%), and *Citrobacter spp* 2 (2.99%) (Table 1).

Table 1

Frequency, Percentage and Distribution Pattern of Gram-negative Bacteria Isolated from Various Mobile Swabs Collected from HCWs.

Organism Identified	Number	Frequency
<i>Klebsiella spp</i>	20	29.85%
<i>Escherichia coli</i>	15	22.38%
<i>Acinetobacter spp</i>	10	14.93%
<i>Proteus spp</i>	9	13.43%
<i>Pseudomonas aeruginosa</i>	6	8.96%
<i>Enterobacter aerogens</i>	5	7.46%
<i>Citrobacter spp</i>	2	2.99%
Total	67	100%

Antibiotic Susceptibility Test of the isolated Gram-negative bacteria

Various antibiotics were used for antibiotic susceptibility pattern determination using Kirby Bauer disc diffusion method. *Klebsiella* species showed 100% resistant to Amoxicillin+Clavulanate, Gentamycin, Cotrimoxazole and Ampicillin. The most effective drug of choice were Amikacin (95%) followed by 70% sensitive to Nitrofurantoin, Cefotaxime and Ceftazidime. Where as Imipenem (50%) and 45% sensitive to Tetracycline and Ceftriaxone (Table 2).

Comparatively antibiotic susceptibility pattern in *E.coli* showed different than that of *Klebsiella spp*. *E. coli* was found to be 100% resistant to Amoxicillin+Clavulanate, Gentamycin, Cotrimoxazole and Ampicillin. The most effective drug of choice were Amikacin and showing 86.66% sensitivity followed by 73.33% sensitive to Cefotaxime, Ceftazidime, Imipenem and Nitrofurantoin. 53.33% sensitive to Tetracycline and Ceftriaxone and 40% sensitive to Ciprofloxacin (Table 2).

However, *Acinetobacter spp* showed 100% resistant to almost all antibiotics tested except sensitive to Cefotaxime (60%), Ceftazidime (60%), Amikacin (50%) and 20% sensitive to Imipenem and Nitrofurantoin.

Proteus species showed 100% resistant to Gentamycin, Ampicillin and Amoxicillin+Clavulanate. The most effective antibiotic were Cefotaxime, Ceftazidime, Amikacin and Nitrofurantoin with 66.66% sensitivity followed by Ciprofloxacin (55.55%), Imipenem and Ceftriaxone with 44.44% (Table 2).

Similarly *Pseudomonas aeruginosa* also showed 100% resistant to most antibiotics tested and 66.66% sensitive to only Cefotaxime, Ceftazidime and Amikacin followed by

50% sensitive to Imipenem and 33.33% sensitive to Ciprofloxacin and 16.66% sensitive to Tetracycline (Table 2).

Enterobacter species showed 100% resistant to Amoxicillin+Clavulanate, Gentamycin and Cotrimoxazole. The most effective drug of choice were Cefotaxime, Ceftazidime and Imipenem with 80% sensitivity followed by 60% sensitive to Nitrofurantoin, Ceftriaxone, Amikacin, Tetracycline and Cotrimoxazole. Whereas 40% sensitive to ciprofloxacin (Table 2).

Citrobacter species showed 100% resistant to Amoxicillin+Clavulanate, Cotrimoxazole, and Ampicillin. The most effective antibiotics were Cefotaxime, Ceftazidime, Imipenem, Amikacin, and Nitrofurantoin with 100% sensitivity followed by Ceftriaxone, Tetracycline and Ciprofloxacin with 50% sensitivity and Gentamycin with 33.33% sensitivity.

Table 2

Antibiotic Susceptibility Pattern of the Isolated Gram-negative Bacteria

Pathogens	<i>Klebsiella</i> spp	<i>Escherichia coli</i>	<i>Acinetobacter</i> spp	<i>Proteus</i> spp	<i>Pseudomonas aeruginosa</i>	<i>Enterobacter aerogens</i>	<i>Citrobacter</i> spp
Total no. of isolates	20	15	10	9	6	5	2
No. (%) of isolates sensitive to							
CTX	14 (70)	11 (73.33)	6 (60)	6 (66.66)	4 (66.66)	4 (80)	2 (100)
CTZ	14 (70)	11 (73.33)	6 (60)	6 (66.66)	4 (66.66)	4 (80)	2 (100)
AMC	0	0	0	0	0	0	0
GEN	0	0	0	0	0	0	1 (50)
COT	0	0	0	6 (66.66)	0	3 (60)	0
CIP	8 (40)	6 (40)	0	5 (55.55)	2 (33.33)	2 (40)	1 (50)
TE	9 (45)	8 (53.33)	0	3 (33.33)	1 (16.66)	3 (60)	1 (50)
AMP	0	0	0	0	0	0	0

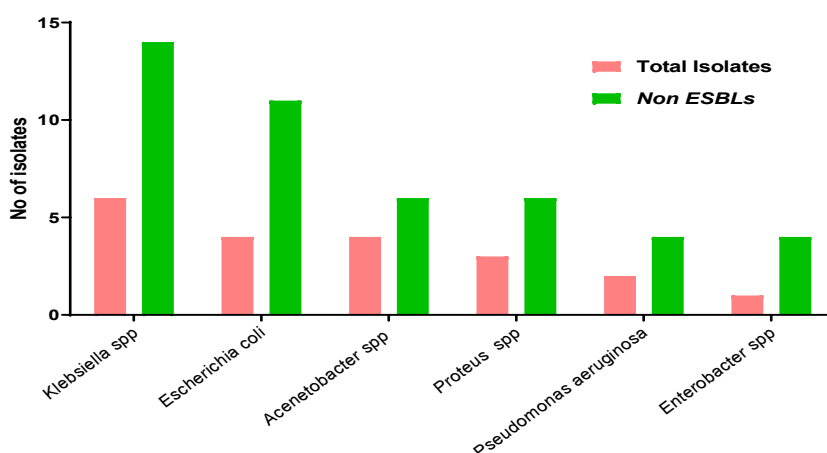
IPM	10 (50)	11 (73.33)	2 (20)	4 (44.44)	1 (16.66)	4 (80)	2 (100)
AK	19 (95)	13 (86.66)	5 (50)	6 (66.66)	4 (66.66)	3 (60)	2 (100)
NIT	14 (70)	11 (73.33)	3 (30)	6 (66.66)	0	3 (60)	2 (100)
CTZ	9 (45)	8 (53.33)	0	4 (44.44)	0	3 (60)	1 (50)

Note: CTX, Cefotaxime; CTZ, Ceftazidime; AMC, Amoxicillin+Clavulanate ; GEN, Gentamycin; COT, Cotrimoxazole; CPL, Ciprofloxacin; TE, Tetracycline; NX, Norfloxacin; IPM, Imipenem; AK, Amikacin; NIT, Nitrofurantoin; CTZ, Ceftriaxone.

Prevalence of ESBLs among the Isolated Gram Negative Bacteria

Out of total 67 Gram Negative isolates 20 were found to be ESBLs. The prevalence of ESBLs among the Gram Negative isolates in this study was (20/67) 29.85%. Total of 67 Gram negative bacilli were observed. Out of total 20 *Klebsiella spp* isolated, 6(30%); out of total 15 *Escherichia coli* 4(26.66%); out of total 10 *Acinetobacter spp* isolated 4(40%); out of 9 *Proteus spp* isolated 3(33.33%); out of total 6 *Pseudomonas spp* 2(33.33%), out of total 5 *Enterobacter spp* 1(20%) and No *Citrobacter spp* was found to be Extended B-Lactamase Producers (ESBLs).

Figure 2. Distribution of ESBL Producing Gram Negative Isolates



Discussion

In the past few years, the mobile phone gradually became more and more involved in our daily life, including its private and work-related capacities. With high level of mobile phone penetration, a mobile culture has evolved, where the phone has become a key social tool. High technology applied in mobile phones has led to a better strategic life with good communication (Akinyemi et al., 2009).

In an attempt to provide better communication and health care facilities, nowadays nearly 100% of HCWs own and use mobile phones. In fact, uncontrolled use of mobile phones by HCWs increases the spread of nosocomial infections (Amer et al., 2016). Actually, not all HCWs clean their hands before or after using their phones which exposes both themselves as well as the others to the risk of transferring infections. HCW can transfer microorganisms from the patient himself or from one of the samples taken from him to their own hands, from their hands to their phones, and from their phones to their faces, mouths and ears. In reverse, HCWs can transfer microorganisms from their phones to patients or to other members of the community outside the health care facility (Bobat et al., 2016).

This study revealed high level of bacterial contaminants on Mobile phones which were contaminated with considerable number of Gram positive bacteria and Gram negative bacteria. However, Gram positive bacteria were found to occur more than Gram negative bacteria. Most skin flora bacteria are Gram positive, which would account for their predominance on mobile phones contamination.

Out of 100 samples (mobile swabs) processed, 97(97%) showed bacterial contamination. There is slightly higher than the reports of some researchers like Brady et al (2007) who showed that 89.7% of mobile phones were contaminated by bacteria. Ulger et al (2009) stated that 94.5% of phones showed evidence of bacterial contamination.

This study also highlighted the presence of potential pathogenic Gram-negative bacteria in mobile phones of HCWs. *Klebsiella* spp, *Escherichia coli*, *Acinetobacter* spp, *Proteus* spp, *Enterobacter* spp, *Pseudomonas* spp, and *Citrobacter* spp were the main Gram-negative bacteria isolated in this research work so far. The fact that bacteria of the enterobacteriaceae found on different mobile phones may indicate fecal contamination of the hands as the origin. This might be due to the fact that most people go to toilet and end up contaminating their hands with fecal and urinal material and fail to wash their hand because they take the issue of hygiene with levity, they also lack the concept of hand washing as a simple means of stopping this spread of infectious agents, this correspond with the work of Zhad et al (1998), who

reported that the high rate of isolation of these organisms was only achieved during epidemics in which human hands serve as the vehicle of transmission. Gram negative sepsis, urinary tract infections are most commonly caused by *E. coli* and *Klebsiella* spp. The presence of these pathogenic bacteria on mobile phones poses a potential risk to vulnerable, immune-compromised individuals.

Similar to this study, in other studies, Gram negative bacteria like *E. coli*, *Klebsiella* spp., *Pseudomonas* spp, *Acinetobacter* which also can cause hospital acquired infections were also isolated from the mobile phones (Patil & Pawar, 2012). Srikantha et al (2010) reported that commonly isolated pathogens from mobile phones were *S. aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Acinetobacter* spp. and *Klebsiella pneumoniae*. Borer et al (2005) observed that there were contaminations of hands and mobile phones only in 10% of their staff who were sampled for once. Tagoe et al (2011) observed that bacterial isolates from cell phones were *Bacillus cereus* being the highest followed by *Proteus mirabilis*, coagulase negative *Staphylococci* and the least organisms sampled were *Citrobacter* spp. and *Shigella* spp.

Klebsiella species showed 100% resistant to Amoxicillin+Clavulanate, Gentamycin, Cotrimoxazole and Ampicillin. The most effective drug of choice were Amikacin (95%) followed by 70% sensitive to Nitrofurantoin, Cefotaxime and Ceftazidime. Comparatively antibiotic susceptibility pattern in *E.coli* showed different than that of *Klebsiella* spp. *E. coli* was found to be 100% resistant to Amoxicillin+Clavulanate, Gentamycin, Cotrimoxazole and Ampicillin. However, *Acinetobacter* spp showed 100% resistant to almost all antibiotics tested except sensitive to Cefotaxime (60%), Ceftazidime (60%), Amikacin (50%) and 20% sensitive to Imipenem and Nitrofurantoin. *Proteus* species showed 100% resistant to Gentamycin, Ampicillin and Amoxicillin+ Clavulanate. Similarly *Pseudomonas aeruginosa* also showed 100% resistant to most antibiotics tested and 66.66% sensitive to only Cefotaxime, Ceftazidime and Amikacin. *Enterobacter* species showed 100% resistant to Amoxicillin+Clavulanate, Gentamycin and Cotrimoxazole. *Citrobacter* species showed 100% resistant to Amoxicillin+Clavulanate, Cotrimoxazole, and Ampicillin.

In this study most of the Gram negative isolates were Multidrug resistance and resistant to Cefotaxime, Ceftazidime, Amoxicillin+clavulanate, Gentamycin, and Cotrimoxazole which is in agreement with other studies who also found 100 % resistant to Cefotaxime and Ceftazidime. For ESBL producing *E coli* or *Klebsiella* species, the Amikacin, Nitrofurantoin, and Imipenem were found to be effective drugs of choice likewise in the study done by Stoesser

et al (2015) reported 96% isolates susceptible to Nitrofurantoin. The isolated organisms from mobile phones of HCWs in this study were resistant to most of the commonly used antibiotics. This may be due to indiscriminate use of multiple antibiotics, intravenous drug abuse, self-medication, and inappropriate use of antibiotics.

Indiscriminate use of antibiotics and delay in seeking medical treatment could be other reason for high rate of resistance to various antimicrobials in the this study. Isolation of ESBLs from mobile phones of the health care workers is worrisome. There is the possibility of transmission of pathogenic ESBLs from hospital units (OT, ICUs) mobile phones to patients, patients to health care professionals and vice versa during patient care, various diagnostic and therapeutic procedures. Therefore, regular surveillance, with suitable agent at regular interval would minimize the colonization and transmission of ESBLs.

Conclusion

The isolation of ESBLs on mobile phones of HCWs is a matter of concern. It proves the pathogenic potential of the organisms and highlights the risk of mobile phones as vehicles of transmission of serious multiple drug resistant pathogens. The benefits of a mobile phone to the HCW far outweigh the risk of cross-transmission of nosocomial pathogens. The findings of this study shall make aware on using mobile phones in health care settings especially during working hours to reduce the risk of transmission of detrimental nosocomial pathogens including multidrug-resistant pathogens as ESBLs. The prevention of the potential spread of infections through mobile phones needs strict adherence to infection control and precautions such as hand washing (hand-hygiene protocols must include directions for hand washing before and after mobile phone usage) and good hygienic practice among the users.

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Social and Psychological Experiences of Senior Citizens to Cope with Their Lives

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Abstract

Aging is a normal, inevitable, biological and universal phenomenon and is the outcome of certain structural and physiological changes that take place in different parts of the body as the life years increases. During ageing process, coping with the situations of everyday life and meeting its demands become more difficult than before. This study mainly focused on the experiences of senior citizens to cope with their lives. A descriptive qualitative case study design was used to explore the experiences. Twenty five senior citizens from Pokhara Aged Shelter were selected in the study. In-depth interview was used to collect primary data. Qualitative data was recorded, transcribed and thematic analysis was made. Elderly people express themselves as useless and worthless. They think that they have nothing to contribute to social life and the community. Social activities are reduced after ageing. They have fear of pain, disability, decline, loss of control and death and also have feelings of anxiety, fear and powerlessness. Elderly people have negative feelings such as emptiness, sadness, resignation, frustration, loneliness and regret because of being alone, limited activities or troubles to cope with ageing. They feel discouraged and helpless. During the ageing process, they give up daily activities gradually. Elderly people missed having somebody to share their small daily experiences. Family is an important factor that contributed to the elderly people's ability to cope with. Hence, the issue of senior citizen and old age should be addressed appropriately as other social problems in society.

Keywords: Ageing, coping, psychological experiences, senior citizens, social experiences.

Introduction

The normal ageing represents the universal biological changes that occur with age. It is a natural process which is commonly defined as the accumulation of diverse deleterious changes occurring in cells and tissues with advancing age that are responsible for the increased risk of disease and death (Harman, 2003). Ageing process reduces physiological capacity, which makes the elderly more susceptible to many health threats (Lepeule, Bind, Baccarelli, Koutrakis, Tarantini, Litonjua, Sparrow, Vokonas & Schwartz 2014). The ageing process differs because of a number of reasons such as health problems, functional abilities, personal resources or the amount of social support (Hautsalo, Rantanen, & Astedt-Kurki, 2012).

The psychological theories describe ageing in terms of the specific changes in behavior, cognitive functions, and roles that occur in an individual undergoing the ageing process. On the other hand however, the social theories explain how factors such as the prevailing circumstances, available resources, caste systems, social accelerators, etc can either speed up or slow down the process of ageing (Ron, 2014).

Globally, the older adult population is rapidly growing and is projected to increase from 810 million to 2 billion in 2050. The fastest growing age group is those aged over 80 years; the 'oldest-old,' with numbers expected to increase almost eight-fold by 2100 (United Nations, 2012). The elderly population is expected to grow considerably in the near future. This rise will especially be prominent in the developing countries where an increment of 140 percent is projected, compared to 51 percent in the developed countries (Shah, Makwana, Goswami & Yadav, 2012). These demographic changes present many challenges, one being the increased demand on health and clinical services (Laidlaw, 2010). Global ageing is the success story of the 21st century because of which declining fertility and mortality as well as improved public health interventions, aged population has been a world-wide phenomenon (Geriatric Centre Nepal, 2010).

Coping for elderly people is different from coping for people of other age groups, as stressors also change with age. Young adults experience more stress in areas related to work, their finances, home maintenance, their personal life, family, and friends; whereas the elderly tend to experience stress related to the limitations of aging (Andersson, Burman, & Skar, 2011). The decreased functional ability and suffering from various health complaints also means dependency on others for carrying out activities of daily living, which may be more or less hard to live with (Andersson, Hallberg & Edberg 2008).

Several studies in Nepal show that the long established culture and traditions of

respecting elders are eroding day by day. Younger generations move away from their birthplace for employment opportunities elsewhere. Consequently, more elderly today are living alone and are vulnerable to mental problems like loneliness, depressions and many other physical diseases (Geriatric Centre Nepal, 2010).

Problems of the aged are not entirely due to aging. Many of the problems are due to associated retirement, which result in loss of income, loss of role as a worker, a role shift from dependable to dependent and isolation due to loss of social group. In addition, there is problem of spending free time. This leads to a negative self-image, which corrodes ones mental health resulting in apprehension, anxiety, depression, frustrations and life itself starts being a burden (Cavanaugh & Blanchard, 2011).

Among the various disorders that affect the elderly, mental health deserves special attention. Depression and dementia incapacitate elderly people worldwide, since these conditions lead to loss of independence and, almost inevitably, loss of autonomy. Mental disorders affect 20 percent of the elderly population and, among these, dementia and depression are highly prevalent.¹ In Brazil, approximately 10 million elderly people suffer from depression (Snowdon, 2002).

Depression is common in the elderly and is a major public health problem. The WHO (2005) also emphasizes that depression, which is the fourth most common illness, can lead to physical, emotional, social and economic problems. The prevalence rate of depression varies worldwide and their prevalence rates range between 10 percent and 55 percent. A study shows the depression ranges from 34.6 percent to 77.5 percent in old age home. Depression in late life is associated with significant morbidity, including deficits in a range of cognitive functions and considerable influence on functional impairment, disability, decreased quality of life, and has a negative effect on the body's recovery from illness, increases the rate of suicide, increases use of health care services and expenses and can result in early death and disturbance in the general state of wellness (Chalise, 2014).

Changes in the social role of the elderly have an impact on their wellbeing. In a considerable proportion of countries, older adults are now in better health as compared with the past. Older adults are increasingly "expected" to be more productive and are even being asked to contribute more to their family and/or community. Conventional attitudes toward the elderly have typically been considerate of their dignity, with a few exceptions in some cultures. However, the current expected role of an elderly

person seems to have changed from the role of “sage advisor” as it used to be in most parts of the world. Retirement age is increasing in many high-income countries. Older people are expected and are able to make important contributions to society as family members, volunteers and as active participants in the workforce, provided they stay fit enough for carrying out such roles. Nevertheless, improving productivity and asking older adults to provide support to communities and families must be complemented by additional support to them from society (Yasamy, Dua, Harper & Saxena, 2013).

A research on family functioning, health and social support assessed by aged home care clients and their family members and concluded that the assessment of needs, care planning and updating are important. The factors influencing life satisfaction compared and examined between older people living with family and those living alone. They found that perceived health status, self-esteem, depression, age and monthly allowance were the factors related to the life satisfaction of older people. Effects of family caregivers on the use of formal long-term care were investigated in South Korea. They draw the conclusion that the decision to use formal services may depend not only on the care level required by the applicant, but also on the presence and type of care givers (Shin & Sok, 2012).

Old age is not a problem itself but it becomes a problem when the obvious physical and mental changes brought by old age make men unable to do their own necessary basic things. Hence, the issue of senior citizen and old age should be addressed appropriately as other social problems in society (Acharya, 2008). Though there are number of quantitative studies regarding problems of elderly, but as per researcher's knowledge, the number of qualitative studies that have examined these issues in Nepal is scarce and this study is a true endeavor to shed light on the prospect of elderly' social and psychological experiences to cope with their lives.

Theoretical perspective

This study is based upon the theories of ageing: Activity theory and continuity theory. The activity theory was developed by Robert J. Havighurst in 1961, asserts that remaining active and engaged with society is essential to satisfaction in old age. Successful aging equals active aging. Activity can be physical or intellectual in nature, but mainly refers to maintaining active roles in society. To maintain a positive self-image, the older person must develop new interests, hobbies, roles, and relationships to replace those that are diminished or lost in late life. Some

elders may insist on continuing activities in late life that pose a danger to themselves and others, such as driving at night with low visual acuity or doing maintenance work in the house while climbing with severely arthritic knees. In doing so, they are denying their limitations and engaging in unsafe behaviors. The activity theory was based on the hypothesis that older people remain socially and psychologically fit, if they stay active (McGarry et al., 2013). The activity theory sees activity as necessary to maintain a person's life satisfaction and positive self-concept. Within the context of this theory, activity may be viewed broadly as physical or intellectual (Meiner, 2015).

The Continuity Theory of aging relates that personality, values, morals, preferences, role activity, and basic patterns of behavior are consistent throughout the life span, regardless of the life changes one encounters. This theory builds upon and modifies the Activity Theory. This theory utilizes the psychological theory of personality to explore the influence of personality on personal roles and life satisfaction (McGarry et al., 2013). According to the continuity theory, the latter part of life is a continuation of the earlier part and therefore an integral component of the entire life cycle. Individuals will respond to aging in the same way they have responded to previous life events (Meiner, 2015).

Data and Methods

The study was conducted in the "Pokhara Briddhasram" which is also called "Pokhara Aged Shelter". "Pokhara Aged Shelter" was purposefully selected and it is one of the old age homes in Pokhara where so many senior citizens are staying and it is providing protection and service free of cost to the senior citizens who are deprived of assistance from anybody else whether they are from the well off or poor family. A descriptive qualitative case study research design was used to explore and generalize the social and psychological experiences of senior citizens to cope with their lives.

The target population comprised of the old aged people of Pokhara Aged Shelter. During data collection, 55 senior citizens were staying in the shelter. Among them 25 cases were selected as sample for this study purposively because only 25 senior citizens were able to answer the asked questions whereas other were having some problems like, chronic illness, bedridden, paralyzed, having depression, etc.

The nature of the data was qualitative. The primary data was obtained from the field work with in-depth interview. Here, the researcher asked the participants (senior citizens) about their sufferings (social and psychological experiences) to cope with their lives. In-depth

interview was taken by the researcher herself with each respondent in friendly environment in their own residential setting. In-depth interview guideline was developed on the basis of extensive literature review, opinion obtained from subject experts. Then qualitative data was collected from the participants according to their feasible time. Interview was recorded in cell phone and field note was maintained. The average time for each interview was 60 minutes. Ethics in this research has been completely maintained. Consent from the participants was taken before hand. They were told about the research purpose and objectives. Their privacy has been maintained throughout the research.

Data was analyzed on the basis of research objectives and research questions. In qualitative data analysis, recordings were transcribed by the researcher herself by listening the interview and writing transcription. Then, case study of each case was made and content analysis was done to make replicable and valid inferences by interpreting and coding textual material. The trustworthiness of the study was maintained by doing iterative questioning, frequent debriefing and by doing thick description of the phenomenon under scrutiny (credibility) and inter rater matching was also done (dependability).

Results

The study revealed that 28.0 percent of the age group living in old age home belonged to 66-70 years age group, 24.0 percent were of 61-65 and 71-75 years age groups whereas 4 percent of them belonged to the age group of 81-85 years and above 86 years. More than half (56%) of the respondents were female and (44%) were male. Hindu believers were (84%) and (12%) respondents have faith in Christianity. Regarding ethnicity, 44.0% were Brahmin followed by Chhetri 36 percent and ethnic groups 20 percent. No any Muslim respondents were found during the survey. The majority of the respondents were illiterate i.e, 76 percent. Only 20 percent of the respondents could read and write. They had not received the education formally. Out of all the respondents, only one respondent had gone to school and received education upto primary level. Out of 25 respondents, 17 were widow/widower which comprised of 68%. Only 12 percent of the respondents were unmarried and the respondents who divorced or separated were also 12 percent.

Social Experiences

Several of the participants felt that they had not been respected or understood in their lives. They expressed that they felt awkward in social life and they had nothing to contribute to social

life and the community. For them, it's shameful to stay alive without being productive. They perceived society's view of elderly people, describing it as becoming useless and worthless.

Case 20

My wife married to another person while the son was only one and half years old. Then after, I took care of my child. I never thought of my second marriage for the sake of my son. I admitted him in SOS school, Pokhara. Now he has done bachelor degree. I have heard that he teaches in a school here in Pokhara. I am nothing for him, I am valueless for him. "Paleko Kukurle achhi khayera afailai tokchha vaneke yehi ho."

I have no worries. No one gets worry about me then why should I? "Maran ta awasya hunchha hunchha...kasari hunchha vane matari ho." Everyone has to go through this old stage. Being old is not shameful but my son does think so and he abandoned me. He will also have to pass through this stage.....let us see what time says?

Case 25

I have step children, I do not have my own. I was abandoned by my family after the death of my husband. So, I came here to stay. Actually, life is nothing. Everyone has to die, it is sure and certain. But human behave as if they don't have to die. My daughter in laws is so cruel. She will also have to go through this stage but she never realizes that.

However, some other elderly people think themselves negatively to society. Being not respected or understood made elderly people feel being separated as well as shameful.

The son of my cousin sometimes comes here to see me. He brings biscuits, juice, etc for me. He hopes to get some money from me which I get from donors and as old age allowance. He comes here to visit me only for the sake of money. No one has affection towards me. Sorrow has become my friend.....but when I see my friends here I think that every individual is lonely and isolated during old age. "Ekali janmane eklai marne ta honi yo jindagi vaneke."

Life is full of happiness and sorrows: happiness in youth and sorrows in old age. No one should get proud because life ends with death and Karma of previous life determines the role of this life. Until I was active, everything was going fine but after I started to get sick due to old age, I became burden. They started to discard, humiliate and hate me. Sometimes unusual thoughts use to come. I wish not to be dependent to anyone because we are a burden to society. "bolda boldai saas jawoos".....that is all what I want.

I had a son whom I had adopted when he was a month old. He had gone Malaysia. His family didn't not care about me. So I came here without informing anyone.

Here I am happy. I use to prepare holy threads and tapari for puja. Sometimes I help

in cooking, preparing vegetables and serving food. I have hearing problem and I am using hearing aid. Usually, my legs get cramping. Since 5 days my legs has started to tremor. I have to seek medical help.

I bother about my future. Who will take care of me if I get paralyzed? I want to die without being disabled. I do not want to be burden to anyone. Love of the spouse is the most important during elderly.

Psychological Experiences

Elderly people fear that they are not able to manage things what they did or enjoy existence as individual persons any more. Concerning the future, they felt only fear. They had a fear of pain, disability and decline, loss of control, and ultimately dying or death. The physical changes were perceived as problems they had to struggle with in daily life and involved feelings of anxiety, fear and powerlessness. Participants expressed anxiety that their physical and mental abilities would be weakened and decrease if they did not actively use them. Some of the participants stressed that the most important thing for them was to stay totally independent. They fear the day when they cannot manage any longer. Thus they described uncertainty about how to cope in the future.

I lost all my energy.....no confidence, it all because of old age. I am not thinking to stay in this old age home for long. I feel it is not good to greed for food only. I feel a lot of sadness and worries. Now I have lonely life. I wish I could die easily, without any sorrow, without disability. I always pray with Lord Yesu and always ask that I could die easily. As my age is growing old, I have no any options. My heart says go to Church, garden the flower, care about the Church only.

However, some other elderly persons have negative feelings such as emptiness, sadness, resignation, frustration, loneliness and regret. It could be caused by living alone, limited activities or troubles to cope with ageing. They feel discouraged, helpless (*case 1*), and different from others, too. Being dependent and being not needed are also negative feeling from their opinion.

Case 1

The sad aspect of ageing is that everything is changed; nothing is preserved from the past. I worry much, to escape from these worries, sometimes I smoke cigarette, which relieves me. I used to work as a contractor of building houses etc. Because of old age, I lost my energy and could not work anymore. The energy is decreasing day by day.Nobody cares

about me. When I remember my past days, I cannot sleep. After ageing, everything becomes worse. In this age, even money does not work.

Coping with Ageing

Some older people have negative attitudes towards ageing and are unwilling to fight against ageing and change whereas some of them combat loneliness. In order to adapt to ageing, older people adjust their doings. They learn to give up when they cannot do something anymore. Some said that their days had become less, and life had become dull as compared with earlier life.

Life is nothing, it is only the combination of happiness and sorrow. To birth is to die. So, I never regret for what I have done. Past is past, nothing left to be remembered. I should be happy with the present of my life. We have too much time here, the days go very slowly here. I used to wander outside, sometimes go for shopping. This organization is constructing a temple. So that I am very happy. Nowadays I remain busy looking at the construction site.

Assistance is also one of important parts for some elderly people. Some of them think that receiving assistance is a troublesome process. On the other hand, assistance can also weaken elderly person's independence.

Conclusion

In lights of the result obtained, it can be concluded that most elderly people usually give up social and other activities as a natural part of ageing. The disengagement in activities and social contacts result in feeling of resignation and dejection. Having good social contacts, positive attitudes to ageing and being able to get assistance are the ways to help elderly people to cope with lives. Being active and being engaged in social activities give feelings of pleasure and a sense of belonging. Family is an important factor that contributed to the elderly people's ability to cope with. Strengthening the individual's autonomy, despite dependence on others, are equally important. Elderly people's individual desire should be respected. In order to gain positive self-image, the older person must develop new interests, hobbies, roles, and relationships and replace those that are lost in late life. These activities bring life satisfaction and positive self-concept among elderly people.

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Effects of Stock Market Development on Economic Growth in Nepal

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Abstract

Financial intermediaries and stock markets are important for the economic growth. The relationship between stock market development and economic growth has been extensively studied in the recent years. This study used analytical research design that involves bi-variate analysis by using simple regression model to examine the relationship between stock market development (measured by size and liquidity of the stock market) and economic growth (measured by logarithm of capital GDP at constant price) in Nepal during the period 2007-2017. Secondary data were collected from the official websites of Ministry of Finance (MoF) and Nepal Stock Exchange (NEPSE). It is assumed that economic growth is the function of stock market development for the purpose of data analysis. Empirical results of this study indicate significant positive relationship between economic growth and stock market development. Moreover, stock market development explained considerable variations in economic growth of Nepal i.e. size of the stock market explained 57.7 percent, and liquidity of the stock market explained 41.6 percent variation in economic growth of Nepal.

Keywords: Economic growth, liquidity, market capitalization, stock market

Introduction

All economists do not hold similar opinions regarding the importance of the financial system for the economic growth. Kunt and Levine (1996) pointed out that various conceptual

arguments emphasize the potentially positive, neutral or even negative implications of stock market development for economic growth. Many analysts view stock market in development countries as "casinos" that have little positive and potentially a large negative impact on economic growth. Other analysts argue that because not much corporate investment is financed through the issuance of equity, stock markets are unimportant for economic growth. As economies develop, self-financed capital investment first gives way to bank- intermediated debt finance and later to the emergence of equity markets as additional instruments for raising external funds. Financial structure the mix of financial intermediaries and markets-changes as countries develop, as illustrated by differences in financial structure across countries and across time for individual countries. Levine (1991) argued that stock markets may affect economic activity through the creation of liquidity. Many profitable investments require a long-term commitment of capital, but investors are often reluctant to relinquish control of their savings for long periods. Liquid equity markets make investment for long periods. Liquid equity markets make investment less risky and more attractive because they allow savers access to their savings quickly and cheaply or when savers want alter their portfolio, they can easily do it. At the same time, companies enjoy permanent access to capital raised through equity issues. By facilitating longer-term, more profitable investments, liquid markets improve the allocation of capital and enhance prospects for long-term economic growth. Yarek and Adjasi (2007) argued that emerging economies are faced with financial constraints which are due to underdeveloped nature of the financial system.

The relationship between financial development and economic growth has been extensively studied in last few decades. Goldsmith (1969) empirically tested the relationship between financial sector development and economic growth by using the cross country data of 35 countries and indicated the positive relationship between the two variables. Levine and Zervous (1996) empirically evaluated the relationship between stock market development and long run growth by using data of 24 countries over the 1976-1993 periods. They used stock market size and liquidity as the proxies of stock market development; and logarithm of initial per capita GDP and the logarithm of the initial secondary school enrollment rate as proxies of long run economic growth. Their study revealed that stock market development is positively associated with economic growth.

Habib and Khan (2004) empirically tested the relationship between financial development and economic growth of Bangladesh during 1975 to 2002. They used money stock to GDP, private sector credit to GDP, and domestic credit to GDP ratios as the indicators

of financial development. Their study indicated a causal direction from economic growth to financial development in Bangladesh.

Tahin (2008) examined the causality between economic development and financial development in Pakistan covering the data for the period 1973 to 2006 by using Johansen's multivariate co-integrating procedure, and found a casual direction from economic development to financial development in the long run.

Boubakari (2010) used Granger Causality test proposed by Granger in 1969 for testing statistically causality between stock market development and the economic growth by using economic and financial time series data from 1995 to 2008 of some European countries Belgium, France, Portugal, Netherlands and United Kingdom. This study indicated that the stock market development does significantly "Granger Cause" economic growth in France and United Kingdom. Moreover, it was found that stock market development does "Granger Cause" but not significantly the economic growth of Netherlands. However, this study also found negative relationship between stock market development and economic growth for Belgium and Portugal. This study also pointed out the findings of Nowbusting (2009) that indicated stock market development is an important ingredient for growth in Mauritius. The causality has been observed only in the countries where stock market is significantly active and highly liquid.

Kharel and Pokhrel (2012) empirically tested the role of financial structure in promoting economic growth of Nepal during 1994-2011 by employing Johansen's co-integrating vector error correction model. They indicated that the banking sector plays a key role for economic growth compared to capital market in Nepal.

Bayar, Kaya and Yildirim (2013) examined the relationship between stock market development and economic growth in Turkey during the period 1993-2013 by using Jahansen-Juselins co-integration test and Grangr Causality test and indicated that there is a long run relationship between economic growth and stock market capitalization, total value of stocks traded, turnover ratio of stocks traded. They also indicated that there is unidirectional causality from stock market capitalization, total value of stock traded and turnover ratio of stocks traded to economic growth.

Mohabbad (2013) investigated the causal relationship between stock market development and economic growth for Jordan for the period 2000-2012 using a vector Error Correction Model (VECM). His study found unidirectional causality between stock market development and economic growth with direction from stock market development to economic growth.

Moreover, Granger co-integration indicated that all t-statistics are significant indicating long-run relationship between the variables.

Osaskwe and Ananwde (2017) applied the Autoregressive Distributive Lag (ARDL) model to investigate the co-integration relationship between stock market development and economic growth by using data of Nigeria from 1989 to 2015. They used real gross domestic growth rate as proxy of economic growth, and market capitalization ratio of GDP and turnover ratio as indicators of stock market development and indicated both short run and long run association between stock market development and economic growth in Nigeria.

Bista (2017) examined the empirical relationship between stock market development and economic growth of Nepal for the period 1993 to 2014. He used real GDP per capital as proxy of economic growth and market capitalization of Nepal stock exchange (NEPSE) as proxy of stock market development. His study indicated a unidirectional causality from stock market development to economic growth in Nepal.

This paper examines whether stock market development matters for economic growth. Stock market development indicators have been included in the model with the assumption that they have a positive impact on economic growth in Nepal.

Data and Methods

This study examines the effects of stock market development on economic growth of Nepal. It used analytical research design that involves bi-variate analysis particularly to examine the relationship between the stock market development and the economic growth. The size and liquidity of the stock market are used as indicators of stock market development defined by Levine and Servos in their study that they conducted in 1996. They defined the measure of the size of the stock market as the ratio of market capitalization divided by Gross Domestic Product (GDP). Market capitalization equals the total value of all listed shares. The assumption underlying the use of this variable as an indicator of stock market development is that the size of the stock market is positively correlated with the ability to mobilize capital and diversify risk. Further, they defined liquidity, the measure of liquidity as the ratio of total value of trades on the major stock exchanges divided by market capitalization and is frequently called the turnover ratio. The turnover ratio also complements the measure of stock market size since markets may be large but inactive or markets may be small but active. Liquidity may importantly influence growth by easing investment in large, long-term projects and by promoting the acquisition of information about firms and managers. Moreover, logarithm of

GDP is used as an indicator of economic growth.

This study incorporated secondary data from the period of 2007/08 to 2017/18 and necessary data were collected from the websites of Nepal Stock Exchange (NEPSE) and Ministry of Finance (MOF) of Nepal. It is assumed that economic growth is the function of stock market development measured by size and liquidity of the stock market of Nepal. SPSS 16.0 version was used to enter, process and analyze the data.

The models used in this study are:

$$Y = a_0 + a_1 X$$

$$Y = b_0 + b_1 Z$$

Where,

Y = logarithm of gross domestic product (GDP)

X = Market capitalization to GDP (size of the stock market)

a_0 = value of constant of equation

a_1 = coefficient of market capitalization to GDP (size of the stock market)

Z = Total value traded to market capitalization (liquidity of the stock market)

b_0 = value of constant of equation

b_1 = coefficient of total value traded to market capitalization
(liquidity of the stock market)

Results and Discussion

Results

The correlation between stock market size and economic growth is 0.759 which is significant at the 0.05 level. This result indicates that there is substantial positive relationship (high correlation) between these two variables. So the regression model is fitting to test the relationship between the variables.

$$Y = 2.744 + 0.051 X \dots\dots\dots(1)$$

$$t = 114.14 \quad t = 3.302$$

$$p < .001 \quad p < .05 \quad \text{with } R^2 = .577$$

Equation 1 presented the simple linear regression using economic growth (Y) as a dependent and stock market size (X) as an independent variable.

The value of R^2 is 0.577 indicating 57.7 percent of the variation in economic growth is explained by variation in stock market size. Estimated value of constant a_0 is significant at 1.00 percent because p value is 0.000 and this value for predictor (market capitalization to GDP

i.e. stock market size) is significant at 0.05 level as P value is less than 0.05 i.e. 0.011. These results of the study explore that size of NEPSE has satisfactory ability to mobilize capital and diversify risk in the economy.

The correlation between the turnover ratio and economic growth is 0.645. This result indicates moderate positive relationship between these two variables. Hence simple regression model is fitting to test the relationship.

$$Y = 2.795 + 0.14 Z \dots\dots\dots (2)$$

$$t = 179.82 + t = 2.388$$

$$p < .001 \quad p < .05 \quad \text{with } R^2 = 0.416$$

The value of R^2 is 0.416 indicating 41.6 percent of the variation in economic growth is explained by variation in liquidity of the stock market. Equation 2 shows simple linear regression using economic growth (Y) as dependent and turnover ratio (Z) as independent variable. Estimated value of constant b_0 is significant at 1.00 percent because p value is 0.000 and this value for predictor (total value traded to market capitalization i. e. liquidity of the market)) is significant at 5.00 percent because p value is 0.044. These results indicate that liquidity of stock market plays satisfactory role in economic growth of Nepal by easing investment in large and long-term projects, and by promoting the acquisition of information about firms and managers.

Economic growth of the country is not only affected by the stock market development. Kharel and Pokhrel (2012) indicated the significant role of banking sector for economic growth in Nepal. However, empirical studies of Levine and Zervons (1996); Bayar, Kaya and Yildirim (2013); Osaskwe and Ananwe (2017) and Bista (2017) found positive association between stock market development and economic growth. These studies indicated a unidirectional causality from stock market development to economic growth. Moreover, other variables like government spending and tax policies, political stability of the country, and availability of factors of production in the country also affect economic growth.

Rabiul, Habib, and Khan (2004), and Tahin (2008) found a casual direction from economic growth to financial development in Bangladesh and Pakistan respectively indicating demand of capital for growth in the economy could not be supplied only through government spending and bank financed capital that follows development of stock market in those countries. This is why the direction of causality could move in any one of the two directions i.e. from stock market development to economic growth or from economic growth to stock market development.

The results of this study pointed out that size of Nepal Stock Exchange (NEPSE) has satisfactory ability to mobilize capital and diversify risk in the economy as 57.7 percent variation in economic growth is explained by the stock market size. Further, the study also indicated that liquidity of stock market plays satisfactory role in accelerating economic growth of the country by easing investment in large and long-term projects and by promoting the acquisition of information about firms and managers.

Conclusion

This paper empirically evaluated the relationship between stock market development and economic growth of Nepal and indicated significant positive relationship between them, and it also indicated that variation in economic growth is explained by stock market development of Nepal.

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Exploring Teacher Traits in Classroom Practices

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Abstract

Teachers play a key role to proliferate the educational system as they are at the implementation level of educational acts, rules and regulations. Their traits are at a flux because of temporal and contextual variations encountered in different settings. This context led this study to explore teacher traits in real classroom practices. To achieve this goal, phenomenological research design, as a type of qualitative inquiry, has been adopted. The population of the study comprised the stakeholders of Bachelor of Mountain Tourism Management (BMTM) programme conducted in Janapriya Multiple Campus, Pokhara. The tool for collecting information was non-participant class observation, in which three classes were observed. The results of the study reveal that teacher traits can be measured by triad roles like professional, administrative, and social dimensions. The study implies that teachers should be aware of these triad roles; and the current pedagogical trends and practices.

Keywords: Administrative, professional, social, teacher traits

Introduction

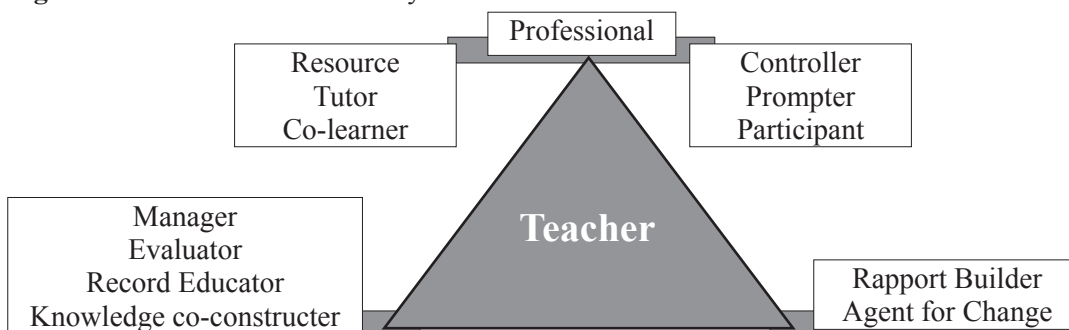
Teachers need to play varying roles and demonstrate distinctive traits based on the contexts they encounter. Their prime roles can be illustrated in authoritative-democratic cline. Teachers, as authorities, play a role of autocrats and commanders of the class who dictate whatever the learners need to do. This is a context of a teacher-fronted classroom (Rose & Kasper, 2010), in which only teachers take agency whereas learners are only the followers. Such a situation appears in traditional classes because it is an easy way to lead the learners towards wherever teachers wish the learners to be and to go. The next type of leadership role, as opposed to the

autocratic one, is democratic, in which both the teachers and the learners share some leadership where necessary.

Teachers are different due to the variability in their personalities such as field dependent versus field independent, extrovert versus introvert, risk taking versus risk-avoiding, along with aptitude, attitude, motivation, affective factors, and so on (Gass & Selinker, 2009; Saville-Troike, 2010; & Gass, Behney, & Plonsky, 2013). These variables are the parameters to identify personality traits of the teachers, whose roles are dependent on different contexts inside and outside the classroom. Despite their different personalities, teachers should be flexible enough to tackle with the “magic moments” (Harmer, 2008a, pp. 24 & 157) decisively and instantly. For example, when the learners have been developed into “praise junkies” (Harmer, 2008a, p. 27), they may be out of track and the teacher needs to perform the role of a controller. Likewise, teachers are not only individual professionals inside the classroom but also members of the communities. Hence, they need to play the role of the agents for social change. Accordingly, they need to perform administrative, professional, and social roles. Such a discursive ability is a pre-requisite to be a professional teacher. Based on these contexts, this study aimed to explore the teacher traits in classroom practices.

Teacher traits subsume: controller, prompter, participant, resource, tutor, rapport builder, task doer, manager and knowledge builder/holder, as the variables to explore and settle (Nagaraj, 1997; Kumaravadivelu, 2003; Richards & Rodgers 2003; Larsen-Freeman, 2007; Tickoo, 2007; Harmer, 2008a & b; Farrell & Jacobs, 2010; Neupane, 2016; & Assaf, n. d.). Furthermore, Fumin and Li (2012) conducted a study on extensive sample and found out teachers’ crucial roles in fostering students’ autonomous learning ability in terms of four variables such as study guides, classroom organizers, resource facilitators, and learning regulators. In learner autonomy, thus, teachers’ role does not decline. These teacher traits fall under the parameters of professional, administrative, and social domains (Figure 1).

Figure 1. PAS Model for the Study



Professional Roles

Professional roles reflect teacher traits in varying teaching learning contexts in which they need to change their roles and tasks. For example, when the students display abrupt behaviours, teachers need to be controllers and when the learners are passive; the teachers should go with the former as co-learners.

Teachers as controllers (Tickoo, 2007) are classroom-in-charges, who deliver lectures in the teacher- fronted classroom (Rose & Kasper, 2010), maintain order and hold authority of the activities conducted in the classroom. They are guides and the learners follow them. Secondly, teachers as prompters (or facilitators) play the roles of the catalysts but being involved in the task. They provide feedback for encouraging the learners may be in fluency or role play activity. Therefore, teachers provide scaffolding (Mitchell & Myles, 2004) for the learners. Yet, teachers should be neither too much adamant nor too much indifferent, nor merely an observant. Thirdly, teachers can be participants along with the learners because it is encouraging for the latter. So, as participants, teachers can be role models for the learners in communicative activities, which can encompass culturally relevant issues, too. At this conjecture, it is customary to note that teachers can be learning from the diverse group of learners and hence the former can be “co-learners” (Farrell & Jacobs, 2010, p. 112). The fourth role, different from the third, is that teachers are resources for the learners and hence the former are required to be resourceful and knowledgeable. Teachers should not make the learners parasites that are reliant on others, but should make bees that look for nectar themselves after having information about where the flower garden lies. The summation of a prompter and a resource yields the teacher roles as tutors (also advisors, counselors, consultants). Teachers, as tutors, facilitate backward learners may be from differently abled one or from marginalized, minority, downtrodden, frustrated, or lower class groups. However, this is possible only if the class size is manageable.

Social Roles

The roles explicated above are not sufficient for the big picture of the good teachers, who should maintain harmonious relationship with the learners. Teachers, as rapport builders (Harmer, 2008a), should play the roles not only inside the constraints of school premises but also outside it to the society. It is because learners are not only individual beings present in the class but also members of the communities outside. Therefore, different types of diversities (e.g. linguistic, cultural, creative, ethnic, and economic) are realities of the postmodern classrooms.

Teachers are also taken as agents for social change (Kumaravadivelu, 2003) and are responsible to be sensible and sensitive enough to make the learners feel that educational institutions are real places for their betterment. Harmer (2008a & b) have suggested two main ways for building good rapport with the learners in the classroom: (a) recognizing, listening, and respecting them; and (b) being even-handed. Nevertheless, teachers should not be too critical; neither can they be too admirer that makes the learners “praise junkies” (Harmer, 2008a, p. 27). Beyond these ways to deal with diverse students inside the classroom, the teachers should be capable of building rapport to the learners as community members.

Administrative Roles

Teachers as administrators should keep diaries (journals), and records of their learners. They can do this by keeping anecdotes, rating scales, cumulative records, diaries and the like. They can also keep records of evaluation scores, maybe for the sake of self-judgment and for the conduction of remedial teaching.

Further, teachers are managers and knowledge holders and builders. They should manage learners in the classroom and hold the spirit of teacher ideals. Also, teachers should be ready for constructing knowledge from diverse group of learners as post-modern classrooms are miniatures of multilingual and multicultural societies. For example, a teacher from one ethnic group can learn cultures from multicultural group of learners. In this sense, teachers are “co-constructors of knowledge” (Assaf, n. d., p.5) and hence, they should be “critical educators” (Assaf, n. d., p. 8), who is capable of reviewing or commenting the existing education system and developing learners to be so. These are the distinctive traits of postmodern teachers.

Data and Methods

Based on the nature of problem, context of the study and purpose of the research, designs are set. Judging these criteria, this study adopted phenomenological research design, which calls for interpretivists’ paradigm (Leavy, 2017). I took teacher traits as a phenomenon to investigate into the real classroom practices in which teachers performed their roles.

I purposively selected only three classes as it was not possible to include all in this small scale study and a few informants for in-depth investigation were sampled purposively in qualitative research (Flick, 2009, & Creswell, 2012 & 2014). Furthermore, Giorgi (2008) has put these words, “At least three participants are included because a sufficient number of variations are needed in order to come up with a typical essence” (as cited in Finlay,

2009, p. 9). Therefore, I selected three teachers and their classes at Bachelor of Mountain Tourism Management Programme of Janapriya Multiple Campus that is located in the Pokhara metropolitan city.

I planned to be a “nonparticipant observer” and the mode was “unstructured” (Dörnyei, 2007, p. 179), in which “the researcher observes the participants in the setting without engaging in the same activities” (Leavy, 2017, p. 135). Thus, I had not prepared any observational schedule/protocol, either. While observing the classes, I maintained field notes, which are “the written or recorded notes on your observations in the field” (Leavy, 2017, p. 136). I jotted down typical words and phrases in the form of on-the-fly notes and thick descriptions so that I could use them in analysis phase. Thus, I also kept a diary while observing their classes. For information processing, I used codes for the three observed classes as CO1, CO2, and CO3 respectively to maintain anonymity and to present, analyze, and interpret the information conveniently and comprehensively.

Results and Discussion

I observed three classes being a non-participant observer so that the natural data could be collected. Each class lasted for one hour. I observed first and third semester classes because only these classes were being run at the time of data collection. The results of the observation have been presented and analyzed in the succeeding sections.

First Class Observation (CO1)

The teacher (T1) began his class asking a few students about the reasons for their absence the previous day in this format:

T: Why were you absent yesterday?

S: I was busy at homework. Sorry sir. (*Source: Field note*)

This vignette shows that the teacher is trying to regularize the students in the class and to establish good relation with his fellow students. This is an episode of a rapport builder on the part of a teacher. Then, he revised the lesson he had taught the day before. It was followed by his mini-lecture that comprised a format of the parts of a letter like introduction, discussion, and conclusion. In this way, he became a guide and a good resource for the students. At the meantime, he also responded the students’ queries and directed them to read the model letter from the book assigned to them. For this episode, he exhibited the role of a director or a prompter.

After a short interaction with the students, he asked them to write a letter based on the prompt given to them. He initiated the tasks giving suggestions in case they needed. For this point, he played the role of a facilitator and a keen observer of the students' task. Further, as an instructor, he was instructing them frequently as per the situation. While the students were writing their letters, he was walking around the class checking their activities and advising them individually as a tutor, too.

As soon as the students submitted their works, he checked them and wherever necessary he suggested for further improvements. This is an instance of being an evaluator, a judge or an assessor. He also proved to be a guide or a pathfinder in these words:

Don't make an exact copy of this. Don't claim you're the best one. Be polite. Show your interest only. That's necessary. Show your gratefulness and say that you enjoyed the interview. Second one is to discuss. Refer to some of the points. Just say, "I'm interested in this job". Just say, "I've special skill". Don't copy the words/lines from the sample given. (*Source: Field note*)

The vignette exhibits that the teacher is a good instructor, who can bring the students in the right track. He is also a good leader who could lead the students towards the right path. Furthermore, when he finished his instructions to the class in general, the students began rewriting the letters. Then, he supported some students in person. This is an instance of being a coach to every student. While he was acutely observing their writing, he was emphasizing on originality in this way, "Write in your own language".

Nevertheless, the students were confused. Then he said, "Write you address first, why you know, it's to show who's writing this letter. Then, give one space and then date, okay". This confirms him to be a classroom leader. Finally, he told them his plan for the next day gave them homework and wrapped his class up.

CO1 demonstrates that the teacher was rapport builder, controller, director, facilitator, keen observer, evaluator, guide, resource, or coach. Whatever roles he performed, the teaching was teacher-centered each and every time. The students were observed as his followers. My observation in this context is that the teacher has not freed himself from the traditional teacher-centeredness of teaching and has not been accustomed to learner-centered practices that are the demands of present day pedagogy.

Second Class Observation (CO2)

As compared to the CO1, I observed CO2 to be more teacher-centered and the teacher

performed the roles of authority, resource, director and controller. These traditional teacher traits were added by the role of a record keeper, a planner, and for some extent rapport builder, too. As soon as the teacher entered the class, he began commanding the students in this way:

T: Have you done your task?

S: No, sir. We don't know.

T: You don't see properly... You...careless!

S: (Murmur)

T: (Speaking as an authority). Look at the board. (*Source: Field note*)

The teacher was talking boldly each time in an authoritative fashion. He began the solution on the board and explained explicitly. It was a deductive way of teaching. He explicated everything himself by giving references to his previous days' teaching. The students were just his followers. After about fifteen minutes' teaching, he started interacting with the students in this way:

T: Oh, Mr. Beard, Why didn't you come to the class yesterday?

S: (Indifferently) I stayed at home.

T: You read at home, then?

S: Yeah! (*Source: Field note*)

This discourse shows that the teacher is trying to build rapport to the students but differently.

While he was teaching, a team of free students union (FSU) entered the class and the FSU chair roared, "Is it okay in the class?" The students replied, "So...so". This discourse is an indicative of the students' dissatisfaction with the campus activities. This also implies teachers' poor rapport with the students. FSU chair also shouted, "Is there no bolt from inside the door? If not, you (pointing to the teacher) should talk to the administration." This vignette entails that FSU chair was trying to show his boldness and power to his colleagues. He behaved as if he were a big brother there. This might have happened because the teacher said to him, "Why are you here? To disturb the class?" And the chair responded negatively. Further, he didn't respect the students as well but was always bullying them, maybe because he wanted to show his power on them. This episode shows that if the teachers are rude, students can naturally be so.

The teacher also seemed a resource for the students while he was solving the problems on the board interacting with them. However, the students were not responding well. This is evident from the following discourse:

T: What is mortgage?

S: (Murmuring) (*Source: Field note*)

This confirms that the teacher did not have good rapport with the students. Notwithstanding with this, when he kidded, they were laughing. This implies that his way of building rapport was different from the usual manner.

When the teacher was informing them that there would be no classes for two days, students were complaining about teachers' irregularity. In addition, they complained for not having a fixed book, a prescribed textbook for BMTM programme. Ultimately, he took students' attendance to keep records of presence.

Like CO1, CO2 shows teachers' roles to be an authority and resource. Unlike the former, the latter shows additional roles like record keeper and planner. Like in CO1, CO2 teacher seemed to be fully teacher-centered and unknown about the learner-centeredness and unknown about the learner-centered and participatory teaching approaches which are requisites for the effective teaching learning.

Third Class Observation (CO3)

Like in CO1 and CO2, I observed CO3 teacher to be leader, controller, guide, director, authority, and overall, fully teacher-centered. However, he performed roles of a record keeper for some extent; he was not observed following social and administrative roles like manager, evaluator, critical thinker, co-constructor of knowledge, and so on. When the teacher entered the class, he installed the multimedia projector and gave a mini-lecture focusing on his teaching item "The organization as an open system." The students listened to him patiently and in a disciplined manner. This proves him a good controller, guide or authority.

While he was explaining his materials being projected, the students were trying to write whatever was projected. Some of them, I think, were not listening to him because they were writing in their copies. For me, the teacher should have told them that these points could be sent to them in their e-mail or messenger if possible; otherwise, he could provide them hand-outs for facilitation. He was totally teacher-centered but never learner-centered. Since he was self-centered, he was not supporting learner autonomy.

He also did not care for building rapport to the students. His teaching was like one-way traffic that does not show him a good rapport-builder. He did not give time to students to talk about the subject. Thus, at times, some students were side-talking. After about half-time of the period passed, the students began murmuring, I overheard. He could not catch the students'

mindset which demanded their agency in teaching-learning activities.

He was totally self-centered. Notwithstanding with this, he partially tried to activate learners. This is evident from his query to students to make groups (each group consisting of three members) for conducting group work for the accomplishment of a case study. He also asked the students to prepare slides for presenting their case study reports. Despite the teacher's assignment, the students were complaining about not teaching how they could prepare slides. This is evident from this discourse:

T: How to make power points?

S: You should make, anyway. (*Source: Field note*)

Finally, as a record keeper, he took students' attendance and closed his teaching that day.

The results of CO3 reveal that the teacher's roles were limited only to a controller, and a record-keeper for some extent. These limited roles do not suffice him to be a good teacher.

The CO1, CO2, and CO3 exhibit the limited teacher roles like controller, facilitator, tutor, resource, rapport builder, record keeper, manager, planner, keen observer, tutor, coach, and evaluator. This proves that teachers are conscious to their professional roles but callous to administrative and social roles. This is undesirable in autonomous programme like BMTM.

The informants showed congruence in professional roles like controller, resource, facilitator, resource, and tutor. However, the incongruences were mainly in administrative and social roles. They kept only students' daily attendance in the name of record keeping. They were not observed keeping anecdotes, cumulative records, rating scales, and so on and so forth.

In spite of some paradoxes mentioned above, the study exhibits that triad roles and tasks (social, administrative and professional), on the part the teachers, are necessary to undertake for the learners' better results and the institutional prosperity.

Conclusions and Implications

The results of the study reveal that teachers' role is crucial for the proliferation of the autonomous programme specifically and of the campus generally. The primacy of teacher-centered practices to the learner-centered ones proves that the teachers are accustomed in traditional methods like lecture and they are not used to practicing participatory approaches like project work, pair work, discovery, problem solving and self-exploratory practices.

The results also show that the stakeholders are not aware of triad roles like professional, administrative and social ones. The teachers' performance in the classroom as controllers, for

some extent facilitators, guides, and poor rapport builders confirms that they are not conscious about their roles to take and tasks to perform. To be specific, they are not much aware of their administrative and social responsibilities which are desirable to bear inside and outside the classrooms.

These conclusions have some implications. Firstly, the teachers should be provided refresher training to highlight the ways of implementing participatory and learner-centered practices against the teacher-centered traditions. They should be made aware of their tripartite roles (professional administrative and social) so that they can contribute to enhance the autonomous programme like BMTM. Secondly, such autonomous programmes should spark teacher autonomy as well as learner autonomy so that the concerned sectors may develop authority, responsibility, and accountability. This way of imparting agency to themselves is beneficial to hold up the spirit of professionalism in teachers and agency in students. In turn, this facilitates in proliferating the BMTM programme specifically and the campus generally. Thirdly, this study can be replicated to another study area, extended number of participants, other agendas of teacher professionalism, and by using other research designs, tools and techniques.

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Tourism and its Socio-economic Effects on Tourism Villages of Kaski, Nepal

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Abstract

Tourism is one of the rapidly growing, complicated and multidimensional business activities worldwide. Village tourism carries high level of potentiality in the county like Nepal which is full of large number of villages having divergent cultures, caste, ethnic groups, climates, religions, and language speaker scattering from the Tarai to the Himalayan territories. This research paper has aimed to explore the socio-economic effects of village tourism activities and the key barriers for the development of village tourism. It has adopted descriptive cum analytical research design and conducted a survey in three sampled villages to collect primary data from 75 respondents, 25 from each village including people directly involved in tourism activities and people not directly involved in tourism activities. The research result has revealed that village tourism activities have significant effects on education, lodging and food culture, government revenue, earnings capacity of the villagers and flow of domestic tourists without any adverse effect on religion and culture, youth of the villages and social undertakings. It has also revealed that there is statistically significant association across the sampled villages regarding socio-economic effects. Furthermore, tourism education, transportation facilities, and lack of skilled manpower have been identified as the key barriers for the sustainable development of village tourism.

Keywords: Economic effects, key barrier, socio-cultural effect, village tourism

Introduction

Tourism is temporary movement of people to destinations out of their normal home and workplace. Tourism includes the activities undertaken during the stay and the facilities created to cater for tourist needs.

Tourism represents dynamic mobility of persons from one place to other places to know lifestyle, cultural and civility of the particular places of interest. It is a smokeless industry and plays significant roles in transforming lifestyle and cultures (Bishwakarma & Basnet, 2018). Someone who travels for pleasure is called tourist who brings multiple outcomes with him/her. The tourists practice several activities and residents of certain areas would observe and learn new activities and perceptions in the society. A circle represents a starting point, which ultimately returns to the same beginning point. Hence, like a circle, tour represents a kind of journey that is a round trip. It is the act of leaving and then returning to the original starting point and therefore, one who takes such a journey can be called a tourist.

According to Negi (1990) tourism is the movement of the people from one place to another or one country to another at leisure for the purpose of pleasure, business, religion, health treatment or visiting friends and relatives. Tourism is also mentioned in Sanskrit, in ancient times. In Sanskrit literature, there are three terms for tourism, derived from the root 'atna', which means going or leaving home for some other place.

Bishwakarma & Basnet (2018) states that tourism is not only travelling to the certain places of interests but also promoting intimacy, exposing hidden cultures, sharing thoughts and understanding between the existing cultures. World tourism organization defined tourism as the activities of persons identified as visitors. A visitor is someone who is making a visit to a main destination outside his/her usual environment for less than a year for any main purpose including holidays, leisure and recreation, business, health, education or other purposes (UNWTO, 2010).

Nepal, a small country with an area of 147,181 square kilometers, has a population of 29.30 million (WB, 2017). Nepal is one of the richest countries in the world in terms of biodiversity due to its geographical position (NTB, 2003). The elevation of the country ranges from 70 m above sea level to the highest point on the earth, Mt. Everest at 8,848 m, all within a breadth of 150 km with climatic conditions ranging from subtropical to arctic. The wild variation fosters an incredible variety of ecosystems, the greatest mountain range on the earth, thick tropical jungles teeming with a wealth of wildlife, thundering rivers, forested hills and frozen valleys. Nepal's natural attractions are ranging from physical, historical, cultural

monuments, temples, art treasures and festivals

Nepal's diversity attracts tourists. Its physical uniqueness offers a wide scope of activities that range from jungle safaris to trekking in snow-capped mountains. Tourism is important to Nepal as a source of foreign currencies and a major employment generator. For country like Nepal, which lacks sufficient resources, the tourism sector is expected to continue to play an important role in the country's development, but not without negative consequences (Pandey, Chettri, Kunwar & Ghimire, 1995)

Rural tourism or tourism in rural is a new form of activity that can bring economic and social benefits to the society. Rural tourism will bring people of different cultures, faiths, languages and life-styles close to one another and it will provide a broader outlook of life. It will not only generate employment for the people but it can also develop social, cultural and educational values. Rural tourism encompasses a wide range of attractions and activities that take place in agricultural or non-urban areas. Its essential characteristics include wide-open spaces, low levels of tourism development, and opportunities for visitors to directly experience agricultural and/or natural environments.

Nepal has more than 125 ethnic groups and 123 spoken languages, 2012) and a rich variety of cultures, lifestyles, values and traditions. Although the law and constitution has provided equal rights to all ethnic and religious groups, Nepal is characterized by a highly stratified social system, resulting in the presence of many castes. In the context of Nepal, a village is a discrete economic political unit to which most individual's social relations are confined and people have strong emotional as well as structural ties to their villages (Kunwar, 1989). All these villages neither are tourist destinations nor are these attractive for the tourists. There are various types of villages like single ethnic village, multi ethnic village, single clan village, multi clan village, caste based villages, homogeneous and heterogeneous villages.

Rural tourism is a kind of macro model tourism whereas village tourism is based on micro model. Village tourism denotes the tourists staying in or near village, often traditional villages in remote areas, and learning about the villager's way of life (Kunwar, 2006). Therefore, in the village tourism, tourists get to know the real culture and rich heritage of the nation. By creating jobs within villages, village tourism creates economic prosperity and reduces the need for young people to migrate to cities to seek employment. The money goes straight to the local community. Even those who do not take in guests earn money by selling handicrafts, working as guides and porters or taking part in cultural performances. The revenue also contributes for the betterment of the villages. In our country, the term village tourism has come up in recent

years. To some people village tourism means any kind of tourism that has a village or rural area as destination. Some others feel that the involvement of the local community in this type of tourism, the economic benefits for the community and minimization of negative social, cultural and environmental impact should be included in the concept (Beun & Lamichhane, 1999).

Village tours should be carefully organized and controlled to minimize negative socio cultural impacts. Such tours should ensure that the economic benefits go to the villagers as well as the tour organizer. In some places, Model village should be established to show tourist about traditional village architecture and activities (Urry, 2002). Traditional villages and related ancient cultural patterns are often major attractions for tourists and can bring benefits to these local communities.

Village tourism can bring various economic and social benefits like increase in employment, generation of foreign currencies, increase in demand of goods and services, improvements in public services, increase in government revenue, improvement of education and health of the rural community, different cultural understanding through fairs and festivals, decrease in migration of rural people to urban areas, enhancement of market for agro products and handicrafts.

The village tourism also has some negative economic and social impact such as exploitation of rural people, overdependence on the urban entrepreneur, under payment for village people, creation of disharmony in development, bad effect on the traditional values and cultural practices, replacement of traditional products by modern products, decline in participation in rural traditional and cultural practices follows etc (Rathore, 2012). By nature, human being adopts new things or manners. Tourists not only bring money to village, they also carry with them a strong and visible life style. Tourism results cultivation of youth cultures consuming music, fashion, clothing, alcohol and drugs. This has led to the situation of stress and conflict (Macloed, 2006). There is gradual weakening of traditional culture popularly termed as the development of 'Coca-Cola' society or the process of cocacolisation within indigenous lifestyles. Depthless coca cola culture consisting of relatively unintegrated traits, people do not have the capacity of pick and choose what traits of coca cola culture they want (Lewellen, 2002). Therefore tourism can be termed as a good servant but bad master. Hence, tourism may have positive and negative socio – cultural and economic impact in the people living in the tourism village.

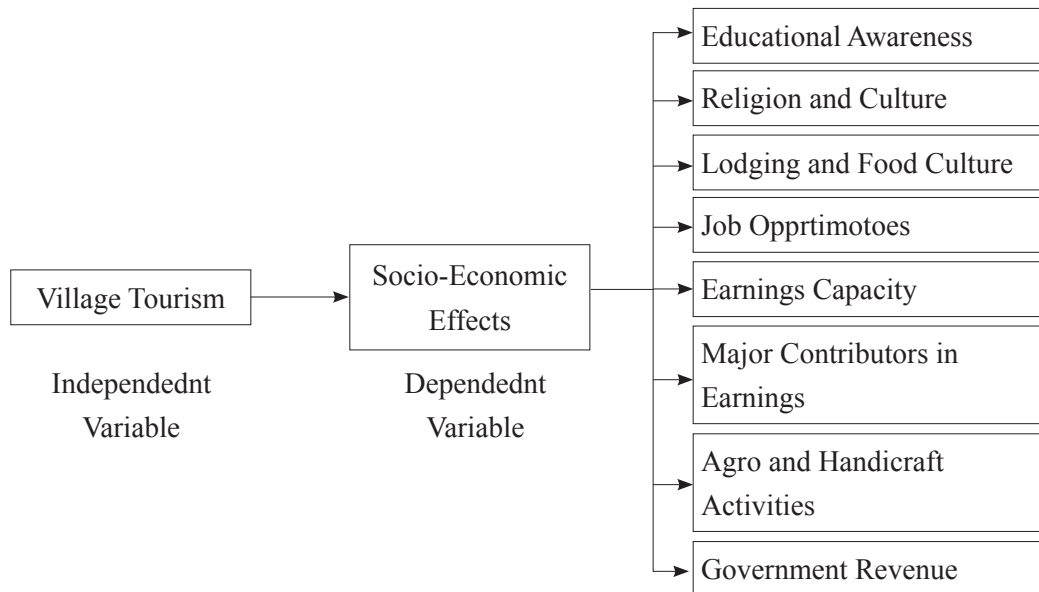
The main objective of this paper is to assess the socio-economic effects resulted from

village tourism activities in rural Kaski. Therefore, this paper has attempted to investigate the socio-economic effect of village tourism in the people living in the sampled villages. Besides that the other specific purposes of this paper are to measure the association socio-economic effects across the sampled villages and to identify the key barriers for sustainable development for the village tourism.

Village tourism will emerged as an important instrument for sustainable human development including poverty alleviation, employment generation, environmental regeneration and development of rural areas and advancement of disadvantaged groups in the country. It can help inflow to resources from urban to the rural economy. It can prevent migration of rural people to urban. Tourism does not only create benefits but it brings along some negative effects which can be devastating if not managed properly and addressed in time. With the growth of tourism, the negative impacts include loss of cultural integrity, environmental and ecological damage.

After conducting the review and observation about the village tourism and its socio-economic impacts in the life of people living in the villages, various relevant variables have been identified concerning the research areas or topic which has been arranged as conceptual framework in the figure given below:

Figure 1. Conceptual Framework



Data and Methods

This study has been conducted in Sikles, Dhampus and Langdruk villages of Kaski district, Gandaki province, Nepal. These villages are popularly known as tourism villages of Kaski district located under the area of Annapurna Conservation Area. Sikles located under Madi Rural Municipality and Dhampus and Langdruk located under Machhapuchhre Rural Municipality of Kaski district. Sikles is a village lying in the lap of Lamjung Himal and Annapurna II that lies 42 kilometers north of Pokhara metropolitan. Whereas, Dhampus and Langdruk are lying in the lap of Machhapuchhre Himal that lies north east side about 26 km and 32 km respectively from Pokhara Metropolitan. The majority of people living in these villages are from ethnic group of Gurung community. And the minority group of people are from Damai, Kami, Sarki, Kshetry and Bramin communities.

Since, the purpose of the study is to determine the socio-economic effects of the tourism activities in the sampled tourism villages with the help of descriptive tools, it has adopted descriptive research design and conducted a field survey in three sampled villages of Kaski district to collect primary data from 75 households, 25 from each villages including people directly involved in tourism activities and people not directly involved in tourism activities. The samples are selected on the basis of convenient and judgmental sampling technique. Quantitative nature of data has been collected through structured questionnaire and the questionnaire was personally administrated with the respondents. For the reliability of questionnaire, a pilot survey was conducted among 20 respondents and improved the questionnaire and for its content validity theoretically and scholarly supported variables have been used through the review of literature concerned to the subject areas as well as for its external validity samples have been taken from those villages where the people directly or indirectly affected in term of socially and economically by the village tourism activities.

The data have been analyzed by using descriptive statistical tools such as mean, percentage and standard deviation. Five points Likert scale were used to measure the socio-economic effects of tourism activities in the sampled villages, where, 1 being highly disagree and 5 being highly agree. Besides this, due to the non-normality of data to measure the association of socio-economic effects across the sampled villages, independent samples Kruskal-Wallis H test and two independent sample Mann-Whitney U test has been conducted. The data have been processed and analyzed by using MS- Words, MS-Excel and Statistical Package of Social Science, version 20.

Results and Discussion

Economic Effect of Village Tourism

The Likert scale mean values calculated to assess the economic effect of village tourism in Kaski over different economic variables. All mean values lie above Likert scale 3; indicating that the villagers are agreed over various economic effects. The highest mean value 4.57 out of all indicates that the respondents have higher level of agreement on increase in local level government income due to village tourism activities followed by 4.36 regarding increase in earnings capacity of the villagers and 4.04 regarding Nepalese tourists are the main source of income from village tourism activities. Similarly, the lowest mean value 3.40 out of all indicates that the respondents have lowest level of agreement regarding foreign tourists are main source of income from village tourism activities followed by 3.76 regarding promote agro and handicraft business in villages and 3.80 regarding increase job opportunities in the villages. The level of agreement from higher level to lower level over various economic effect have been presented in the table 1.

Table 1

Economic Effect of Village Tourism

Statement	HA	A	N	D	HD	Mean	SD
Contributing in government revenue	57.3%	42.7%	0%	0%	0%	4.57	0.50
Contributing to increase earning capacity	36.0%	64.0%	0%	0%	0%	4.36	0.48
Nepalese tourists are the main source of earnings	34.7%	44.0%	12.0%	9.3%	0%	4.04	0.92
Increasing the job opportunities	20.0%	60.0%	0%	20.0%	0%	3.80	0.99
Promote agro and handicraft business	28.0%	48.0%	0%	20.0%	4.0%	3.76	1.18
Foreign tourists are the main source of earnings	22.7%	40.0%	0%	29.3%	8.0%	3.40	1.34

Note: HA = Highly Agree, A = Agree, N = Neutral, D = Disagree, HD = Highly Disagree. 5 points Likert scale analysis have been used where 1 being highly disagree and 5 being highly agree.

The lower standard deviation 0.50 on highly agreed economic statements to higher standard deviation 1.34 on the lowest level of agreement on economic statements revealed that respondents have high level of consistency regarding the economic effects in which they have high level of agreement but a bit more variability regarding the economic effects in which they have lower level of agreement.

Socio-Cultural Effect of Village Tourism

Table 2*Socio-Cultural Effect of Village Tourism*

Statement	HA	A	N	D	HD	Mean	SD
Increase awareness towards education	56.0%	36.0%	4%	4%	0%	4.44	0.76
Change in lodging and food culture	52.0%	36.0%	0%	12.0%	0%	4.28	0.97
Leading to change the traditional occupation	36.0%	41.3%	8.0%	14.7%	0%	3.99	1.02
Change the traditional life style	17.3%	34.7%	4.0%	29.3%	14.7%	3.11	1.39
Increase pollution in the village	16.0%	37.3%	0%	34.7%	12.0%	3.11	1.36
Negative effect on the religion and culture	20.0%	17.3%	14.7%	41.3%	6.7%	3.03	1.29
Negative effect on the youth	0%	8.0%	12.0%	50.7%	29.3%	1.99	0.86
Increase social evil in village	4.0%	14.7%	0%	38.7%	42.7%	1.99	1.18

Note: HA = Highly Agree, A = Agree, N = Neutral, D = Disagree, HD = Highly Disagree and SD = Standard Deviation. 5 points Likert scale analysis has been used where 1 being highly agree and 5 being highly disagree.

The Likert scale mean value presented on table 2 indicates the level of agreement and disagreement over the socio-cultural effect resulted from the village tourism activities. The value of standard deviation of each socio-cultural statements indicate the variability in the responses of the respondents.

As the data revealed, the mean value of 4.44, 4.28, 3.99, 3.11, and 3.11 indicate that majority of respondents have higher level of agreement to lower level of agreement towards “increase in awareness towards education”, “change in lodging and food culture”, “change in traditional occupation”, “change in traditional life style”, and “increase pollution in the villages” due to village tourism activities. Likewise, the mean value of Likert scale 1.99 revealed that the villagers are disagree towards increase in social evils and negative effect to youth of villages respectively. But mean value of 3.03 portrayed that almost neutral towards negative effect on religion and culture.

As the measure of standard deviation for each socio-cultural statement, the low level of standard deviation 0.76 indicates that there is low level of variation among the respondents regarding the increase in the awareness towards education due to village tourism activities followed by 0.86 on “negative effect on the youth”, 0.97 on “change in lodging and food culture” and 1.02 on “leading to change traditional culture”. However, the high level of

standard deviation 1.39 regarding change the traditional life style in the village indicates that there is a high level of variation in agreement and disagreement among the respondents.

Association of Socio-economic Effects Across Selected Villages

In order to examine whether there is any significant differences or similarities exist regarding the economic and socio-cultural effect of village tourism in the sampled villages, independent samples Kruskal-Wallis H test has been conducted.

Table 3

Association of Economic Effects Across Sampled Villages

Economic effect	χ^2_{cal}	D.F.(v)	P- value
Increasing the government revenue	49.799	2	0.00
Contributing in increasing the earnings capacity	12.676	2	0.00
Nepalese tourists are main source of earnings	33.878	2	0.00
Increasing the job opportunities	9.669	2	0.01
Promoting the agro and handicraft business	23.245	2	0.00
Foreign tourist are main source of earnings	60.689	2	0.00
Association of Economic Effects across Sampled Villages	15.486	2	0.00

The independent samples Kruskal Wallis H test conducted at a significance level of 0.05 revealed that $p < 0.05$ in all cases of economic effects. This indicates the rejection of null hypothesis and acceptance of alternative hypothesis. This indicates there is statistically significant difference among the sampled villages regarding the economic effect resulted from village tourism activities in the villages.

Table 4

Association of Socio-cultural Effects across Sampled Villages

Socio-cultural effect	χ^2_{cal}	D.F.(v)	P-value
Increase awareness towards education	20.577	2	0.00
Change in lodging and food culture	3.780	2	0.15
Leading to change the traditional occupation	17.101	2	0.00
Change in traditional life style	31.827	2	0.00
Increase pollution in the village	11.059	2	0.00
Negative effect on the religion and culture	6.642	2	0.04
Negative effect on the youth	14.057	2	0.00
Increase social evil in the village	4.358	2	0.11
Association of Socio-cultural Effects across Sampled Villages	13.728	2	0.00

The p value less than 0.05 of Kruska-Wallis H test analysis regarding increase awareness toward education, leading to change in traditional occupations, changed the traditional life style, increase in pollution in the village, negative effect on the religion and culture, and negative effect on the youth; represented the acceptance of alternative hypothesis indicating that the sampled respondents have difference understanding regarding these socio-cultural effects. However, the p value more than 0.05 in case of changed in lodging and food culture, and increase in social evil in the villages revealed the acceptance of null hypothesis. This indicated that the people of sampled villages have similar type of understanding regarding these two socio-cultural effect resulted from the villages tourism activities.

Association Between Selected Villages Regarding Socio-Economic Effects

Two independent sample test has been conducted using Mann-Whitney U test to measure whether there is any association between any two sampled villages regarding economic and socio-cultural effect resulted from the village tourism activities. The statistical result have been presented in table 5.

Table 5

Measurement of Association between two Sampled Villages

Effect	Two independent samples villages	Mann-Whitney U	Asymp. Sig. (2-tailed)
Economic effect	Sikles and Langdruk	118.000	.00
	Sikles and Dhampus	181.500	.010
	Langdruk and Dhampus	241.500	.163
Socio-cultural	Sikles and Langdruk	160.000	.003
	Sikles and Dhampus	280.000	.525
	Langdruk and Dhampus	140.500	.001

As the statistical test data presented in the table 5 indicates that there is statistically significant difference between Sikles and Langdruk, and Sikles and Dhampus regarding economic effects and statistically not significant difference between Langdruk and Dhampus since the $p > 0.05$. Similarly, in case of socio-cultural effect the test result revealed that there is statistically significant different between Sikles and Langdruk, and Langdruk and Dhampus villages but statistically not significant difference between Sikles and Dhampus.

Key Barrier for Village Tourism Development

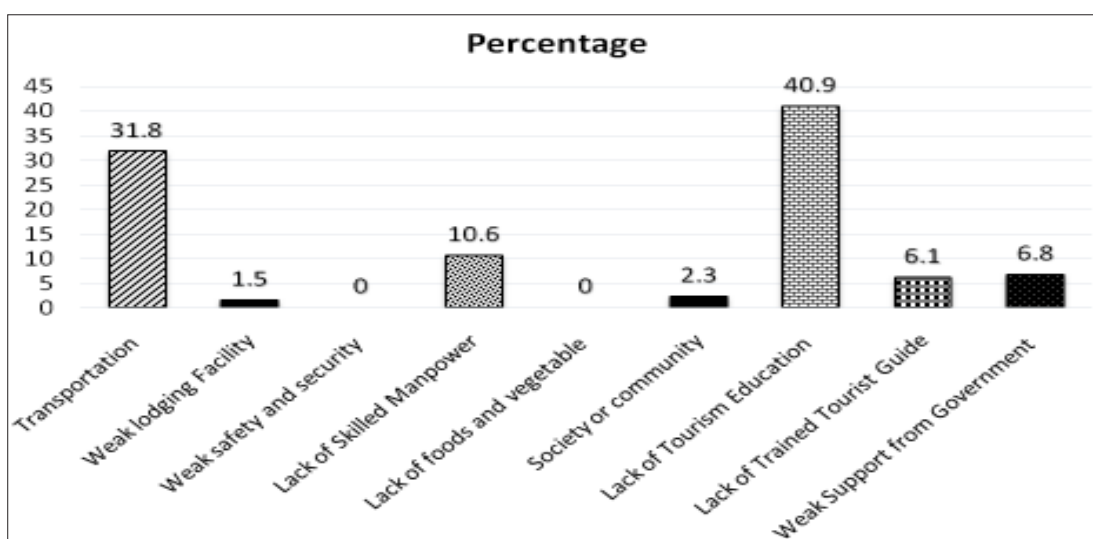
Table 6

Key Barriers for Village Tourism Development

Key Barrier	Responses	Percentage
Transportation	42	31.8
Weak lodging facility	2	1.5
Weak safety and security	0	0.0
Lack of skilled manpower	14	10.6
Lack of foods and vegetable	0	0.0
Society or community	3	2.3
Lack of tourism education	54	40.9
Lack of trained tourist guide	8	6.1
Weak support from government	9	6.8
Total	132	100

The multiple choice questionnaire for the study about the barriers for the development of village tourism revealed that lack of tourism education, transportation facility and the lack of skilled manpower are the key barriers for the development of village tourism and other are less significant. Out the three barriers, lack of tourism education found to be main barrier (40.9%) followed by transportation facility or connectivity to the villages (31.8%) and lack of skilled manpower stands as the third main barriers which occupies 10.6 percent responses as a main barrier. This study portrayed that safety and security and availability of foods and vegetables are not the problems or barriers for village tourism development.

Figure 2: Key Barriers for Village Tourism Development



Conclusion

Despite statistically significant difference across the sampled villages regarding the economic and socio-cultural effects resulted from the village tourism activities as tested by Kruskal-Wallis H test and Mann-Whitney U test, village tourism activities have revealed significant effects on increase in earnings capacity, government revenue, agro and handicraft business, job opportunities, educational awareness, lodging and food culture, traditional life style, and flow of domestic tourists. The survey result also reveals that there are no adverse effect on social undertakings, religion and culture, and the youth of the villages. Lack of tourism education, transportation facilities or connectivity and skilled manpower have been recognized as the key barriers for sustainable development of village tourism.

However, the high level of consensus on change in lodging and food culture, traditional occupation and life style may not be taken as positive effects of village tourism. This may lead to damage the indigenous identity which is more essential for sustainable development of village tourism.

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Shattered Dreams and Stolen Childhood: A Study of Child Labour and Child Rights in Restaurants and Hotels of Pokhara, Nepal

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Abstract

Nepal is committed to end child labour expressed by the ratification of ILO convention and its national plan of action for children and Master Plan to end child labour. However, the 'wicked problem' of child labour is increasing at an alarming rate in urban areas. New hotels and restaurants have been opened and along with it a new way of child labour exploitation has emerged in urban centres. Most of the workers in restaurants/hotels of Pokhara are children. The employers of such business prefer child labour as they are cheap and can be easily exploited. This study attempts to determine the extent to which child labour constitutes a violation of child rights. Pedestal on theories of exploitation and structural-functionalism the study result reveals that condition of child labourers is disgraceful with a shattered dream and stolen childhood—a result of family dysfunction and child rights violation by employer that has thwarted the opportunities for healthy adulthood under a vicious cycle of deprivation, abuse and exploitation. Amid noxious relationship between child labourer and the employer, child labourers face violence and sexual harassment by employer, senior staff and customers. Heavy workload, trouncing and dragging by hair and ill-treatment are the common violence faced by child labourer. Most of the employers are ignorant of child rights. It is a paradox that child labourer is valuable for employer but the life of child labourer is worthless. Most of the child labourers are willing to rehabilitate.

Keywords: Anthropological lens, better off families, good dreams, rehabilitation

Introduction

Amid the global capitalization and modernization process, a wide range of exploitation is found in almost all domains, while some of these are rooted traditionally and some are appearing as a part of drive towards development. Children are particularly vulnerable to poverty, social injustice, child labour, girl trafficking and the resulting exploitation. Child labour prevailing in Nepal and other poor countries is among one of the heinous social problems and violation of human rights. ILO (2004) states that child labour is simply the single most important of child exploitation and child abuse in the world today. A study by CWIN (2000) states that bonded child labour is found in most part of Nepal . . . children mostly from the backward castes are hired for different purposes and are used in almost all sectors like domestic, agricultural, and industrial, hotel, business etc. Many poor children turn up to urban areas with *good dreams* like opportunity to study in good schools, earning money, getting exposure, enjoy city life, a job security in future. Some children from the better off families run away from the houses and enter into the urban centres because of several attractions of the town. According to Nepal Child Labour Report (2008), social recognition, social attitude of taking children as the source of income, family dysfunction, death of parent, maltreatment and abuse of children by parents, lack of facilities and opportunity in rural areas etc. are the contributing factors of child labour. Sainju (2003) argues that most of the children are compelled to work for their mere survival, and cannot be an exception.

UNICEF (2007) states that the term child labour is often defined as work that deprives of their childhood, their potential and their dignity, and that is harmful to physical and mental development. It refers to work that are mentally, physically, socially or morally dangerous and harmful to children, interferes with their schooling, deprives them of the opportunity to attend school, obliging them to leave school prematurely; or requiring them to attempt to combine school attendance excessively with heavy work. Beside these problems, children face many physical dangers and death from forced labour (ILO/IPEC, 2006).

Nepal is a signatory of UN Convention on the Rights of the Child, Convention on Human Rights, Slavery Conventions and other conventions related to children, women, racial discrimination and torture. These instruments also contain provision regarding the protection and promotion of children's rights. Generally, child rights include their rights to life, rights to education, rights to food, rights to health, rights to freedom, rights to water, rights to protection and security, rights to identity etc. Interpretations of children's rights range from allowing children the capacity for autonomous action to the enforcement of children being physically,

mentally and emotionally free from abuse, though what constitutes *abuse* is a matter of debate. Other definitions include the rights to care and nurturing (Lieten, 2009). Child labour itself is the abuse of child rights. Furthermore the children who are in the condition of labour are treated inhumanly and forced to live miserable life.

As children are the pillar of the society and the future of the country, in order to make positive impacts on their lives it is necessary to eliminate violation against children by promoting their potentiality through the protection of their rights. *Anthropological lens* promotes universal human rights that help determine the extent to which we appreciate children's relative value (Tilley, 2000). The Constitution of Nepal 2015, the Labour Act 1992, the Children's Act 1992 and the Child Labour Prohibition and Regulation Act 2000 all have strict provisions to prohibit child labour under the age of 16 in Nepal. Child labour in any system is heinous and illegal act as per the Child Labour Act 2000, but it has not received the same amount of attention. A child bench has also been established as an enforcement mechanism to punish child abuses and offenders of the existing national legislation of children. But despite all the programs of action being carried out, the problem persists primarily due to the absence of proper enforcement and implementation of these laws. However, research on barriers to the weak implementation of the law, apart from conjectures indicating the lack of political will, is almost non-existent.

With the increasing capitalization process in most of the urban areas of Nepal, the population is increasing, new business complexes are being established, more hotels and restaurants are opened and along with it new way of child labour exploitation is emerging in Pokhara. Based on the tribulations of child labourers, this current research revolves around child labourers working in hotels and restaurants and attempts to explore the existing veracities of child labourers in hotels and restaurants of Pokhara. The key objective of this paper is to assess the causes and factors that compelled children's entry into child labour and to analyse the state of child rights.

Data and Methods

A Survey on child labour in Pokhara Metropolitan by Dharel and Bhattarai (2012) depicts that the concentration of child labourers is extremely high in the main commercial centres of Pokhara viz. Prithvi Chowk especially old bus park area, Nagdhunga, Srijana Chowk, Baglung Bus Park, Amarsing Chowk etc. According to this survey, the number of child labourers in the whole Pokhara-Lekhnath Metropolitan in all sectors is in the range between 2,032 and

3,594 children and among them 41 percent are below 16 years old. But there is no specific data of child labourers working in different sectors like hotels, restaurants, construction sites, domestic servants etc. Guided by the anthropological theoretical perspectives of *Exploitation* (Ritzer, 1983) and *Structural-Functionalism* (Pritchard 1962, Nadel 1957, Brown, 1940) and the philosophical principles of *Positivist* and *Interpretivist* tradition, which Chhetri (1992) terms as ‘combination of anthropological and survey method’, both qualitative and quantitative approaches were used in this study.

The field study was conducted in a rigorous field study period during December 2-30, 2018. Using the quantitative survey method, at first, listing were done in hotels and restaurants of Prithvi Chowk inc. Old Bus Park area, Nagdhunga and Srijana Chowk to identify eligible child labourers (children below 16 years of age) and 130 child labourers (69 boys and 61 girls) were found eligible from 32 restaurants and 20 hotels of Prithvi Chowk (inc. old bus park), Nagdhunga and Srijana Chowk areas. From these, as per purposive random sampling, 80 child labourers (44 boys and 36 girls) i.e. 80 children were selected for the study. Of them, 82.5 percent were literate and had multiethnic composition comprising *Janajati* 45 (56.25%) percent, *Dalit* 16 (20%), Chhetri 11 (13.75%), Brahmin 8 (10%). Around 26.25 of them were from villages/poor communities of Kaski, Chitwan, Tanahun, Gorkha, Dhading and Syangja with age ranging from below 10 to 15 years.

Survey method was used to collect quantitative information which supplemented the qualitative information collected through interviews with child labourers and restaurant/hotel employers, direct observation and case studies (altogether seven) on personal experiences, valuation of child rights, relationships and lifestyle. There were various difficulties and challenges in collecting data on such socially existing but legally illicit sadistic phenomenon as child labour. The first challenge was to persuade the child labourers to get time and to provide real information separately on their plight. The second challenge was to get the approval of the hotel/restaurant employer. For this, a generic assessment checklist was designed on child labourers’ plight/human rights and pre-test was consummated on ten child-labourers employed in four hotels/restaurants of old bus park and Nagdhunga that assisted in maintaining the consistency of reliability across time, items and the respondents. This facilitated in assisting validation of the measurement tools so that to represent the variables they are intended to.

Ethical approval in the form of verbal consent and assurance was obtained from each respondent (child labourer and hotel/restaurant employer) before administering the interview and each respondent was convinced of the confidentiality of their identity. No higher statistical

tools and methods were used to analyze and interpret the findings. The quantitative data has been treated in terms of frequencies and percentage.

Results and Discussion

Occupation is a person's usual or principle work or business, especially as a means of earning a living (Foster, 1996). Majority (47%) of child labourers family were engaged with agriculture, 30 percent had their parents in wage labour, small business (6.25%), and abroad employment 5%. Subsistence agriculture with traditional agriculture system and small landholding is the major feature of their lifeline. Around 71.25 percent of child labourers were from poor families. Childhood model claims that children are a part of social structure but poverty makes them out of their social structure (James *et al.* 1998). To escape from poverty and to find a better life children are pushed towards child labour.

Around 67.5 percent had their both parents alive, 13.75 percent had their mother dead, 10 percent had their both parents' dead and 10 percent had their father died. About 55 percent child labours parents were living separately and 45 percent had their parents living together at home. About 48.75 percent of the child labourers' parents were illiterate. Because of illiteracy and lack of parental awareness, children did not get proper guidance.

Family size is a strong contributing factor to child labour. Around 48.75 percent of child labourer's family size was more than eight members, whereas 32.5 percent had family size between five to eight members and 18.75 percent had family size ranging from one to four. Large family is one of the causes that push children into child labour. Parents of large families believe that if their children work, they can be relieved from financial burden. One case reveals.

Case 1

Kam garera parivar lai sahayog gareko chu (I am working to support my family)

I am a 12 year old boy from Bhujel community of Kushmiswara, Baglung District. I have eight members in my family. Unable to feed the family, my father compelled me to work in a hotel near Prithvi Chowk. I wake up around 5am and start my duty and it lasts around 10 pm. My father takes my salary from the employer. My employer's wife is rigid and difficult to tolerate. Sometimes customers behave me inhumanly and scold me. To contribute my huge family and to survive, I have no option, but to work here.

Domestic Violence in Family

Domestic violence is a forced pattern of behaviour in any relationship that is used to gain

or maintain power and control over an individual that includes any behaviour that is meant to threaten, intimidate, frighten, manipulate, harm, humiliate, or falsely accuse (Paul, 2006). Table below illustrates the lashing incidents of domestic violence faced by 23 children who faced domestic violence at home that pushed them to child labour.

Table 1

Incidents of Domestic Violence

Incidents	Number of Child labourer	Percentage
Mother Eloped and Family Disturbed	3	13.05
Harassment/Torture of Stepmother	9	39.13
Quarrelling of Parents	4	17.39
Parents Separation/Affliction by Single Parent	7	30.43
Total	23	100

Among them, 39.13 percent child labourers were pushed to child labour because of stepmother's harassment and torture, 30.43 percent because of parents' separation and affliction by single parent, similarly 17.39 were pressed to child labour because of quarrelling of parents and lastly 13.05 because of mother's elopement and disturbance in family. This confirms that domestic violence and family dysfunction are the forceful factors of child labour. Structural Functional theory of Brown (1940) claims that society is an organized arrangement of parts and disturbance in parts (family) creates chaos. Family breakdown breaks a child and push towards labour. Domestic violence may occur between adults or between adults and children (Chevette, 2003). Many of the child labourers were abused, tortured and bruised by their step mother. Case presented below presents the plight of a boy who was a victim of domestic violence as beatings and abuse that pushed him to child labour.

Case 2

(Poila gayeki ko choro vayeko le balshramik vaye (Become a child labour being the son of eloped mother)

I'm a 13 year old Gurung boy from Lumle, Kaski. My mother eloped and my father married another woman. My step mother used to torture me because I was the son of an eloped mother. Feeling unsecured I started working as a dishwasher in a restaurant at Nagdhunga. I work almost 15 hours a day; don't get leave. Instead they don't believe when I am sick instead blame me of being deceitful. I have to hide my pain and cry in isolation. My stepmother knows that I have been working and she has managed to get my salary. I am suffering because of my parents' behaviour that forced me to child labour.

Child Labour, Child Rights and Employer Nexus

Child labourers plight are steadfastly associated to employers and their dealings to child worker in the matters of education, nature of work, salary, leisure, health, violence etc that verify the

condition of child rights. If the employer is somehow kind and conscious about child rights, the child labourers get congenial environment in work and if not they can be behaved inhumanly. The *capability approach* of Amartya Sen (1999) makes advocacy for welfare economics as an alternative to the understanding and protection of child rights.

Right to Education

The right to education is vital for the economic, social and cultural development of all societies that contributes to the flourishing of individuality through the enhancement of social and professional integration (UNESCO, 2005). Basu (1999) argues that education is a human right which ought to be accessible to everyone, without any discrimination. Almost 92.5 percent of the child labourers were not allowed access to school by employer; 7.5 percent children who were offered schooling by employer were reluctant to go to school. Lack of awareness and tough grind at work place are the reasons behind their reluctance. Child labourers i.e. 77.5 percent were willing to go to school if they get a congenial working environment.

Nature of Work

Almost two third of the child labourers i.e. 70 percent had no fixed work, they perform many activities throughout the day, 20 percent of the child labourers were washing dishes, similarly 13.75 percent were cleaning, likewise 8.75 percent were cooking food and 6.25 percent were washing clothes items.

Table 2

Nature of Work

Nature of Work	Number of Child labourers	Percentage
Washing Dishes	16	20
Cooking Food	7	8.75
Washing Cloths Items	5	6.25
Cleaning	11	13.75
All of the Above	41	51.25
Total	80	100

Child Labour Act of Nepal 2056 BS clarifies that no child shall be engaged in work for more than six hours a day and more than thirty-six hours in a week either with or without additional remuneration. But most of the child labourers (81.25%) worked more than 12 hours everyday while 12.5 percent worked 8-12 hours a day and only 6.25 percent had worked between 6-8 hours. These confirm that employers are ignoring the Child Labour Act by forcing overwork. Many child labourers have work routine of before 5.00 a.m. morning to between 10-11 p.m. evening and their work hours is between 17 to 18 hours a day. They are given limited time for

eating; they are expected to be on duty at right time if not they are scolded and abused.

Salary Received

Contrary to Child Labour Act of Nepal 2056 BS, many child labourers bear the injustice of not paid or fixed their wages. The theory of exploitation claims that exploitation is rooted in society and economic system itself and such tendency is plausible among the child labourers.

Table 3

Wages Received by Child Labourers

Nature of Wages	Number of Child labourers	Percentage
Paid	25	31.25
Not paid	35	43.75
Not fixed	20	25
Total	80	100

On wages, 43.75 percent child labourers were not paid at all. About 40 percent of child labourers got Rs.1500 to 2500 as monthly salary; similarly 32 percent got monthly Rs. 500 to Rs.1500. Most child labourers are not paid or do not have fix monthly salary and those who get salary are not satisfied because the salary is very low compared to their hard labour. About 44 percent labourers received salary half yearly; similarly 28 percent received salary tri-monthly, 20 percent of them received salary annually and only 8 percent received regular salary. The employers are not following the job rules properly and are paying wages at their will. There is no any government monitoring unit to monitor the salary payment of child workers because child labour in itself is illegal and government officials are reluctant to accept the existing phenomenon of child labour.

Bina talab kam gardai chu (I am working without any salary)

I'm a 14 year old Tamang boy from Phulkharka village of Dhading district. I lost my father in my childhood. I work in a restaurant at Nagdhunga as a dishwasher. I have not received a penny this year and if I asked to my employer he says 'Why do you need money?' You are living and eating here; I will give you when you need.' I don't have money even to escape and return home. I have to work around twelve hours a day. I have no option except to work here.

Health and Sanitation

Health is fundamental human rights (WHO, 1948). However, 82.5 percent of the child labourers had not got health facility when sick. It is a violation of child rights on the part of employers intricately linked with the theory of exploitation. Among the 17.5 percent child labourers who got health facilities, 35.71 percent got hygienic food while they were ill, 28.57 percent got rest

when ill, 21.43 percent got hospital check-up and 14.29 percent got medical expenses while they were sick. However, in the cases of 82.5 percent child labourers, the basic needs of health facilities were bluntly ignored by employer. One case study unveils.

Case 4

Bottle le hirkayeko ghau afai puriyo (Injury created by bottle healed naturally)

I am a 12 year old Tharu girl from Chitwan. Due to stark poverty I started working as a dishwasher in a restaurant at Prithvi Chowk. I have to work from early morning to late evening. I am provided with a little amount of money but not in monthly basis. I can neither complain nor leave the hotel because I have to survive. My mistress scolds me and punishes me for broken plate and glass. Once she hit me with a broken bottle and I was badly injured but with no treatment. My injury healed naturally but it was painful and I cried a lot. I want to be free but I do not know where to go and what to do?

Good and balanced food, proper shelter, education, clothing, clean water etc. are the fundamental child rights. But only 7.5 percent of child labourers were given the same food as of their employer, 55 percent were getting low-quality (decayed/rotten) food. Around 43.75 percent child labourers were wearing the clothes already used by the employer's family member, 30 percent of them were in rags, whereas 22.5 percent were given cheap clothes to wear. Only 3.75 percent of the child labourers were provided clean, clothes of normal quality. It was observed that most children were filthy.

Violence and Brutality on Child Labourer

Majority of the child labourers 83.75 were treated badly. Around 50.75 percent of the child labourers were misbehaved and treated brutally by their employers, 28.36 percent were misbehaved by customers and 20.89 percent were ill-treated by senior staff. Most of child labourers i.e. 43.28 percent were bruised by heavy work burden, 31.35 percent of them were beaten and their hair pulled and, 25.37 percent child labourers were abused all time for minor offence or without any reasons. They were scolded by employers and were blamed as lazy and inefficient. Child labourers are always in panic and terrible condition. Table 4 reveals physical injuries and mutilations of 27 child workers caused by beatings and incessant work.

Table 4*Violence on Child Labourer*

Consequences	Number of Child labourers	Percentage
Physical Injuries	12	15
Growth Deficiency	45	56.25
Long Term Health Problem/Trauma	6	7.5
Exhaustion and Malnutrition	27	33.75

It was observed that many of the child labourers were physically injured e.g. fire burn, torn palm, legs and fingers. Almost 15 percent of the child labourers were physically injured, followed by growth deficiency (56.25%), long term health problem/trauma (7.5), exhaustion and malnourishment (33.75%). Many were pale faced and mal-nourished which can impinge on their adult life. Numerous child labourers are irritated, traumatized, depressed and have anti-social thinking due to incessant oppression and work burden. Taking child labourers as means of profit, the employers pressurize them for over-work. One case study reveals the bitter experience of a child labourer who escaped from his home but was badly bruised by his hotel employer.

Case 5***Sarir bhari hirkayeko nil dam cha (My body is full of cane beaten wounds)***

I am a 12 year old Tharu boy from a poor Tharu family of Meghauli, Chitwan. Because of hardships I escaped from home and started to work in a hotel at Prithvi Chowk. I wake up early in the morning and start my daily work. I have to perform various duties: dishwashing, cleaning, shopping, waiter etc without any leave. My employer is rude. When I make mistakes, he scolds me and beat me badly. My body is full of wounds beaten by cane. Under this situation, I remember my family. I am fed up with overload and violent behaviour of the employer. My dream of good life and education has been shattered.

Commoditization of child workers is pervasive. Employers pressurize the child labourers to gratify their customers that results in sexual harassment and mental trauma. The case of a girl child labourer who has been sexually harassed discloses the dark aspect of child labour.

Case 6***Grahak ra sahu le mero gopya anga chunchan (Customer and employer touch my sensitive organ)***

I am a 15 year old Dalit girl from Syangja working in a restaurant at old bus park. On many occasions in the evening time many alcoholic customers' tries to touch my sensible organ pretending as if they are showing love. I cannot deny it because I'm supposed to gratify the

customers. Not only the visitors but also my employer sometimes touches me knowingly in my private parts. I cannot express it because he says me he can do whatever he likes. I am always in panic. I want to be free from such work but I have no choice except accepting my destiny.

Rehabilitation

Most of the child labourers i.e. almost 90 percent were willing to change their profession and rehabilitate if they get any alternative. Most of the child labourers are not involved in this work by desire but by compulsion. Only 10 percent of the child labourers were contented with their profession and want to stay where they are. Among those who want to rehabilitate, 47.22 percent child labourers wanted to continue their study, 35 percent wished to go home and 12.5 percent want to shift to other works. Most of the children wanted to continue their study.

Relations with Employer

A strong, healthy relationship can be one of the best supports in life. However, if relationship isn't working, it can also be a tremendous drain. Majority of the child labourers (73.75 percent) had unhealthy and stressful relationship with employers i.e. they were dissatisfied with their employer's treatment. Only 13.75 percent child labourers had good relations with their employer.

Table 5

Relation of Child Labourer with Employer

Response	Number of Child labourers	Percentage
Good Relation / Satisfied	11	13.75
Unhealthy Relation / Dissatisfied	59	73.75
No answer	10	12.50
Total	80	100

Amid unhealthy relations, child labourers are deprived of love, care and attention. One case exposes the bitter verity of a child labourer's relation with her employer.

Case 7

Mero sahu marae pani hunthiyo (I wish my employer would have been dead)

I am 15 years old girl from Bishwokarma family of Myagdi District. My father is in gulf country and at home my stepmother used to beat and torture me hence I escaped to Pokhara. Now I am working as a waiter in a restaurant at Srijana Chowk. I have to wake up at 4 am in

the morning and work as dishwasher almost up to 11pm. Though I'm habituated with my job it makes me broken down every day. I don't get rest even during my menstruation period, when tired and feverish, I did not get rest. They provide me paracetamol and let me work. If I don't work they scold me. I wish my employer would have been dead only then I will be free.

Employers Preference and Perception on Child Labour and Child Rights

Employers were preferring children as a worker because of easy access of child labourers. Most of the employers i.e. 30 percent preferred children because they did not demand high wage and other facilities. Similarly 23.75 percent employers preferred children because they perform activities consciously, 22.5 percent preferred children because they were easy going. Likewise, 7.5 percent employers favoured child labourer because they had little chance of involvement in activities as theft. Lastly, 16.25 percent employers preferred children because of all of the above reasons. It is an irony that child labourer is valuable for employer but the life of child labourer is worthless. Most employers do not know about child rights.

Table 6

Restaurant/Hotel Employers Perception on Child Rights

Perception	Number of child labourers	Percentage
Partially know about child rights	18	22.50
Do not know about child rights	39	48.75
Aware about child rights	23	28.75
Total	80	100

Almost half of the employers i.e. 48.75 percent were unknown about child rights, only 28.75 percent were aware on child rights and lastly, 22.5 percent partially know about child rights. Many employers think that they were not violating the child rights but they were protecting it as they provide job opportunity and means of survival to the children, which mean that they are uninformed about the child rights and child labour. This depicts the level of awareness of employers, or they may not be telling the truth in the fear of legal prosecution.

Broadly, the relationship between child labour, child rights and employers depicts a dismal stipulation, full of strains....where child labourers are compelled to work and survive in an inhuman condition with very little or no child rights. Despite this, employers prefer a child labourer...correlated amicably with the theory of exploitation which holds the notion that the capitalist compensates the labourers enough for his labour power to reproduce commodity.

Conclusion

The *wicked* problem of child labour is the immediate result of family structure and its

dysfunction allied to structural – functionalist perspective which hub on healthy family function under a strong bond. Child labourers are stuck in deplorable work—with long work hours and 3D (*difficult, dangerous and dirty*) works, but with meagre salary or even unpaid. Deprived of their basic child rights and shattered *budding* childhood dreams, their childhood has been stolen by the grown-up adult....the hotel and restaurant employer and even their parents. The dreams of education and a balanced normal childhood have crushed under the shackle of child labour. It is a fascinating paradox that major bulks of hotel and restaurant employers were unknown about child rights and the harsh veracity that they stole child labourer's childhood and child rights. The concerned government authorities are ignorant to this illegal theft. The irony is that there is no government data on the exact number of child labourers in hotels and restaurants of Pokhara.

Theory of exploitation argues that the capitalist mode of production apart from the commodity mode of production is not only the accumulation of money; but the use of labour power as a commodity to create more value. Hotel/restaurant employers are exploiting child labourers to accumulate surplus money and hence violated Child Labour Act of Nepal 2056 BS. Children needs fair environment for their overall growth but this study dig out very unjust and disgusting life of child labour. Ballet *et al.* (2006) apply the capability approach to child labour issue, focusing on Amartya Sen's (1999) concepts of *substantive opportunities* and *freedom of processes*, which state that the end must be achieved through the most efficient and available means of sustaining economic life, security and welfare of people. Hence, a combination of stringent policies that might contribute complete elimination of child labour could be employment generation schemes that lead to economic prosperity for the household, compulsory schooling for children, a school enrolment subsidy and adult literacy campaigns that increase community or social awareness, especially among adult women. Nepal's rigid social structure has also contributed to child labour, and there are severe inequalities in society that seem to have contributed to widespread poverty, which in turn has forced parents to send their children to become part of the workforce. Child labour and child rights are controversial. Child labour is illegal, however government monitoring cell is necessary to monitor the regular salary payment of child workers--may be through banking payment.

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Impact of Trade Liberalization on Economic Growth of Nepal

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Abstract

Trade openness has been considered as an important determinant of economic growth. It has been witnessed during the past couple of decades that international trade openness has played a significant role in the growth process of both developed and developing countries. International organizations such as World Trade Organization, International Monetary Fund and World Bank are constantly advising, especially developing countries, to speed up the process of trade liberalization to achieve high economic growth. In this context, this paper aims to analyze the impact of trade liberalization on economic growth of Nepal. For this purpose, all the data regarding gross domestic product, export, import, total trade, trade balance of Nepal from 1980 A.D. to 2013 A.D. published by World Bank (2014) were used. Both descriptive as well as inferential statistics were used to analyze the data. Correlation analysis was used to find the correlation between the selected variables. Multiple linear regression analysis was carried out to analyze the impact of the trade liberalization in economic growth of Nepal. Trade cost does not explain any influence in gross domestic product, export, import, total trade and trade balance. The impact of trade openness is positive for all variables except trade balance. Trade openness has influenced economy significantly; import increased with purchasing power, export also increased but service only. Therefore, there is gap in export and imports.

Keywords: Correlation, economic growth, gross domestic product, multiple linear regression, trade balance, trade liberalization.

Introduction

Trade liberalization has been a key policy debate in the development literature since the early 1970s. The centerpiece of this debate has placed a particular emphasis on the role of openness on economic growth and productivity as part of development strategy. The evolution of this debate has also been reinforced by the accumulation of evidence that confirmed positive correlation between export growth and GDP growth in countries with more open trade regime as opposed to those countries, which embraced import substitution and inward looking policies under the wall of tariffs and non-tariff barriers (Edwards, 1998).

In Nepal, trade liberalization has been implemented under the aegis of Breton woods institutions. According to these institutions, the rationale for these reforms is that Nepal's dismal economic performance fundamentally reflects domestic policy inadequacies, and it is precisely these policy inadequacies that need to be re-examined and addressed. In order to realize economic recovery, liberalization of internal and external trade and greater reliance on market forces have been accorded high priority in the policy agenda. These policies have primarily been designed to restore equilibrium, especially in the balance of payments and boosting productivity and exports in both manufacturing and agricultural sectors.

However, the response of exports to the incentive structure built into the trade liberalization program has been unsatisfactory in terms of the values of export earnings and absence of export diversifications. Indeed, the available evidence indicates that the economic performance of Nepalese economy has been rather disappointing. Between 1990 and 2001, the Nepalese economy registered negative current account balance to GDP; however, it was positive during 2002 to 2009. The GDP per capita in constant US\$ rise from \$177 in 1990 to \$269 in 2010 with the slow growth rate of 2.6 percent per annum. Trade to GDP ratio increased from 32 percent in 1990 to 64 percent in 1997 again declined to 46 percent in 2010. Similarly, export to GDP ratio increased from 10 percent in the 1990 to about 27 percent 1997, it started to decline after 1997 and reached to 9.5 percent in 2010. While growth rate of GDP continues to remain under 4 percent over the past two decades except some specific years (World Bank, 2014). The industrial value added has been falling and there are no symptoms of any quick recovery.

Thus, the role of trade and trade policy reforms in Nepal not only remains questionable but it also poses serious questions on development strategy.

Sharma and Bajracharya(1996) carried out a research study on impact of economic liberalization in Nepal by using time series data of 1974/75 to 1994/95. This study has measured

the impact of trade liberalization by using three different methods. First, it has measured the impact of economic liberalization in manufacturing and trade sector by comparing average performance indicators for the period 1990/91 to 1993/94 with those for the period 1984/85 to 1989/90. Second, it has used regression equation to examine the supply response of various reform programs to the economy. The regression equation is based on the time series data from 1974/75 to 1992/93. Third, the regression equations have been compared for periods before and after economic liberalization. This study concludes that after the initiation of more liberalized policy, the number of industrial establishments is rising rapidly. The reforms have been also highly instrumental in improving the trade performance. The average annual growth in export almost doubled in the post liberalization period. The study also shows that there was higher growth rate of export than growth rate of import in the post liberalization period. Moreover, this study shows positive relationship between trade liberalization and growth.

Greenaway, Morgan and Wright (2002) evaluated the short run impact and transitory effects of liberalization in a dynamic panel model of growth using data set from 73 countries. To provide consistent estimates, an instrumental variable following Arellano and Bond (1991) technique was used, with lagged dependent variable as an instrument. The empirical results suggested that liberalization exert positive impact on growth of real GDP per capita.

Dollar and Kraay (2004) examined relationship between decadal changes in the growth rates and changes in the volume of trade within-country rather than cross country which is regarded as an imperfect measure of trade policy. Period dummies were introduced to control for shocks that are common to all countries such as global demand shocks or reductions in transport cost. The data set consisted of 187 observations on growth in the 1990s. The empirical findings reported by the Dollar and Kraay (2004) found strong and positive relationship between the effect of changes in trade and changes in growth.

Sarkar (2005) examined the relationship between trade liberalization and real growth rates of India and Korea using simple trend analysis as well as Autoregressive Distributive Lag (ARDL) approach to co-integration. In the first stage of simple trend analysis, it is observed that both India and Korea opened up and consequently share of trade (export, import and sum of the two) in their GDPs rose significantly. However, found no positive long-term relationship between trade liberalization and growth rate when ARDL approach is used to co-integration.

Salinas and Aksoy (2006), carried out the empirical study on impact of trade liberalization on growth by using cross country regression analysis of 36 developing countries. They found the significant increase in GDP per capita growth for sample developing countries that are

not in transition from socialism, do not have conflicts, and do not depend on a single natural resource. The study concluded different results of trade liberalization in different countries. The impact of trade liberalization is found most significant in the small countries. There is increased growth in Latin America after dismantling of import substitution industrialization. There is also significant positive impact in Sub-Saharan Africa.

Kazungu (2009) explored the role of trade and trade liberalization policies on Tanzanian economy with special focus on the performance of agricultural sector. Parametric and non-parametric tests, ordinary least square (OLS), instrumental variable and cointegration technique are used to evaluate the impact of liberalization on the growth rate of exports, land productivity and economic growth. From the parametric and non-parametric tests, it is found that the contribution of trade liberalization in fostering export growth is rather weak. Second, although the volume of food crops during the post reform period is much higher than before the reforms, there are no symptoms of increased growth overtime. The empirical evidence from econometric analysis found impact of traditional exports negative and significant. The cointegration analysis shows that the share of trade to GDP is negatively correlated with economic growth.

Mannil and Afzal (2012) assessed the impact of trade liberalization on Bangladesh economy between the periods 1980 to 2010. This research analyzed the achievements of the economy in terms of growth, inflation, export and import after trade liberalization. The study used ordinary least square (OLS) technique for empirical analysis. It is found that GDP growth increased consequent to liberalization. Inflation in the economy found unaffected to trade liberalization. The similar result found with quantitative analysis. Both export and imports are found increased with greater openness.

Igweike (2012) examined the impact of trade liberalization on economic growth of Nigeria and examined the separate effects of shocks (Export and Import) on economic growth under trade openness. The study employed the multiple regression analysis to ascertain the appropriateness. The co-efficient of determination, the signs and magnitude of the parameter coefficients are used to access the impact. In the study Vector Autoregressive (VAR) approach is also used to capture shocks, concomitant to economic policies to openness, the impulse-response and variance decomposition analyses. The Granger causality test is used to determine the selective or holistic nature of policy of trade openness. The estimated regression results show that trade openness has not had a positive impact on the Nigerian economy. But the results of the impulse-response analysis and the Granger causality test show that export openness and

economic growth are mutually reinforcing, and that economic growth enhances import, which stimulates export.

The emerging theme in the literature is that there is no agreement pertaining to the gains from trade/trade policy and the mechanism through which these gains are accomplished. The intricacy of establishing an empirical link between trade liberalization/openness and growth arises from. The problem is common definition of openness/trade liberalization because there are several different measures of trade liberalization. The most common measures used are: the average import tariff; an average index of non-tariff barriers; an index of effective protection; an index of relative price distortions or exchange rate misalignment, and the average black market exchange rate premium. Difficulty in establishing causality between variables; openness, with populations, land areas, borders and distances between trading partners because of endogeneity is also tedious. Although recent studies employ System Generalized Method of Moments (SYS-GMM) to overcome the endogeneity problem, they are nevertheless trapped in the first problem.

Inseparable effect of trade liberalization on growth from other complementary policies is another issue of debate. Since trade liberalization is never implemented in isolation, trying to separate its effects from other policies; sound macroeconomic fundamentals, rule of laws, anti-corruption, good institutions, accountability, political stability, transparency, and investment in human capital does not make sense. Unfortunately, however, the current econometric strategies are not well capable in handling those crucial determinants of growth. There are huge cross-country differences in the measurement of many of the variables used in econometric.

Most of the studies have focused on cross-country studies. Its problem is that they suffer from heterogeneity problems prevailing in the countries under investigation. Regarding the trade liberalization, abundant studies have carried out in the global context to test the correlation among the variables. In case of Nepal, some analyses are conducted; however, very few studies based on the tools, in the past are made in this regard. This study justifies the present work by updating data and information so that it becomes an evidence to compare with the finding of previous research. In this context, this study aims to examine the impact of trade liberalization on GDP, import, export, total trade and trade balance of Nepal,

Data and Methods

This study sought the help of descriptive as well as explanatory research design. The series employed are GDP, import, exports and balance of trade of Nepal. Exports include both

merchandise and service to estimate its effect on output growth.

Since function of trade liberalization became effective in 80s decade, so all the series are starting from 1980 and ending in 2013. Series are presented in annual frequency and converted from nominal to real terms using the implicit price index and export index (2005=100, World Bank, 2014). All the series are measured in million dollars. To assess the impact of concerned variable on GDP the ratio of variables to GDP are taken as independent variable in most of the time. For the uniformity in the series, all the information used in this study is collected from the World Bank (2014). The methodology used in this work is common method of analyzing ordinary least square (OLS) in time series framework.

To test for the linkage between trade and economic growth in the short-run, in the long-run, and overall, three steps are commonly followed in time series approach studies: (1) test for unit roots and the order of integration, (2) test for co-integration between the series, and (3) causality test. In this study, the econometrics procedure to be used follows these steps mostly taken from Enders (1995). This study has followed these steps to ensure that all variables included in the study are stationary either in levels or in first differences (unit root tests), to look at the possibility of long-run relationships between the integrated variables (co-integration test), and to determine the significance of coefficient to assess the impact of independent variable in dependent variable expect causality test

The model used in this study consists of the variables-real GDP, real exports (X), real imports (M), total trade (TT), trade balance (TB), domestic price and border price. The total trade (X+M) proportion of GDP is used as trade openness index. The trade cost index is calculated using domestic price (fob) and border price (cif). Real exports and imports are obtained by deflating their nominal values by the corresponding consumer price index. Although, the main focus of this study is to examine the effect of trade liberalization on GDP, other variables such as imports, total trade, trade balance, domestic price and border price are included since they also reflect the degree of openness of the countries.

The following procedure of studying the impact of trade liberalization on growth, export, import, total trade and trade balance has been applied by using time series data to fit the multiple linear regression in following set of equations with time trends:

$$\text{GDP} = a + b t + c O + d \text{TC} + u_1(t) \dots \dots \dots (1)$$

$$\text{EXP} = a + b t + c O + d \text{TC} + u_2(t) \dots \dots \dots (2)$$

$$\text{IMP} = a + b t + c O + d \text{TC} + u_3(t) \dots \dots \dots (3)$$

$$\text{TT} = a + b t + c O + d \text{TC} + u_4(t) \dots \dots \dots (4)$$

$$TB = a + b t + c O + d TC + u_5 (t) \dots \dots \dots (5)$$

Where, GDP = Gross Domestic Product, EXP = Export, IMP = Import, TT = Total Trade, TB = Trade balance, O = Index of trade openness (total trade percentage of GDP), t = Trend variable, u_i = Error term, and, a, b, and c are the parameters to be estimated. The index of trade cost has been prepared by using the following procedure of Limao and Venables (2001)
 $TC = (cif/fob) - 1$

Where, TC = Trade cost index, fob = Domestic price export, cif = Border price import All the assumptions to apply multiple linear regression models are examined and found okay for further analysis.

Results and Discussion

All five series have been increasing over the years. Table 1 represents a summary of the descriptive statistics for the five macroeconomic indicators (GDP, exports, import, total trade, and trade balance) for the period 1980-2013. For the period 1980-2013, the average real GDP was \$6180.202 million with maximum of \$ 11370.38 and minimum \$ 5879.55, the average exports was \$928.34 million, the average imports was found almost \$1871.28 million. Total trade on average was \$2799.62 million during period and the average trade balance was found to be -\$942.937 million with maximum trade deficit of \$3047.86 million and with minimum of US\$191.484 million between 1980 and 2013.

Table 1

Descriptive Statistics of Variables

Indicators	GDP	Export	Import	Total Trade	Trade Balance
Mean	6180.202	928.3432	1871.28	2799.623	-942.937
Maximum	11370.38	1626.57	4264.953	5482.042	-191.484
Minimum	2663.095	297.2264	498.8386	806.1935	-3047.86
Std. Dev.	2603.013	442.7722	1067.744	1418.798	811.948
Observations	34	34	34	34	34

Correlation between Variables

Correlation analysis was done to examine the correlation between the variables. Table 2 presents simple correlation test results between real GDP, real exports, real imports, total trade, and

trade balance. The results show strong and positive correlation between the most of variables except trade balance due to its negative volume during the period of analysis. The results suggest that there is negative correlation between TB and other variables. The implication of these correlation figures is that Trade Balance is inversely affecting GDP, Exports etc.

Table 2

Correlation Between Indicators

Correlation	GDP	Exports	Imports	Total Trade	Trade Balance
GDP	1.000000				
EXPORTS	0.674036	1.000000			
IMPORTS	0.985340	0.715854	1.000000		
TT	0.951887	0.850805	0.975970	1.000000	
TB	-0.928196	-0.396056	-0.924670	-0.819477	1.000000

Regression Results of Model

Absence of the long run relationship of series with trade cost and openness index indicates that OLS can be conducted with series in first difference. Now the model to be estimated becomes;

$$DGDP = a_1 + b_1t + c_1DTO + d_1\mathcal{T} + u_1(t)$$

$$DEXP = a_2 + b_2t + c_2DTO + d_2\mathcal{T} + u_2(t)$$

$$DIMP = a_3 + b_3t + c_3DTO + d_3\mathcal{T} + u_3(t)$$

$$DTT = a_4 + b_4t + c_4DTO + d_4\mathcal{T} + u_4(t)$$

$$DTB = a_5 + b_5t + c_5DTO + d_5\mathcal{T} + u_5(t)$$

Here D represents first difference of the series.

OLS Outcome of Model I

Using the first difference of all series in OLS framework, determinants of Gross Domestic Product (DGDP) are expressed by the multiple regression model of DGDP on t, DTO, and TC, which is

$$\text{DGDP} = 75.12 + 10.96 t + 1113.98 \text{ DTO} - 74.45 \text{ TC}$$

The results on OLS regression show that the Adjusted R^2 is 0.5296. It means that 52.96 percent variation in DGDP is explained by the variation in t , DTO and TC. Further F-statistics and P-value are 13.0084 and 0.001 respectively implies that the overall model is significant at 5 percent level of significance. It is found that t and DTO have significant impact on DGDP but TC does not have any significant impact on DGDP. So, t and DTO are the major determinants of DGDP.

OLS Outcome of Model II

Using the first difference of all series in OLS framework, determinants of Export (DEXP) are expressed by the multiple regression model of DEXP. on t , DTO, and TC, which is

$$\text{DEXP} = 11.30 + 0.04 t + 3201.44 \text{ DTO} - 37.26 \text{ TC}$$

The results on OLS regression show that the Adjusted R^2 is 0.73. It means that 73 percent variation in DEXP is explained by the variation in t , DTO and TC. Further F-statistics and P-value are 29.85 and 0.001 respectively implies that the overall model is significant at 5 percent level of significance. It is found that only DTO has significant impact on DEXP. So, DTO is only the major determinant of DEXP.

OLS Outcome of Model III

Using the first difference of all series in OLS framework, determinants of import (DIMP) are expressed by the multiple regression model of import on t , DTO, and TC, which is

$$\text{DIMP} = -28.42 + 7.14 t + 3675.16 \text{ DTO} + 25.86 \text{ TC}$$

The results on OLS regression show that the Adjusted R^2 is 0.6654. It means that 66.54 percent variation in DIMP is explained by the variation in t , DTO and TC. Further F-statistics and P-value are 22.21 and 0.001 respectively implies that the overall model is significant at 5 percent level of significance. It is found that t and DTO have significant impact on DIMP but TC does not have any significant impact on DIMP. So, t and DTO are the major determinants of import.

OLS Outcome of Model IV

Using the first difference of all series in OLS framework, determinants of total trade (DTT) are expressed by the multiple regression model of DTT on t , DTO, and TC, which is

$$DTT = -17.21 + 7.18 t + 6876.59 DTO - 11.40 TC$$

The results on OLS regression show that the Adjusted R^2 is 0.0.8887. It means that 88.87 percent variation in DTT is explained by the variation in t , DTO and TC. Further F-statistics and P-value are 86.16 and 0.001 respectively implies that the overall model is significant at 5 percent level of significance. It is found that t and DTO have significant impact on DTT but TC does not have any significant impact on DTT. So, t and DTO are the major determinants of DTT.

OLS Outcome of Model V

Using the first difference of all series in OLS framework, determinants of Trade Balance (DTB) are expressed by the multiple regression model of DTB on t , DTO, and TC, which is

$$DTB = 39.82 - 7.10 t - 473.72 DTO - 63.11 TC$$

The results on OLS regression show that the Adjusted R^2 is 0.1561. It means that 15.61 percent variation in Trade Balance is explained by the variation in t , DTO and TC. Further F-statistics and P-value are 2.97 and 0.001 respectively implies that the overall model is significant at 5 percent level of significance. It is found that only t has significant impact on DTB but, TC and DTO do not have any significant impact on Trade Balance. So, t is only the major determinant of DTB.

Conclusion

This study is conducted to investigate the contribution of trade openness to explain economic growth in Nepal using a multivariate framework. Two indices viz. level of trade openness and trade related transportation cost were generated to use proxy of trade liberalization. OLS estimation has shown that trade contributed the change in output; however, no meaningful relationship is established with transportation cost of trade.

Trade cost does not explain any influence in any of the dependent variable. The most possible reason behind is tiny size of manufacturing export and there is possibility of influence of trade cost with improved industrial export. On the other hand boarder price (cif) is not under the control of host economy. The impact of trade openness is positive for all variables except trade balance. Since with trade liberalization volume of imports and export especially service exports increased significantly. Openness has influenced economy significantly; import increased with purchasing power, export also increased but service only. Therefore, there is gap in export and imports.

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Preoperative Anxiety and Social Support among Patients Undergoing Surgery

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Abstract

Most patients awaiting surgery experience anxiety. The study aims to assess the levels of preoperative anxiety and social support, determine the association of background variables with levels of preoperative anxiety and social support and to examine the relationship between levels of preoperative anxiety with social support. A hospital based cross-sectional study was conducted among patients undergoing surgery in a government Hospital, Pokhara. The study period was from September 2016 to August 2017. Total sample was 442 patients scheduled for surgery. Data was collected through Anxiety Specific to Surgery Questionnaire for anxiety and Multidimensional Scale of Perceived Social Support through face to face interview. Ethical approval was obtained from IRC, Institute of Medicine, Tribhuvan University. Data were entered and analysis was performed with the help of the Statistical Package for Social Science (SPSS). The total 94.1 percent of patients were married and 52 percent had low living standard. High level of preoperative anxiety and social support are seen in 42.1 and 64.3 percent respectively. Preoperative anxiety had significant statistical association with standard of living, experience of past operation, and types of operation ($p < 0.05$). Social support had significant statistical association with age, gender, residence, standard of living, and types of operation ($p < 0.05$). Correlation between preoperative anxiety and social support is significant ($r = -.133$, $p = 0.005$) at the 0.05 level. As social support increased; preoperative anxiety decreased. Therefore, health care provider should identify patients with high anxiety, encourage them to talk about their feelings and facilitate more time with their families.

Keywords: Anxiety, patients, preoperative anxiety, surgery, social support

Introduction

Preoperative anxiety is an unpleasant state and most patients awaiting elective surgery experience anxiety and it is widely accepted as an expected response (Homzova & Zelenikova, 2015). Surgery is a crucial event, which directly affects the people's lives, well-being and health as well as in fundamental life pattern of an individual and family levels (Santos, Martins & Oliveira, 2014). Significant preoperative anxiety found in Nigeria was 51.0 percent (Akinsulore et al., 2015). A study conducted in India, prevalence of anxiety factor was 58.9 percent (Saini & Dayal, 2016). In Nepal also higher level of preoperative anxiety was found in female gender, younger age with no previous history of surgery (Pokharel, Bhattarai, Tripathi & Subedi, 2011).

Extreme form of anxiety prior to surgical operation has been lead to cardiovascular disturbances such as tachycardia, hypertension, arrhythmias (Akinsulore et al., 2015). The higher level of anxiety directly altered the physiological system which affects the surgical outcomes (Yilmaz et al., 2011). Continuous information reduced the experience of anxiety in (49%) of the patients and the opportunity to ask questions during the intraoperative period reduced anxiety in 55 percent (Haugen et al., 2009).

Individuals concern about the success of surgery, selection of anesthesia, fear of anesthesia and postoperative pain are the main influencing factor in preoperative anxiety Berth, Petrowski & Balck, 2007). Fear of death (Erkilic et al., 2017; Nigussie et al., 2014), Fear of unknown, financial loss, and result of operations are also the reason for anxiety (Nigussie et al., 2014). It is also affected by many factors for example: socio-demographic characteristics, type of surgery, psychosocial variables (Berth et al., 2007).

Preoperative anxiety of patients awaiting surgery was associated with demographic characteristics as well as social support resources. Patient with high level of social support shows less anxiety, less hospital stay and low doses of narcotics (Yilmaz et al., 2011).

There are number of research conducted in other countries in preoperative anxiety and social support but very less in relation with Nepal. Studies suggest that higher social support have less preoperative anxiety. With the view, the study was undertaken to assess the preoperative anxiety and social support among patients undergoing surgery in the western region of Nepal.

Data and Methods

This was a cross-sectional study to assess preoperative anxiety and social support in a government hospital; where various patients with different living standard, residence were

treated, Pokhara among adult patients undergoing surgery. The study period was from September 2016 to August 2017. The hospital provides service as a referral centre throughout patients department as well as the different in patients wards. The sample size was determined by assuming prevalence of anxiety to be 50 per cent with an error of five per cent, 95 per cent confidence limit, and a non-response rate of 10 per cent, The total sample size was 442. Some criteria was used for selecting the patients were aged 20 above, consented to participate, operation planned for at least one day later and general and spinal anaesthesia used during the surgery and surgical procedures classified as intermediate or major surgery.

The instrument consists of three parts. Part I related to background information (gender, age, educational level, marital status, residence, standard of living; measured by using multidimensional poverty index (ranges from 0-14 for a low, 15-24 for a medium and 25- 62 for a high status) and other contributing factors; Part II questionnaire related to preoperative anxiety and Part III related to social support. Anxiety Specific to Surgery Questionnaire (ASSQ) to identify preoperative anxiety; was developed by Karanci and Dirik and is composed of 10 items. A five-point scale is used for scoring (1 = strongly disagree and 5 = strongly agree). The total score is obtained by adding all scores and only responses to item 8 were reversed (5 = strongly disagree and 1 = strongly agree). All items are concerned with the anxiety about pain and death associated with the surgery and the possible complications and restrictions that might occur after the surgery. The total lowest and highest scores for the scale are 10 and 50, respectively. The higher the score is the higher the anxiety level. The Multidimensional Scale of Perceived Social Support (MSPSS) was used to measure social support. This scale was developed by Zimet et al. This scale includes 12 items rated by a five point Likert scale. The scale has three subscales, that is, family support, support from friends and support from someone special. Each subscale involves four items. The lowest and the highest scores for each subscale are 4 and 20, respectively. The total lowest and highest scores for the scale are 12 and 60, respectively. The instruments was used during face-to-face interviews in the room of the patients. Before collecting data approval was obtained from Institutional Review Board Tribhuvan University, Institute of Medicine and authority of Western Regional Hospital Pokhara. All patients was informed about the purpose of study and methods that would be used; permission was obtained from all patients to ensure the right to dignity and explain them about the study purpose and interviewed in a separate room and filled within 25 to 30 minutes. Researcher assured that answer would be kept confidential; name of respondents was not attached with the answer and was used for study purpose only.

Data was edited on the same day of data collection. Data entry and processing was done by using Statistical Package for Social Science (SPSS) computer software. Data analysis was done by using descriptive statistics such as frequency, percentage, mean and standard deviation. Inferential statistics Chi square test was used to find out the association between factors affecting preoperative anxiety. Pearson's correlation test was used to identify relationship between preoperative anxiety and social support.

Results and Discussion

Out of 442, most (94.1%) of patients were married, 90.3 percent were Hindu and 52 percent had low standard of living. Among them, 58.6 percent from rural area, 30.8 percent had primary level education.

Table 1

Pre-operative Anxiety of Patients Undergoing Surgery

Items	Mean	SD
I am afraid that I will be physically disabled by the operation.	2.28	1.549
I think I will feel pain during the operation.	2.33	1.599
I worry that I will have a lot of pain after the operation.	2.59	1.62
I am afraid that after the operation. I may not be able to walk again and/ or I may not be able to care for myself as before.	2.41	1.56
I worry that I may not recover completely after the operation due to inflammation or other problem.	2.04	1.52
I worry that I may die during the operation due to bleeding or other reasons.	2.14	1.57
I am afraid that I may not regain my consciousness after the operation.	2.02	1.52
I believed that I will get rid of all my pains and problems after the operation.	4.16	1.22
Thoughts of dying frequently come to my mind.	1.93	1.52
If something happens to me, my family and children will remain helpless.	2.45	1.72
Total Mean \pm SD	24.35 \pm 9.317	

Note: SD = Standard Deviation

Concerning the statement related to preoperative anxiety, "I am worry that I will have a lot of pain after the operation" (Mean \pm SD=2.59 \pm 1.62) was top anxiety related statement. The low anxiety related statement was the "thoughts of dying frequently

come to my mind” (Mean \pm SD=1.93 \pm 1.52). The total Mean \pm SD is 24.35 \pm 9.317 for preoperative anxiety [Table 1].

Table 2

Social Support of Patients Undergoing Surgery

Items	Mean	SD
My family really tries to help me.	4.69	0.86
I can talk about my problems with my friends.	4.34	1.21
There is a special person who is around when I am in need.	4.57	1.02
There is a special person with whom I can share my joys and sorrows.	4.46	1.18
I get the emotional help and support I need from my family.	4.54	1.08
I have a special person who is a real source of comfort to me.	4.53	1.10
My friends really try to help me.	3.99	1.43
I can count on my friends when things go wrong.	3.50	1.64
I can talk about my problems with my family.	4.66	1.08
There is a special person in my life who care about my feelings.	4.36	1.32
My family is willing to help me make decisions.	4.54	1.11
There is a special person who care about my feeling	4.36	1.32
Total Mean \pm SD	52.31 \pm 9.69	

Note: SD = Standard Deviation

The statement related to social support, “My family really tries to help me” (Mean \pm SD=4.69 \pm 0.86) was the top social support related statement. The low social support, related statement was “I can count on my friends when things go wrong.” (Mean \pm SD=3.50 \pm 1.64). The total Mean \pm SD is 52.31 \pm 9.69 for social support [Table 2].

Table 3

Association of Background variables and Preoperative Anxiety

Characteristics	Total	Level of Preoperative Anxiety		Chi square	p-Value
		High	Low		
Age in Years					
20-39	280	154(55.0)	126(45.0)	2.82	0.244
40-59	119	76(63.9)	43(36.1)		
60& above	43	26(60.5)	17(39.5)		

Gender					
Male	113	70(61.9)	43(38.1)	1.011	0.315
Female	329	187(56.8)	143(43.2)		
Marital Status					
Married with Partner	416	244(58.7)	172(41.3)	1.569	0.210
Single	26	12(46.2)	14(53.8)		
Residence					
Rural	259	149(57.5)	110(42.5)	.039	0.844
Urban	183	107(58.5)	76(41.5)		
Standard of Living					
Low	230	144(62.6)	86(37.4)	8.102	0.017
Medium	163	92(56.5)	71(43.6)		
High	49	20(40.8)	29(59.2)		
Previous of Operation					
Yes	190	120(63.2)	70(36.8)	3.753	0.053
No	252	136(54.0)	116(46.0)		
Type of Operation					
Gynecological Surgery	232	126(54.3)	106(45.7)	7.724	0.021
General Surgery	148	99(66.9)	49(33.1)		
Orthopedic Surgery	62	32(51.6)	30(48.4)		
Pre-anesthetic Counseling					
Yes	95	57(60.0)	38(40.0)	215	643
No	347	199(57.3)	148(42.7)		

Preoperative anxiety had significant statistical association with standard of living, experience of past operation, and types of operation ($p < 0.05$) [Table 3].

Table 4

Association of Background Variables and Social Support

Characteristics	Total	Level of Preoperative Anxiety		Chi square	p-Value
		High	Low		
Age in Years					
20-39	280	91(32.5)	189(67.5)	5.956	0.051
40-59	119	45(37.8)	74(62.2)		
60 & above	43	22(51.2)	21(48.8)		

Gender					
Male	113	44(38.9)	69(61.1)	0.673	0.041
Female	329	114(34.6)	215(65.4)		
Marital Status					
Married with Partner	416	150(36.1)	266(63.9)	0.298	0.585
Single	26	8(30.8)	18(69.2)		
Residence					
Rural	259	108(41.7)	151(58.3)	9.649	0.002
Urban	183	50(27.3)	133(72.7)		
Standard of Living					
Low	230	57(24.8)	173(75.2)	26.641	0.000
Medium	163	74(45.4)	89(54.6)		
High	49	27(55.1)	22(44.9)		
Previous Operation					
Yes	190	70(36.8)	120(63.2)	0.174	0.676
No	252	88(34.9)	164(65.1)		
Type of Operation					
Gynecological Surgery	232	69(29.7)	163(70.3)	7.963	0.019
General Surgery	148	61(41.2)	87(58.8)		
Orthopedic Surgery	62	28(45.2)	34(4.8)		

Social support had significant statistical association with age gender, residence, standard of living, and types of operation ($p < 0.05$) at 95 percent confidence level [Table 4].

Table 5

Correlation Between Preoperative Anxiety and Social Support

Characteristics	Number	Percent	<i>r</i>	P
Preoperative Anxiety				
Mean \pm SD 24.35 \pm 9.317				
High	256		57.9	
Low	186		42.1	
Anxiety Score from 10 - 49				
Social Support		- .133		0.005
Mean \pm SD 52.31 \pm 9.69				
Low	158	35.7		
High	284	64.3		
Social support Score from 12-60				

Note: r = Pearson Correlation value Correlation is significant at the 0.05 level (2-tailed).

High level of preoperative anxiety seen in 42.1 percent and low level of anxiety seen in 57.9 percent where, mean \pm SD 24.35 \pm 9.317. Similarly high level of social support seen in 64.3 percent and low level seen in 57.9 percent where, mean \pm SD52.31 \pm 9.69. There is negative correlation between preoperative anxiety and social support indicates that Higher the social support, lower the anxiety $r = -0.133$ $p= 0.005$ correlation is significant at the 0.05 level [Table 5].

Discussion

Patients undergoing surgery are often more anxious than the patients with other procedure. So, preoperative anxiety is a very crucial problem. In the present study, high level of preoperative anxiety seen in 42.1 percent and low level was seen in 57.9 percent where mean \pm SD 24.35 \pm 9.317. The mean preoperative anxiety score was similar to findings of a previous study carried out by Karanchi & Dirik (2003) and the score was slightly high (Mean \pm SD 31.91 \pm 6.30) in the study conducted by Yilmaz et.al using ASSQ (Yilmaz et al., 2011).

The findings of this study shows that preoperative anxiety had a significant statistical association with the standard of living, experience of past operation, and types of operation ($p<0.05$). The other demographic characteristics that were not associated with preoperative anxiety; age, gender, marital status, and education. But the associations have been demonstrated by previous study (Yilmaz et al., 2011).

Present study explains that patient with previous operative experience perceived low level of preoperative anxiety and the similar finding found in (Matthias & Samarasekera, 2012, Pokharel et al., 2011, &Bander et al., 1990) and preoperative anxiety is not affected by previous operative exposure (Bander et al., 1990). In the present study, patients undergoing gynecological surgery had a high level of preoperative anxiety. The finding was supported by the previous study (Erkilic et al., 2017).

Concerning statement related to preoperative anxiety, "I am worried that I will have a lot of pain after the operation" (Mean \pm SD=2.59 \pm 1.62) was top anxiety related

statement. The low anxiety related statement was the “thoughts of dying frequently come to my mind” (Mean \pm SD=1.93 \pm 1.52). The main cause of preoperative anxiety was patient had worry about family in first which was present in the study Akinsulore et al., 2015.

The results of this study showed that high level of social support seen in 64.3 percent and low level was seen in 57.9 percent where, mean \pm SD 52.31 \pm 9.69. Marriage is the central relationship for most adults and has beneficial effects on health. One study reported that married persons have greater emotional support, which is positively related to their emotional state. The perceived quality of the marital relationship was relatively insignificant (Kulik and Mahler, 1989). Similar finding was observed in this study also. The findings of this study shows that social support had a significant statistical association with age gender, residence, standard of living, and types of operation ($p < 0.05$). Likewise the statement related to social support, “My family really tries to help me” (Mean \pm SD=4.69 \pm 0.86) was the top social support related statement. The low social support-related statement was “I can count on my friends when things go wrong.” (Mean \pm SD=3.50 \pm 1.64).

In the present study, the patients had a mean score of 52.31 \pm 9.69 for social support and there was an inverse correlation $r = -0.133$ between the preoperative anxiety scores and social support scores ($p = 0.005$). These findings illustrate that as family support and support from friends and/or someone special increased, preoperative anxiety decreased. In the studies done by Yilmaz M. et.al. reported that patients visited by their relatives and close friends had decreased levels of anxiety (Yilmaz et al., 2011).

Conclusion

About forty two percent of patients had higher level of anxiety and about sixty-four percent had good social support. The findings illustrate that as social support increased, preoperative anxiety decreased. Therefore, health care provider should identify patients that have high anxiety levels, encourage them to talk about their feelings and facilitate more time with their families.

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Basic Accounting System & Recent Taxation Issues

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Introduction

Accounting is a science and art of creating, recording, classifying and reporting the financial transactions. It helps to generate and maintain records, calculate profit and loss, ascertain the financial position, communicate the information and determine the tax amount. Accounting cycle contains: finding the transactions, recording, classifying, summarizing and communicating to concerned stakeholders.

Each and every financial transaction should be scientifically recorded on the basis of double entry by debiting one account and crediting to other by showing two fold equal financial effect. For double entry system the types of account should be clearly understood.

Personal account_Debit the receiver, credit the giver

Real Account Debit what comes in and credit what goes out

Nominal account_Debit all expenses and losses and credit all incomes and gains.

Every transaction should be recorded as per this rule appropriately as journal entry. The next step is to prepare ledger account. Ledger is a set of concerned account to classify the double entered transactions. Every transaction will be posted in concerned ledger account by showing equal debit and credit effect. After preparing the ledger within a fix time duration, they will be closed by finding the balance. Now we can prepare trial balance as a summery to test the accuracy of the account. At the end of every fiscal year, we have to prepare profit and loss account, balance sheet and cash flow by utilizing the ledger account balance shown in trial balance and including the given adjustments.

Supporting

Supporting refers to the evidence of financial transactions. It is most to attach with journal

vouchers/original records. It may be invoice, receipts, statements, varpai, bills, reports, letters, pragyapan patra, credit note, debit note, clearance certificate etc. Supporting must be legal and original. If it is not authorized, transaction may be doubtful and will not be recognized. For this it is necessary to take PAN, VAT, invoice as well as certified evidence from recognized party. Simple memo, loose bills, unauthorized paper etc should not accept as supporting.

Responsibility

Finance manager/accountant is a responsible and accountable person here. He/She should be fully aware about

- Accounting principles and methods
- Internal and external accounting
- Direct and indirect taxes
- Taxation provisions
- Financial plan and targets
- Assigned tasks and jobs
- Power and interrelationship
- Reporting and improvements

Don't forget following issues while keeping the accounts:

- Improve the capacity and skill through training and participation.
- Don't think that account and reporting is only a formality.
- Don't give the accounting work in contract basis.
- Be sure that if case will need to file in the court, we have sufficient proof/evidence
- Don't be over tight on professional fees.
- Try to make accountable to the accountant
- Don't forget to introduce cross checking system.
- Taxation system of government
- Software and computer system
- Regularity in accounting duty.

Control System

- Accounting performance/outcomes have to evaluate in regular intervals. The system may be different in context to industry, trade and services. Now our concern is trade here due to nature of audience. (Dap members)

- This audience have to focus own observation, review and control on mismatch data, purchase, sales, creditors, debtors, loans, liquidity, current assets, current liabilities, expenses, incomes as well as profitability.
- Inventory management system, debtors collection, and bank statement must be primarily focused. It is more risky in trade.
- Be very much careful in incentives, discounts, commission, etc. received from suppliers and its TDS.

Twenty One Accounting Bullets (Focused to Management)

Following are the key points to check the accounting process and performance.

- Sample checking of stock randomly and detail counting as well as verification at the end of the year.
- Formal or legal expenditure supporting in the name of firm.
- Bank deposit voucher with bank stamp, signature and amount.
- Approved purchase order and authorized store receipt.
- Advance after application and timely clearance.
- Up to date tax invoice and posting in sales and purchase book.
- Daily bank deposit of cash balance.
- Water, electricity, telephone payment in time.
- Very back date supporting not to accept and approve.
- Compare market rate and purchase rate of supplies items.
- Travelling after travel order and objective of travel achievement.
- Daily cash book balance and actual cash balance matching.
- Bank statement balance and ledger balance matching.
- Appropriateness of account head in the voucher.
- Posting up to date maximum excuse 3 days.
- Debtors and creditors balance verification every month.
- Consult to Auditor in every new issue.
- Prepare Trial Balance every month.
- Letter and statement to sent to different concerned parties/receive from parties.
- Regular preparation of minutes of BOD and AGM.
- Documents to sent to company register office/concerned department/renew of firm.

Recent Taxation Issues (076/077)

Taxation Rights

- **Federal Gvt. :** Custom duty, excise duty, value added tax, corporate income tax, individual income tax, remuneration tax, tourism tax etc.
- **State Gvt. :** Land and house registration charge, vehicle tax, entertainment tax, advertisement tax, tourism tax, agriculture income tax, etc.
- **Local Gvt. :** Property tax, rent tax, registration charge, vehicle tax, service tax, tourism tax, advertisement tax, business tax, land tax, entertainment tax etc.

Types of Tax

- **Direct Tax :** Income tax, property tax, rent tax, TDS etc.
- **Indirect Tax :** Custom duty, excise duty, value added tax, export duty , telecom tax etc.

Recent Issues on Direct Tax

In General:

- Basic exemption limit for remuneration income tax for individual Rs. 4,00,000 and couple Rs. 4,50,000. But 1% social security tax have to pay.
- Husband & wife having separate income source are given choice to adopt either to get assessed separately or jointly as married family.
- Implementation of one man one pan policy.
- Payment of salary and wages to employees and workers without PAN and through bank account cannot be booked as expenses.
- Social security fund is operating as it is and no regulation is not finalized and used.
- Tax in share transaction decreased from 7.5% to 5% to encourage in share investment.
- Cooperatives who operates financial transaction, the tax rate is 5% and 10% in municipality and metro and sub-metropolitan area respectively. No tax is in Gaupalika. Other cooperatives tax rate is 20%.
- Income tax facility and exemption continued on merger of bank and financial institution who will submit letter of intent up to 2077 Ashadh end.
- Any error on tax return submitted can be rectified / revised within 30 days of submission.
- Expenses more than Rs. 1,000 must be in PAN bill.
- Income tax facility provided to infrastructure activity, electricity, vehicle, special manufacturing industries etc. specified in different rates.
- If estimated tax return will not be submitted in time minimum penalty is Rs. 5000 or 0.01 percent of total sales whichever is high will be charged.

- Tax rate to natural person : individual Rs. 4 lakh and for couple Rs. 4.5 lakh is not taxable then next 1 lakh, 10%, 2 lakh 20%, upto 20 lakh 30% and more than this 36%.
- Bank, financial institution, insurance company etc., tax rate is 30%.
- Pvt. Ltd. company/Partnership tax rate is 25%.
- Financial cooperatives-5% and 10% in nagarpalika and mahanagarpalika respectively. No tax in Gaupalika to financial and agro-based cooperatives. 20% in others.
- Minimum tax upto 20 lakh sales or Rs. 2 lakh income is Rs. 7,500, 4000 and 2500 in Metropolitan and Sub-Metropolitan, Municipality, and Gaupalika.
- If more than 20 lakh will be the sales of cigarettes and gas, the tax rate will be 0.25% on sales. Others tax rate is 0.75% on sales. Similarly service tax will be 2% on sales. But Rs. 7500 or this percent whichever ever will be high.
- Expenses claim by person is insurance premium limit is Rs. 25,000 or actual payment whichever is less.
- Husband and wife having separate income source have to take the individual tax exemption.

Tax Deduction at Source (TDS)

- 2.5% on transportation or freight charge.
- 5% on dividend, interest on deposit in bank and cooperatives.
- 15% on service fee or charge (1.5% if registered in VAT)
- 10% on rent, hire charge, royalty, aircraft lease.
- 15% on meeting allowances, commission, bonus
- 25% on prize and other sudden gains.
- 5% on retirement fund.
- 15% on advertisement (VAT bill 1.5%)
- 15% on any extra payment to employees
- 15% on donation etc. (Other as per the needs)
- 1.5% if issued VAT invoice in every case.
- 5% on retirement payment.
- 15% on part time teaching.
- 1.5% on payment under contract exceeding Rs. 50,000.
- 1.5% on insurance premium.
- 5% on gain on sale of share of listed company.

- 10% on gain on sale of share of unlisted company.
- 25% on others besides specified.

Advance Income Tax

- Up to Poush end 40% of estimated tax
- Up to Chaitra end 70% of estimated tax
- Up to Ashadh end 100% of estimated tax

(Note: Differences more or less than 10% have to be revised accordingly. If not, penalty will be 15% on the basis of month)

- If tax amount is less than Rs. 7500, no need to pay the advance installment.
- If estimated tax return is not submitted in every Poush end Rs. 5000 or 0.01% of the sales (total income) whichever is higher must pay as penalty.

Recent Issues on Indirect Tax

- Compulsory registration in VAT added on this year are liquors, wine, health club, disco, massage, therapy, motor parts, electric software, custom agent, toys, scrap business, education and legal consultancy, account and auditing service.
- Tax more than Rs. 10 lakh should be paid through cheque/draft or electronic mode.
- VAT refund can be claimed if in case of continuous VAT credit or receivable upto 4 month.
- Person who paid through electronic media, 10% of VAT will be returned and deposited to their bank account.
- Penalty increased for non-issuing VAT invoice from Rs. 5,000 to 10,000. Penalty Rs. 1,000 for not obtaining VAT invoice introduced now.
- Penalty increase from Rs. 5000 to Rs. 10,000 for not carrying tax invoice along with goods worth more than Rs. 10,000.
- 2.5% tax will be imposed in custom point in agriculture products import.
- No VAT claim in diesel and gas.
- Custom rate in raw material import is reduced.
- Custom reduced on import of Ambulance, vehicle by agro based cooperatives, mill machinery also.
- Vehicle and consignment trekking system is introduced from producer/importer to wholesaler.

- Innovative idea, skills, technology related unregistered business are exempted in tax, fines, penalties etc. if they will be registered in VAT and income tax up to 2076 Poush end.
- Excise duty increased in beverages, tobacco/cigarettes, alcohol, beer, cement, microphone, amplifier, speaker etc.
- If any changes in details given while registering in VAT, it should be informed within 15 days, nor Rs. 10,000 penalty.
- If VAT ledger of sales and purchase will not be found updated while visiting by tax officer, the penalty will be Rs. 10,000 at once. (in case of opposed to show Rs. 20,000).

Attention about Pvt. Ltd. Company

- After 3 months of its incorporation the office should be open and inform to company registrar.
- Shareholders details including their share number and capital should be prepared and approved from company registrar office.
- BOD have to form and inform to company registrar.
- Preliminary AGM have to call within the year of establishment and other regular AGM have to call within 6 month of fiscal year completed.
- Statement about AGM have to prepare and sent with audit report to company registrar office within one month.
- Auditor appointment, yearly policy and program approval, discussion on audit and BOD report have to be approved by AGM.
- Special resolution has to pass for changes on Memorandum and Articles of Association.

Taxation Bullets (Focused to management while checking the tax report)

Following are the main points to be considered while preparing report to submit to tax.

- Assets pool A, B, C, D and E grouping as per the specification as building, office assets, automobiles, machine equipments/ other and intangible assets.
- Depreciation rate in order as per the income tax act, 5, 25, 20, 15, percent and lastly cost divided by estimated life. Depreciation on addition on the basis of time 100% Poush, 67% Chaitra and 33% Ashadh.
- Repair expenses 7% of opening value of assets and remaining balance to be capitalized.
- TDS deduction and VAT payment of last month up to 25th of this month. (Better to do

e-TDS.

- Banking transactions in and out as per the legal requirements.
- Advance tax payment in time nor 15% penalty.
- Mismatch data regarding the sales, purchase, debtors and creditors.
- Cash payment limit upto Rs. 50,000
- VAT advance status better to be payable at the end of Ashadh.
- Staff salary payment system and their appointment with citizenship certificate in personal file.
- Last year GP and NP ratio/percentage have to consider quarterly.
- Tax account vouchers, ledgers, and other documents safety up to six years.
- Know that which tax have to pay where.
- Try to submit your financial report upto Aswin if not apply for additional time for it.
(Last Poush)
- Timely find and analyze your expenses and profit status.
- See the liquidity position of the firm or company. Over liquidity is problem.
- Know your bank loan and its appropriate used.
- Renew the license, purchase/sales book, excise duty, firm, company etc. in time.
- Calculation of remuneration tax to deduct from salary.
- Follow up the full audit in time.
- Better to take tax clearance certificate every year.

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Drug Error beyond the Hospital and Role of Pharmacists in drug Safety Process

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Abstract

Medication related error is one of the most common error prevailing in this time. Medication error can be defined as a 'failure in the treatment process that leads to or has potential to lead to harm to the patient. Medication error can occur from the process of ordering to the administration to the patient. Among the healthcare professionals; a pharmacist can be responsible in identification of contributing factors and reducing its occurrence. Great efforts are needed in this area, due to diversity in the types of errors, the relationship between the provider and the patient, information transfer, optimization of e-prescribing systems, the lack of adequate training in analyzing the collected data and poor practical strategies for maintaining accurate drug lists in electronic medical records. Recently healthcare professionals have started becoming aware about the risks of patients' medication exposure. After all, still the area of medication safety beyond the hospital setting needs community pharmacy intervention to avoid malpractice claims and misled decisions in solving medication safety-related problems in the outpatient setting. Approaches like medication reviews and reconciliation, monitoring drug therapy, reporting error will help in identify and prompt the detection of errors, open productive discussions, quality control checks, and effective system-based decisions like performing risk assessment subsequently reduces the harm and risks before patient is exposed to any form of drug error.

Keywords: ADRs deporting, drug error, drug safety, medication error, role of pharmacists

Introduction

There is a saying "To Err is Human, to forgive Divine", but medical errors cannot be excused because errors due to medical mistreatment, insufficient information, and inefficient processes are responsible for the leading cause of death in the developed country like United States. Medication error is defined as "the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim". *Pharmacists are the key persons to prevent the medication error.* According to a research it is found that "an adverse drug event will, on average, lengthen a patient's stay in the hospital by 2.2 days" (Bates,1997). Central to the problem our society faces in coping with medical errors is that the majority of the errors are preventable. Part of the overall problem is the delivery and administration of medications which can be controlled and improved upon to reduce adverse effects of potential errors. If decentralized and fragmented supply chain then the problem may arise as a lack of continuity with staffing at both ward and pharmacy level of supply. The poor supply results in delay, poor communication and leading to incorrect administration of medication. Additionally, in situation when patients see multiple providers for various treatments in different settings, patients can also be more susceptible to potential medication errors due to lack of continuity in maintaining their records (McMahon, 2018; Stoppler, 2018; ASHP, 2019). The paper helps to make the outline of the drug errors frequently encountered in the hospital setting and how pharmacist can play their integral role in minimizing the error and help in safety process of a hospitals setting.

Causes of medications Errors

Table 1

Various Causes of Medication Error

Medication Errors	Types of Error	
Prescribing 39%	Wrong Dose 28%	Drug-drug Interaction 3%
Transcription 12%	Wrong Choice 9%	Wrong route 2%
Dispensing 11%	Wrong Drug 9%	Extra Dose 1%
Administration 38%	Known Allergy 8%	Failure to act on a test 1%
Monitoring 1%	Missed Dose 7%	Equipment Failure 1%
	Wrong Time 7%	Inadequate monitoring 1%
	Wrong Frequency 6%	Preparation error 1%
	Wrong Technique 6%	Other causes 11%

While other causes associated with medication errors include unavailability of patient information, illegibility of physician handwriting, poor communication between nurses, pharmacy, physicians, and technicians, the majority of cases involve errors in drug selection and delivery. As shown in the table, if 28% of patients are given the wrong dose, layers of verification clearly need to be implemented and enforced throughout the process to reduce and control for errors associated with human interpretation (Saskatchewan, 2014; Farlex, 2012; Sucahyo, 2016).

Challenges in Drug Safety Beyond the Hospital

Over the years, not many people have really been aware of the risks of medication exposure to patients outside hospital setting. In America, for instance, the majority of the patient-safety studies and safety-improvement agenda have been carried out within the walls of the clinics or hospitals and statistics has provided evidence that only about 10% of patient-safety studies have been done beyond hospitals (Gandhi, 2010). One striking challenge in terms of medication safety beyond hospital is that there are differences in the types of errors such as treatment errors and diagnostic errors. The treatment errors tend to predominate in inpatient settings, while diagnostic errors are more apparent in outpatient settings (Plews-Ogan, 2018). Another challenge lies in the nature of the relationship between the provider and the patient. It appears that adherence is more critical in outpatient settings because self-management can lead to more problem than the inpatient ones. One also cannot turn a blind eye and a deaf ear to the issue of the organizational structure that also poses a challenge to ensure medication safety beyond hospital- it is a fact that ambulatory practices do not have adequate infrastructure and expertise to deal with the quality and safety improvement (Sheikh, 2017). Other than that, there are also regulatory and legislative requirements to consider (involving things like ratio of staff and requirement for accreditation for hospitals; private practices tend to suffer from these problems the most).

To add, the outpatient setting also poses greater challenges for information transfer. With regards to patients with complex medical needs, the responsibility for care is often shared by a lot of different providers. As it is, they never meet, more often than not, and they often use different medical-record systems, suggesting that shortcomings are inevitable. It is not rare that in the hospital, if a patient has an adverse drug event, clinicians were fast becoming aware of it; in the outpatient setting, a complication or missed diagnosis may not be identified for months, if ever (Gandhi 2010: Wachter, 2006). Perhaps, we cannot overestimate

or underestimate the fact that there are still too much to learn about the effects of e-prescribing systems on errors and about how these systems can be optimized. We start by bringing together data on outpatient-safety risks via a better reporting of events and near-misses from the clinicians themselves. Leaders also need to undergo training so that when they receive reports with respect to safety, they are able to dwell into them and start making changes. Provider organizations that have come to be aware of these challenges and respond to them will be the superior ones as the spotlight is increasingly focused on care delivered not just by hospitals but by truly accountable care organizations (Sheikh, 2017).

Another challenge is to provide better strategies to maintain the right medication lists in electronic medical records. Many integrated delivery systems, including ours, have to struggle with ‘the nitty-gritty’ like who is responsible in maintaining the accuracy of the medication list. Some concerns can also be raised if we look at the present systems- if a specialist is the only physician in an organization who attends to the patient, does that specialist have the responsibility to log in all the patient’s medications and dosages in the medical record? As the responsible parties work out ways or even resorted to several trial-and-error methods to resolve the issues, clinicians would already have been further overworked (Sheikh, 2017; (Wachter, 2006). Also, missed or delayed diagnoses are the most common problem leading to malpractice claims in the outpatient setting. Tests revealing findings that are clinically significant but not critical require particular attention. These findings must be communicated appropriately to a responsible provider, where they must acknowledge their receipt, and systems must be put in place to ensure that any follow-up testing would take place and patients are informed about this in a proper manner.

Next, important information like follow-up plans and appointments and any other relevant details are sometimes not relayed. A study done by Roy et. al (2015) has shown that almost half of the total numbers of hospitalized patients have pending test results when they are discharged, and none of the health care authorities are informed about these test results. This failure of transmission suggests that the responsibility is not communicated and maybe distributed well. It is also reasonable to anticipate that discharging hospitals need to implement high-quality discharge summaries that are transmitted in a reliable way, while outpatient physicians’ offices need to ensure patient access to timely post-discharge visits where they can go through the discharge materials, reconcile medications, elaborate on symptoms, and perform appropriate follow-up so that the readmission rate can decrease (Roy 2005).

Medication Safety in Community Pharmacy

It may be a great help if community pharmacies are equipped with adequate guidelines and manuals or some kind of written guidance on ensuring the safety of the medication used and delivered to patients. One tool that can be used to assist community pharmacies to prepare for the oncoming implementation of a barcode product verification system helps pharmacy leaders and staff evaluate their current workflow, standard operating procedures, and technology to identify what needs to be accomplished before implementing a barcode product verification system is the Assessing Barcode Verification System Readiness in Community Pharmacies. The assessment process makes the adoption of this technology less stressful and more efficient as the staff have a better preparation (Agrawal 2009).

Pharmacists and other pharmacy personnel also need to be able to do what they can to ensure the success of the organizations. This includes targeting at a specific system's weakness in the medication-use processes. The tasks of a community pharmacy personnel include:

- Beginning a risk assessment process to identify system-based medication safety improvements in the community pharmacy setting,
- Identify and prevent risk in daily practice,
- Check on the flow diagrams or flow charts of the medication process to identify the variability in the current medication-use processes,
- Be able to choose effective error reduction strategies that can avert patient harm,
- Apply knowledge to identify breakdowns in the system that have to do with the error, and
- Detect any medication error or near miss that has happened (ISMP, 2018).

Next, the ISMP Medication Safety Self-Assessment for Community/Ambulatory Pharmacy should be actively used by pharmacists to raise awareness of distinctive characteristics of safe pharmacy systems; this will prepare the basis for pharmacy efforts to improve medication safety and evaluate these efforts (Sucahyo, 2016). ISPM medication safety self-assessment for community/ambulatory pharmacy is a valuable tool which will help to identify safety risks, create an action plan for improvement. Every layer of the staff within each pharmacy site should be provided with a copy of the assessment and asked to complete the items collectively or individually. There should be a consensus on the responses and doors should be opened for improvement. The self-assessment should serve as an ongoing safety project in your medication safety program. This monthly innovative newsletter (Community/Ambulatory) gives vital and potentially life-saving information about medication-related

errors, negative drug reactions, as well as recommendations that will help you reduce the risk of medication errors and other adverse drug events in your community practice site (ISMP, 2018).

There should also be a confidential national voluntary reporting program that provides expert analysis of the system causes of medication errors and disseminates recommendations for prevention. Of course, we do not want such events to go unreported and to let important preventive and epidemiological information become unavailable. Regulatory agencies and manufacturers should be notified when the products are to be changed to a certain degree. Reporting errors to external reporting programs as an important element would be complementary to the medication safety program and demonstrates a practice's commitment to sharing information on medication errors which may definitely help others as well (ISMP, 2018). Some abbreviations, symbols and dose designations are also frequently misinterpreted and this can be detrimental to the patients. It is important to realize that these potentially ambiguous and misleading labels are not to be used when giving out and sharing medical information to others.

Medication Safety at Home

Personal care is seemingly the way to go these days, especially in hospitals with too many patients, but the fact remains that many of the people who are cared for in their own homes need help with their medicines. The care provider must be very clear about their care workers-whether care workers are involved in medicine administration or are limited to providing general support for each child or adult they care for. This has to be monitored and reviewed regularly. All in all, the communications between care workers, their supervisors and prescribers must be robust and effective. Care workers also have to consider a few things - in the case where a person declines on his or her medications (ISMP, 2018).

As Little Distractions and/or Interruptions as Possible

Interruptions and distractions (including noise) are proven to be two of the leading causes of prescription dispensing and medication errors in hospitals and health systems (45%). It is advisable to turn down the volume of your cell phone, turn off the radio and/or TV and choose a time when you are free and less distracted. Conversing with other while you are trying to dispense medication is also another possible cause for this kind of errors.

Well-organized Workspace or Storing Area

Errors in dispensing medicine can occur too when medications are not properly stored, so proper organization is very important:

Important information should be within reach; frequently used items should also be within reach. Sorting the Items Together – Items that are related to a medical procedure should be stored together in a single bin. Follow the Medication Closely – Most medicines should be stored safely in a cool dry place well away from moisture. Nevertheless, some medications require special storage conditions so always adhere to the storage directions contained on the medicine label or the Medication Guide (ISMP, 2018; Sheikh, 2017).

Have Easy to Follow Prescription Labels

If either the patient or the healthcare professional cannot read or cannot comprehend the label, pharmacist stays there for help as prescription last comes to pharmacy. One way how the difficulty can be reduced is by encouraging health care professionals to have the prescriptions written in large fonts. Also, for non-native speakers, the prescription can be written in patient's native language or language most familiar to him or her. Another way is to include the information on 'the purpose of use' on the label of the medicine so medication errors can be avoided and adherence further ensured. Next, important documents like the Patient information leaflets should be accessible to patients and the people close to them. Physicians and pharmacists can also make the initiative to create a system that works for the patient and promotes adherence, for instance (Kadia & Schroeder 2015).

Think of a better way for them to record their medication method and procedure. Tech-savvy patients and healthcare professionals can make use of the apps that concentrate on helping patients with their medication (ISMP, 2018).

Role of Pharmacists in Ambulatory Medication Safety Process

It is easy to understand that pharmacists should ensure that medicines are delivered to patients safely and securely. Upon dispensing, pharmacists are expected to reconcile prescriptions of the medicine and confirm the indications of medicine therapy with the patient or agent. They should also be able to perform counseling and refuse documents that are irrelevant to their patients' cases. They should be able to ask questions to evaluate patient and caregiver level of understanding. Last but not least, before dispensing the medicine, they must be able to

motivate their patients and caregivers by way of asking questions or raising concerns about their medicines. Before any of these can be materialized, it is perhaps not too much to urge for pharmacists – locally and internationally- to have an in-depth understanding and genuine awareness of what is at stake if this safety process is neglected.

In short, medication safety leaders must collaborate with all types of health care professionals, support staff, and management and consider all components of the medication-use process in both inpatient and clinic settings to ensure that medication safety can be improved. The medication safety leader's role includes demonstrating the responsibility for leadership, influencing practice change, and various others.

Recommendations for Improving Medication Safety Beyond Hospital

Some recommendations are then considered imminent: first of all, pharmacies are to monitor regularly the medications works or studies on drug error information and take action for prevention. Secondly, pharmacies need to be accountable in confirming the entry for new prescription data. They also have to keep going through the error frequencies and near-misses so unfortunate incidents can be prevented and corrections can be made. They must always be ready to report errors to external reporting programs. Next, as further recommendation, pharmacists should be able to verify patients' identity, other than educating consumers about preventing errors. An equally important task for pharmacies is for them to be able to work on approaches or methods that can monitor prescription-filling machines to prevent errors. Follow-ups must also be done to see if patients have any side-effects especially as far as high-risk patients are concerned.

If we are to focus on a pharmacy and a patient under his or her care, there are several things that the former should do. Firstly, the pharmacist needs to review the patient's medication list routinely. He or she has to go through all the treatment options that the patient can undertake. The name and the purpose of the selected medication then have to be noted. A pharmacist should also be able to open himself to her to discussions- discussions like when and how to take medications are not only appropriate, but also crucial (McCarthy, 2014)

Conclusion

The sole reason as to why medication management takes a very important position in the world of healthcare is because it is supposed to protect patients from harm or ill effects. We have been able to conclude that despite the fact that all healthcare practitioners have a role in preventing

adverse drug events (ADEs), most medication treatments begin in the (proper) practice setting of physicians and this is further continued to be emphasized at home. Adverse events can result from many reasons. Among them the confusion about the medication schedules, two caregivers duplicating a dose and care givers using the wrong syringe size, or mixing up two different medications are major one encountered in daily life.

Factors like language barriers, financial barriers to medication refills and transitioning patients between multiple households can also impact the safe administration of medications at home. Proper medication management can be achieved and maintained by a collaborative effort of physicians, pharmacists, nurses, and other health care professionals together with patients and lay caregivers pursuing optimum and safe use of medication. Medication safety should be a standing item in the regular patient safety staff meetings and be a key part of your practice's patient safety plan as better health outcome can be achieved by implementing proper compliance of patient towards medicine. Most importantly, these various parties have to understand their respective role in ensuring the safety of medication beyond hospital settings.

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Revisiting Capitalism through Social Business Model

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Abstract

Seeing the fall of the Berlin Wall and the collapse of the Soviet Union gave a false hope to the proponent of capitalism that it is the only hope for the future. However, this very belief is crumbling the western societies with the rise of the populism and nationalism. Amidst this confusion, this paper revisited the published literature on social business model suggested by Nobel Laureate prof Muhammad Yunus and added a new dimension of entrepreneurial attention suggested by Ocasio (1997). Propositions are derived on how the entrepreneurial attention increases the sustainable performance of the social business.

Keywords: Ambidexterity, Attention, Bias, Capitalism, Integrity, Performance, Social Business.

Introduction

Corporate Social Responsibility (CSR) has been a widely discussed topic in the corporate world these days. World renowned corporate leader *Bill Gates* through the *Bill and Melinda Gates Foundation* is taking CSR initiatives in the form of charity. At local level, corporate entities of *Nepal* are also taking the CSR initiatives in the form of charity by contributing to various social organizations and independently conducting social works. In case of banks and other financial institutions they are legally obliged to spend some part of their profit in the CSR activities. Their CSR initiatives in the form of charity are highly appreciable.

But having spent a good amount of CSR fund in social activities in the form of charity,

they have only brought some immediate and short-term impacts in the society. The philosophy of charity itself has been to spend the fund for one time without any chances of reusability of the initial fund. Despite of many great advantages of charity, the notion of one-time life has made it inefficient.

Let's imagine the scenario where same amount of *CSR* fund can bring the same amount of impact in society repetitively for endless period. Wouldn't it be a better option than a charity? Of course, it would be. The imagination is now not just confined in theory but is practically manifested. The concept is called the *Social Business* (Yunus et al., 2010).

After the wide success of microfinance to alleviate poverty, *Nobel laureate* Prof. Muhammad Yunus developed the concept of *Social Business* which would be equally effective as microfinance to fight the social and/or environmental problems. *Social Business* can be thought of as the midpoint between the profit-making business and non-profit charitable organizations for social cause.

The concept is now practically manifested in *Bangladesh*. More than 40 *Social Businesses* are running successfully in *Bangladesh* with full financial self-sustainability and eternal and wide social impact than any charitable organization. *CSR* till now has only been thought of in a standardized form of charity and donations, thus conducting various social activities with no sustainable impact. The organizations yearly spend a good amount of money for social and environmental causes only for immediate short-term results. In this regard, a better option for the corporate entities would be the investment in *Social Business* ventures. In the world with limited resources, the same *CSR* fund could be reused year after year to establish new venture with same fund.

Developing a Conceptual Framework

Corporate Social Responsibility (*CSR*) is the social responsibility pursued by any corporate entity towards the society. The concept embodies that any corporate entity needs to give back to the society in return of exploiting the resources in the society. Social Responsibility refers to the obligation of a firm, beyond that required by law or economics, to pursue long-term goals that are good for society (Ioanna et al., 2005). The idea that firms, corporation and other organizations have social responsibilities leads to the development of the concept labeled as *CSR* and has evoked widespread interests and concerns both in business and among academicians (Vaaland et al., 2008).

The Concept of *Social Business*

Social Business is a cause-driven business. In a *Social Business*, the investors can gradually recoup the money invested, but cannot take any dividend beyond that point. *Purpose* of the investment is purely to achieve one or more social objectives through the operation of the company; no personal gain is desired by the investors. The company must cover all costs and make profit, at the same time achieve the social objective, such as, healthcare for the poor, housing for the poor, financial services for the poor, nutrition for malnourished children, providing safe drinking water, introducing renewable energy, etc. in a business way (Yunus, 2007). The impact of the business on people or environment and *financial self-sustainability* measures the success of *Social Business*, rather than the amount of profit made in a given period measures the success of *Social Business*. Sustainability of the company indicates that it is running as a business. The objective of the company is to achieve social and/or environment goals (Yunus, 2007).

Leadership Skills Needed for a Social Business

Yunus et al. (2010) contributed a new business model called “*Social Business* model” to empower the dying capitalism to address challenges faced by the humanity and the planet earth itself. The underlying assumptions in such business models were based on the experience of *Grameen Bank*, founded in 1976, who was the first mover in developing micro-finance, and founding over 30 businesses solving a social and/or environmental cause. The emergence of *Social Business* model follows the normal business model innovation process which is guided by development of new customer utility, network of value orchestrators and new ways to capture that value through profit plus social and environmental business benefits. Observing these businesses guided the authors of this paper to develop a conceptual framework as shown in Figure 1.

Basic guiding principle is: humans are honest and their motivation is work itself rather than any extrinsic rewards. *Social business* operates on different dimension of finance which is not affected by basic cycles of economics. The evidence is the sustainability of *Grameen America*. Even in 2008-09 financial crisis the *Grameen America* had near 100% loan repayment rate. Based on Yunus et al. (2010), among the five lessons gained from *Grameen* history, three are similar to traditional business model innovation such as questioning status quo, looking for complementary stakeholders and doing hit and trial works to learn about the new business model. However, the remaining two lessons revealed the *Social Business* model differentiation. First

lesson guides that it is crucial to find *Social Business*- pro shareholders who are touched by the pains faced by the society and concerned with the businesses raping the planet earth to maximize their own profit. Second lesson guides that it is extremely important to specify social profit rather than normal profit related objectives clearly and early enough so that the shareholders and all other stakeholders have the right expectation about the monetary benefits of the venture. Based on this finding, entrepreneurial leaders driven by social profit defy agency theory as they maximize the stakeholder's benefit rather than shareholder's benefits.

There are three major skills needed to be successful as a social entrepreneur. First, they need to have a freedom from *Agency* bias. According to the Agency theory (Eisenhardt, 1989), managers maximize their own benefits at the cost of shareholders. However, in a *Social Business*, the entrepreneur is motivated by higher purpose of social and environmental causes, rather than making only profit. Second, behavioral integrity is important to be successful in fulfilling the higher purpose of social and environmental benefits. Behavioral integrity is the perception of the fit between ones ideal and practiced values (Simons, 1999). One of the major reasons for failure of many transformational activities is the challenge of securing behavioral integrity. Third, entrepreneurial ambidexterity guides social entrepreneurs to achieve their higher purpose. Literature on organizational ambidexterity is full of research at the firm level where balancing exploration and exploitation has been argued to be the major factor for sustainable performance (Uotila et al., 2009). By extending this firm level construct at the individual level, this research increases the understanding of the key antecedents to superior performance of a social business. All of the antecedents are moderated by entrepreneurial attention (Ocasio, 1997). At higher level of attention, the relationship between all three antecedents and sustainable performance reports higher performance and at the lower level of attention the lower level of performance is expected.

Sustainable Performance

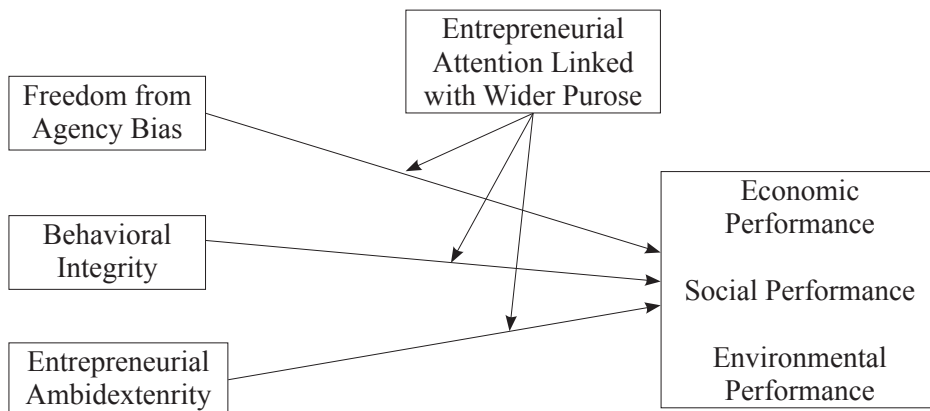
The concept of *Social Business* borrows the positive aspects of both the extremities and creates an entity that can bring social impact which doesn't last just for one short period of time but for endless period. The entity has purely social objective with the self-sustaining and fund re-investable operation model. Under this model, the investor would invest on a business venture that innovatively solves the social problem and in return investor would only get back initial investment after the venture becomes able to generate enough profit to be financially self-sustained, after the return of investment the venture runs on its own and the initial investment

amount could be used to establish another *Social Business* venture.

Let's imagine the scenario where same amount of *CSR* fund can bring the same amount of impact in society repetitively for endless period of time. After the wide success of microfinance to alleviate poverty, *Grameen Bank* developed the concept of *Social Business* which would be equally effective as microfinance to fight the social problems. Thus, corporate entities need to give a second thought on charitable approach to *CSR* for the more efficient and sustainable social and environmental impact from their fund and also for their own privilege to reuse the same *CSR* fund over and over again.

Traditional businesses pursue shareholder's benefits. However, in *Social Business* the major component with social (Yunus et al., 2010) and environmental benefits (added by authors) are included as the organizational goal as shown in Figure 1 as social and environmental performance. As discussed earlier, in such a business the owners only get their investments back rather than dividends. The profit generated by the business entity is ploughed back in solving the social and environmental challenges facing the society not as a charity but as a business goal. An example is a *Bangel* in Bangladesh developed by *Grameen Bank's* customers that reduced patients of asthma by fifty percent in rural areas. This was possible by participative approach and changing the views of people about BIG business houses on corporate social responsibility (CSR). Sixty percent of the owners of *Grameen Bank* are the borrowers themselves; a unique approach against *winners take all* approach prevalent in modern *high-growth* entrepreneurship in the *United States* and elsewhere.

Figure 1. Social Entrepreneurial Traits Maximizing Economic, Social and Environmental Performance

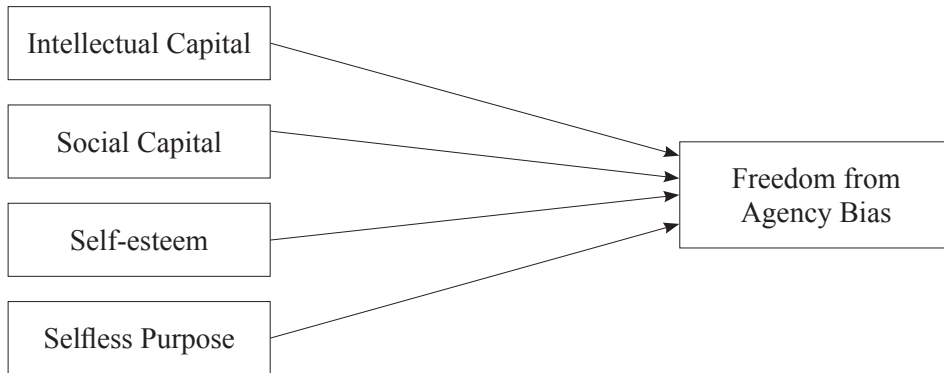


Key Propositions

Social Business entrepreneurs have such an intellectual capital that guides them to deliver societal and environmental goods apart from generating profit. They surround themselves with similar investors and stakeholders to bring the change they want to see in the society and the environment. Also, the social entrepreneurs have high self-esteem driven by bigger purpose. Thus, all the three traits high intellectual capital, noble social capital and self-esteem and selfless purpose explain the inherent second order construct called freedom from agency bias as shown in Figure 2. Such an entrepreneur based on Yunus et al. (2010) maximizes the stakeholder's benefit rather than only shareholder's benefits. Thus:

Proposition 1: Freedom from agency bias has a positive relationship with sustainable performance

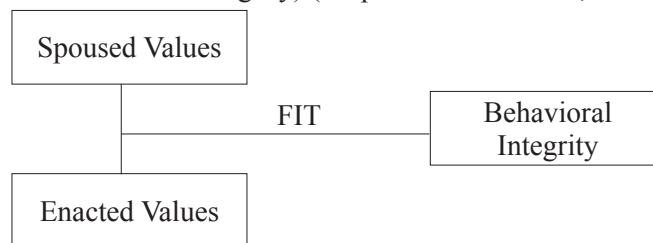
Figure 2. Antecedents to Freedom from Agency Bias



Behavioral integrity as shown in Figure 3 is the fit between espoused values and enacted values. In case of *Social Business* leaders, this trait seems to be very important as they have to walk the talk. Such a trait delivers economic, social and environmental benefits for the society. Thus, our second proposition is:

Proposition 2: Behavioral integrity has a positive relationship with sustainable performance

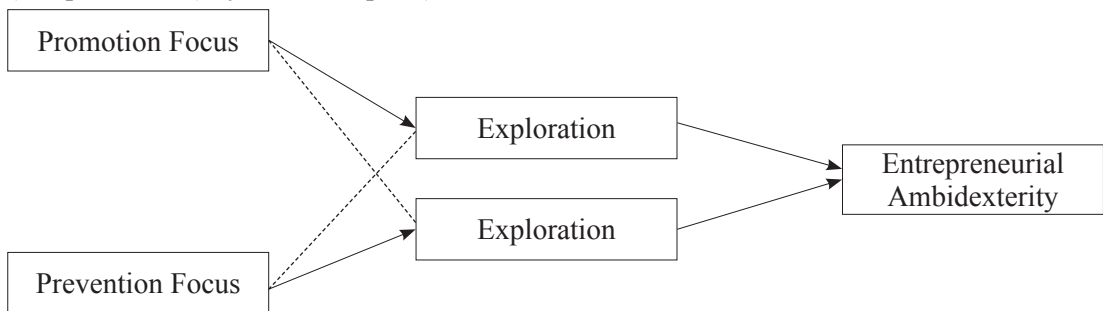
Figure 3. Antecedents to Behavioral Integrity) (adapted from: Simons, 1999).



Per Bryant (2009) entrepreneurs are driven by promotion focus and prevention focus which are influencing exploration orientation or exploitation orientation of an entrepreneur as shown in figure 4 used as entrepreneurial ambidexterity in this paper. Social entrepreneurs are both driven by promotion and prevention balance and hence the balance of exploration and exploitation. Thus,

Proposition 3: Entrepreneurial ambidexterity has a positive relationship with sustainable performance.

Figure 4. Model of Entrepreneurial Ambidexterity (Dashed Lines Indicate Weaker Effects) (Adapted from (Bryant, 2009; p. 29))



Discussions

Going beyond the redefinition of success from profit to profit to serve people, in this research we argued that the leadership traits needed for implementing change are different than normal profit-making venture. Compared to normal profit-making venture, social entrepreneurs have altruism embedded into entrepreneurial orientation. Similarly, they have social responsibility embedded into market orientation. Thus, we contribute a new dimension to existing literature on entrepreneurial orientation and market orientation each.

Laureiro-Martínez, Brusoni & Zollo (2010) conducted a cognitive research to find out the origins of the ability to explore and exploit at the same time, we call it entrepreneurial ambidexterity. Exploration means finding novel domains of activity while exploitation means the use of current knowledge base with increasing efficacy. The duality of exploration and exploitation has been studied extensively in the literature at the firm level. However, understanding this at the individual level is still a mystery. Resources are rare and the both conflicting objectives of exploration and exploitation compete for entrepreneurial attention, shown as the moderating variable in figure 1. Neuro modulation of attention (Laureiro-Martínez, Brusoni&Zollo, 2010) suggested that neuroscience, psychology, and management

skills are crucial in deciding for exploration and exploitation related activities. Thus, all the antecedents have a good impact on the sustainable performance if the entrepreneurial attention (Ocasio, 1997) is in place. Thus, we propose that:

Proposition 4: The overall performance impact of freedom from agency bias primarily depends on the entrepreneur's attention. Entrepreneurial attention moderates the relationship between freedom from agency bias and overall performance in such a way that high levels of attention increase the performance gains attributable to freedom from agency bias.

Proposition 5: The overall performance impact of behavioral integrity also primarily depends on the entrepreneur's attention. Entrepreneurial attention moderates the relationship between behavioral integrity and overall performance in such a way that high levels of attention increase the performance gains attributable to behavioral integrity.

Proposition 6: The overall performance impact of entrepreneurial integrity¹ also primarily depends on the entrepreneur's attention. Entrepreneurial attention moderates the relationship between entrepreneurial ambidexterity and overall performance in such a way that high levels of attention increase the performance gains attributable to entrepreneurial ambidexterity.

Discussions and Implications

“[Entrepreneurship] can be seen as the study of sources of opportunities; the processes of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them” (Shane and Venkataraman, 2000: 218).

As outlined in the quote above, when sources of opportunities are seen through discovery, evaluation, and exploitation process by the entrepreneurs we call it entrepreneurship which has become a dominant research field since 2000 when Shane and Venkataraman published their seminal paper ‘*The promise of entrepreneurship as a field of research*’; awarded AMR decade award but another stream of scholars argued that we need to move forward with the entrepreneurship as a science of the artificial (Venkataraman, Sarasvathy, Dew, & Forster, 2012) in three ways: *understanding opportunities as made as well as found, moving beyond new combinations to transformations, and developing a new nexus around actions and interactions*. However, a new approach to entrepreneurship research has emerged with positive theory of social entrepreneurship (Santos, 2012) which argues that understanding the key trade-off between value creation and value appropriation triggered by market or government

¹ Social business is a business based on trust solely as evidenced by the fact that you do not need a collateral to women who take loans from the Grameen Bank

failure driving sustainable solutions to all problems of neglected positive externalities. In this approach addressing the problems involving positive externalities is the unique part of social entrepreneurship benefitting the powerless segment of the population; in doing so social entrepreneurs are prone to finding sustainable solutions compared to sustainable advantages, a domain of research in strategic management; and social entrepreneurs are focused on developing a solution built on the logic of empowerment than on the logic of control.

Another stream of research in understanding entrepreneurship research is under the umbrella of theory of planned behavior in entrepreneurship (Krueger & Carsrud, 1993). Entrepreneurial intentions are triggered by social psychology and as suggested by Ajzen's (1985) intentions-centered 'theory of planned behavior'. The argument lies on the fact that intentions are the single best predictor of such state of being which depends on attitudes toward the target behavior driven by beliefs and perceptions.

Social Business will not only solve the social and environmental problems but also createsome employment through entrepreneurship. Thus, corporate entities need to give a second thought on charitable approach to *CSR* for the more efficient and sustainable social and environmental impact from their fund and for their own privilege to reuse the same *CSR* fund repeatedly.

Agency theory suggests that there is a conflict between principal and agents and agents maximize their own benefits in the expense of principals. However, social entrepreneurs defy this assumption and they maximize stakeholder's (not only shareholder's) benefits. This is very interesting contrast with normal entrepreneur who is driven mainly by pursuits of profit (not social profit). Also, supporting trait apart from the freedom from agency bias is the entrepreneurial ambidexterity combined with behavioral integrity. These are potentially the most important antecedents that generate sustainable performance measured in terms of profit, social impact, and environmental impact; we call it social profit. As capitalism is crying for rescue, perhaps such social business thinking could be the next frontier of policy making and curriculum development at the schools and colleges. This might be the solution to the unemployed, serialized, Naxalites who are seeking for truth and emancipation and reuniting with the society. Governments could initiate such a drive that the future generation may remember us for safeguarding their future through social business.

Heimans and Timms (2014) contributed a synthesis on the new reality created by technological and societal transformation taking place. The old power values have been transformed into new power values. Managerialism, institutionalism, and representative

governance have been replaced by informal, opt-on decision making, self-organization and networked governance. Similarly, exclusivity, competition, authority, and resource consolidation have been replaced by open source collaboration, crowd wisdom, and sharing. Another emerging trend is that the discretion, confidentiality, separation between private and public spheres have been replaced by radical transparency. Professionalism and specialization have been challenged by do-it-ourselves, “maker culture”. Long-term affiliation and loyalty and less overall participation have been replaced by short-term, conditional affiliation and more overall participation. In this changing reality, to become successful, *Social Business* leaders must embrace this reality and its possible for them because they are free from agency bias, they have behavioral integrity, and they can balance exploration and exploitation at the same time. However, their attention spans are limited, and they need to decide with limited information. Therefore, to become successful *Social Business* leaders, they must make a conscious choice on which area to focus and which traits to nurture so that sustainable performance becomes a reality. Capitalism metamorphoses into new reality and the world sees a new era of *Social Businesses*.

Further Research

Though we have outlined social business model as a golden opportunity, a critical perspective in entrepreneurship research is highly recommended which may question ideologies or dominant assumptions or grand narratives in entrepreneurship. Also, a fruitful avenue for further research is to analyze the socio cultural dynamics of entrepreneurship scholarship; critiquing the dominant ideologies that construct particular political economies of entrepreneurialism.

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Human infection with pandemic Influenza (H1N1): A Review Article

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Abstract

Swine flu, also known as the H1N1 virus, is new strain of an influenza virus that causes symptoms similar to the regular flu. It originated in pigs, but is spread rapidly from person to person. Therefore, the objectives of this article are to highlight on H1N1 Influenza, its mode of transmission, risk factor, clinical spectrums and preventive ways. Studies published relevant to swine flu was searched through scientific databases like MEDLINE, Pubmed and online search engines like 'Google Scholar'. Eligible studies involved at least one factor related to 'influenza A virus', 'H1N1 subtype', 'epidemiology', 'transmission' and 'preventive measures' etc. Searches were limited to human only and also looked at the websites of the leading health authorities (e.g. WHO, CDC, HPA). Swine is a new flu virus that appears in human and spreads very quickly from person to person. In Nepal, the first case was detected on June 2009 after that the case is increasing day by day. In 2010 till May there were 172 confirmed positive cases, likewise on August 7, 2017 there were 10 death and 354 positive cases of swine flu in Nepal. Therefore, Government of Nepal has broadcasted awareness programs, organized seminars and meetings, to make people aware regarding H1N1 Influenza. But, it seems challenging to decrease its outbreak in Nepal because of low financial resources, low manpower, limited technology and political instability.

Keywords: *Human influenza, pandemic, swine flu*

Introduction

Swine flu has been creating a terror effects all-round the globe. Swine flu refers to viral infection caused by influenza virus A, and its sub-types. H1N1 virus is a new swine flu virus and it contains the genetic material of swine, bird and human influenza virus (Jadhav, 2017). Like all influenza viruses, swine flu viruses change constantly. When influenza viruses from different species infect pigs, the viruses can reassort (i.e. swap genes) and new viruses that are a mix of swine, human and/or avian influenza viruses can emerge (Mukherjee, Sen, Nakate, & Moitra, 2015).

The advance of human civilization has brought people, plants, animal and microbes together. Nowadays, the rate of International travel and commerce also increasing which drives the rapid, global distribution of microbial pathogens and the organism that harbors them (Mack, Choffnes & Relman, 2010).

Because of aerosol transmission swine flu now become one of the fastest spreading influenza in the world, which affects the many countries in a short period of time. Unavailability of vaccine, unavailability of antiviral drugs, inadequate information regarding prevention and control of swine flu and high treatment cost are the greater threat to the developing countries for its prevention and control.

Historical perspective

Swine influenza virus caused by Orthomyxo virus endemic to pig populations. It is a highly contagious respiratory disease of pigs caused by type A influenza that regularly cause outbreaks of influenza among pigs¹Such virus, namely, Influenza A H1N1 virus has the capacity to cross species barrier (i.e., pig to humans) and has spread widely amongst humans. This led to a pandemic situation covering nearly the entire globe with a significant pace in terms of spread (Arora et.al, 2011).

If we see the history of influenza pandemics, there were three devastating pandemics in 1918, 1957 and 1968, caused by H1N1 (Spanish flu), H2N2 (Asian flu) and H3N2 (Hong Kong flu) (Taubenberger, 2006). During that period, excess mortality was noted in infants, elderly and persons with chronic diseases with a peak of excess death among young adults aged between 20 and 40 years. After that, the influenza A (H1N1) virus was not identified in humans again until 1977. In 1977, the H1N1 virus re-emerged in China, Hong Kong and the former Soviet Union with relatively milder effects (Hsieh et.al, 2006).

Effect of Influenza A (H1N1) Virus on 21st Century

Influenza is an acute viral disease of the respiratory tract that annually produce greatest global burden with high morbidity, mortality, social and economic disruption. The swine-origin influenza A (H1N1) virus was first found in human beings in Mexico in March 2009 and spread through the traveller's worldwide (World Health Organization, 2009). During December 2005 to January 2009, 12 cases of human infection with swine influenza were reported; five of these 12 cases occurred in patients who had direct exposure to pigs, six patients reported being near pigs, and the source of infection in one case was unknown (Centers for Disease Control and Prevention, 2010).

A clinical guidance WHO (2009) reported that till 12 May 2009, 30 countries had officially reported influenza A (H1N1) virus infection with 5251 confirmed cases. Of these cases, 5030 (95.8%) were reported from American Region, 204 (3.9%) from the European Region and 17 (0.3%) from the Western Pacific Region. Likewise, 61 deaths related to influenza A (H1N1) virus infection have been reported from 4 countries: Mexico the death rate is 56, United States the death rate is 3, Canada and Costa Rica the death rate is same that is 1. Similarly, in 6 July 2009, nearly 95 000 cases and 429 deaths were reported from 135 countries (World Health Organization, 2009). Likewise the data from 13 November 2017 to 26 November 2017 among 99 countries reported 8982 were positive cases of influenza viruses, of which 5617 (62.5%) were typed as influenza A and 3365 (37.5%) as influenza B. Regarding the sub-typed 1122 (33%) were influenza A (H1N1)pdm09 (World Health Organization, 2016). This data demonstrates that there is not one single country be affected only but globally as a whole.

In India the first confirmed case of influenza A (H1N1) was recorded in Hyderabad on May 16, 2009 (Siddharth, Goyal & Koushal, 2012). In Oct 2013, there were over 13,000 cases of swine flu reported with 444 deaths. During 2014 swine flu had swallowed the lives of more than 1,000 people and 20,000 people were affected by this virus. In 2015, as many as 1,731 deaths out of 30,000 documented cases had been reported in India. In Pakistan, the ministry of health of Pakistan confirmed the country's first swine flu case On August 10, 2009. In Muslim country like Pakistan there is no swine source of virus, but the only source is, the migrant people from abroad.

In Nepal, the first case was detected among people returning from the US on June 2009. According to National public health laboratory report, till May 2010, there was 172 confirmed positive cases. Out of them, 36 cases were recorded before declaration of

Community transmission, 29 Nepalese citizens residing within the country, 2 foreigners and 5 close relatives of confirmed positive cases. Remaining 136 cases were found after community transmission. After the community outbreak, most of the swine flu cases were found from Kathmandu district followed by Kaski and Chitwan. All the confirmed cases of Pandemic influenza A/H1N1 were in the range of age group from 1-74 (Adhikari, Shakya, Upadhyay Shrestha & Dhungana, 2011).

In Nepal swine flu outbreaks were reported in the spring of 2015. On April 21, 2015 it is reported that there were 26 affected people lives in the most severely affected district, Jajarkot. Cases also detected in the districts of Kathmandu, Morang, Kaski, and Chitwan. As of 22 April 2015 the Nepal Ministry of Health reported that 2,498 people had been treated in Jajarkot, of whom 552 were believed to have swine flu (Jadhav, 2017). According to Sentinetal Human Surveillance for Human Influnza, Nepal on 16 august 2017 reported that in Western Regional Hospital (WRH), among the 529 suspected specimens 282 cases were flu A/H1 pdm09, 7 cases were flu A/H3 and 26 cases were flu B.

Influenza timing generally followed historical trends in most regions except in Europe and east Asia, where the seasons commenced and peaked earlier than usual. In China, Japan, Mongolia and the Republic of Korea, influenza activity increased towards the end of 2016 and peaked in December 2016 or January 2017. Influenza activity in China often has 2 peaks during the year, with the winter peak often greater than the summer peak, However, during this reporting period, the larger peak occurred in July (World Health Organization, 2016).

Classification of Influenza Virus

The Orthomyxoviruses are Spherical viruses' 80-120 nm in diameter and classified into three types of Orthomyxoviridae family: A, B, Con the basis of variation in the nucleoprotein antigen they have. Type A influenza viruses are further divided into subtypes according to the specific proteins that occur on the surface of the virus. These proteins are called hemagglutinin (HA) and neuraminidase (NA). There are 15 different HA subtypes and 9 different NA subtypes,among them influenza A subtypes (i.e., H1N1, H1N2, and H3N2) are common among people (White, White, & Fenner, 1994).

Mode of Transmission

Influenza virus spread through inhalation of small particle aerosols, large droplet infection, direct contact, or by contact with articles recently contaminated by nasopharyngeal secretions

(Centers for Disease Control and Prevention, 2010).

The incubation period for influenza usually ranges from one to three days, typically two days. The period of communicability for influenza virus is during the 24 hours before the onset of symptoms, and during the most symptomatic period, usually three to five days from clinical onset in adults and up to seven days in young children and severely immunocompromised persons can shed virus for even longer (Blumberg, Cohen & Dawood, 2017).

Likewise viruses can survive for 24-48 hr on hard, nonporous surfaces such as stainless steel and plastic but survived for less than 8-12 hr on cloth, paper, and tissues. Measurable quantities of influenza A virus can transfer from stainless steel surfaces to hands for 24 hr and from tissues to hands for up to 15 min. On hands virus can survive for up to 5 min after transfer from the environmental surfaces. The days of survival of virus increases under conditions of low humidity and in the cold (Centers for Disease Control and Prevention, 2010).

Risk Factor

Presently the world is under the threat of an influenza virus but, there are specific groups who are high risk for illness, they are: Pregnant women (including the post-partum period), HIV-infected individuals (Centers for Disease Control and Prevention, 2010). Individuals with tuberculosis, Persons of any age with chronic diseases like Pulmonary diseases (e.g. asthma, COPD), Immunosuppression (e.g. persons on immunosuppressive medication, malignancy), Cardiac diseases (e.g. congestive cardiac failure), except for hypertension, Metabolic disorders (e.g. diabetes), Renal disease or Hepatic disease, Neurologic and neurodevelopmental conditions, Haemoglobinopathies (e.g. sickle cell disease), Persons aged ≥ 65 years, Persons ≤ 18 years receiving chronic aspirin therapy, Persons who are morbidly obese (i.e. BMI ≥ 40), Young children (particularly < 2 years of age) etc (Blumberg, Cohen, & Dawood, 2017).

Clinical Presentation

The Influenza virus symptoms may be self-limited mild-to-moderate uncomplicated disease to severe complications including fatal outcomes. Patients may have present initially with uncomplicated influenza may progress to more severe disease. Progression can be rapid (i.e. within 24 hours). Shortness of breath (with activity or at rest), difficulty in breathing cyanosis, bloody coloured sputum, chest pain, and low blood pressure, altered mental status, unconsciousness, drowsiness, seizures, paralysis are the symptoms of disease progression (World Health Organization, 2009).

The uncomplicated influenza illness resolves after 3-7 days although cough and malaise can persist for >2 weeks. Others symptoms include Influenza like illness (ILI) like fever, cough, sore throat, rhinorrhea, headache, muscle pain, and malaise, but no shortness of breath and no dyspnoea. Gastrointestinal symptoms like diarrhoea and/or vomiting, especially in children, but without evidence of dehydration may be present (World Health Organization, 2009).

Complicated or severe influenza symptoms may include: influenza-associated pneumonia/ LRTI, multi-organ failure. Rare complications include encephalopathy, myocarditis, pericarditis and Reye syndrome (World Health Organization, 2009). The study conducted at India among 442 H1N1 positive patients reveal that the overall mortality rate was 1.8% and the most common cause of death in patients was due to pneumonia. Fever (95.4%) was the most common clinical manifestation followed by cough (82.32%), breathlessness (32.8%) and sorethroat (26.7%) (Puvanalingam et.al, 2011).¹⁷.

Antiviral Drugs for Influenza

Timely diagnosis and early recognition of an influenza outbreak can prevent the influenza-related complications, hospitalizations, and deaths. Uncomplicated seasonal influenza is benefited by antiviral treatment commencing within 48 hours of onset of symptoms. Oral Oseltamivir (Tamiflu®) and inhaled zanamivir (Relenza®) are chemically related antiviral medications that act as neuraminidase inhibitors and have activity against both influenza A and B. Antiviral treatment should be maintained without a break until virus infection is resolved or there is satisfactory clinical improvement (World Health Organization, 2017). Other interventions includes Antibiotic treatment for reducing the risk of pneumonia and should maintain SaO₂ >90%. High flow oxygen may be required in severe cases (Blumberg, Cohen & Dawood, 2017).

Public Health Measures to Limit Transmission

Preparedness, early detection and outbreak response are critical elements in limiting the spread of seasonal and pandemic influenza at the local, national, and global levels (WHO, 2010). Influenza vaccination is the most effective method for prevention and control of influenza infection. Influenza vaccine takes about 2 weeks to develop protective antibody response and the best time for vaccination is before the influenza season starts. The inactivated influenza vaccine (IIV) should be administered intramuscularly, 0.5ml, single dose for adult. The recommended inactivated influenza vaccines are A/Michigan/45/2015 (H1N1) pdm09-like

viruses, an A/Hong Kong/4801/2014 (H3N2)-like virus (Puvanalingam et.al, 2011).

Preventing the transmission of influenza is best achieved through strict compliance with routine practices. Avoid close contact to the person who is risk for severe influenza, use of facemask/N95 respirator also reduce the risk of influenza transmission. Maintain distance of minimum 6 feet from people having ILI. Strict adherence to hand washing after coughing, sneezing or keeping hands away from the mucous membranes of the eyes and nose are the cornerstone of infection prevention². Drink plenty of water and clear fluids to prevent dehydration. Avoid touching eyes, nose or mouth to prevent spreading of germs. Avoid traveling when sick, for minimum 7 days after falling sick or at least 24 hours after symptoms have resolved whichever is longer. Wipe down surfaces that are frequently touched or shared (doorknobs, remote controls) with a standard household disinfectant (Centers for Disease Control and Prevention, 2016).

The Government of Nepal prepared strategic plan, “National Preparedness and Response Plan for Pandemic Influnza and Other Public Health Emergencies” and “Standard operating Procedure for influenza surveilance system in Nepal” to fight against ongoing health threats through disease surveillance, laboratory detection, epidemiologic investigation and responding rapidly during outbreaks. But, it seems challenges to implement a plan in Nepal because of open border between India Nepal, small rural and backward mix animal farming, limited financial resources, low manpower and limited technology as well as political instability.

Conclusion

The present review concluded that H1N1 virus is becoming a global threat because of fast moving influenza associated with high mortality rate related to their infections. Swine flu, also known as the H1N1 virus, is a relatively new strain of an influenza virus that causes symptoms similar to the regular flu. It originated in pigs but it spread primarily from person to person. It affects the people of all ages, children to older people weakening immunity. The flu can be prevented by conducting awareness programs and using antiviral therapy and vaccines. Therefore Ministry of Health, Nepal should play crucial role on early detection and management of pandemic Influenza, actively implementation of National Influenza Pandemic Preparedness Plan according to WHO guidelines. The Ministry of Health should also additionally launch seasonal flu vaccination programs on time to the vulnerable groups.

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Bacterial Diversity in Aquatic Ecosystems over the Central Himalayas, Nepal: Progress and Future Perspectives

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Abstract

Nepal hosts a large area of freshwater aquatic ecosystem including glacier associated system like glacier-fed streams and lakes as well as stream fed lowland lakes. Bacteriological studies are very important in aquatic ecosystems as bacteria are the major participants in biogeochemical cycles and food web structures. This study reviewed available literature in bacteriological studies of aquatic ecosystems in the Central Himalayas, Nepal and revealed that such studies are very limited. Thus, we conclude that future research works need to proceed through the latest molecular methods with high throughput technique using multiple environmental factors in the aquatic ecosystem.

Keywords: Aquatic ecosystems, Bacteria, Central Himalayas, Nepal

Introduction

An aquatic ecosystem is broadly categorized into freshwater and marine ecosystem based on the salt concentration. The aquatic ecosystem in which the dissolved salt concentration is

less than one percent is called a freshwater ecosystem. Nepal, being a land-locked country only hosts the freshwater ecosystem. Some of the aquatic ecosystems of Nepal are lakes, rivers, marshes, and glaciers (<https://gold.jgi.doe.gov/distribution#Classification>). Nepal is located in the central part of the Himalayas, with a large number of glaciers, glacier-fed lakes, and streams. Previous studies have estimated that there are altogether 6000 rivers in Nepal with a total drainage area of 194,471 sq.km. Based on the 2001 inventory, there are 3252 glaciers in Nepal with a total area of 5324 sq. km, whereas 2010 inventory identified 3808 glaciers with an area of 4212 sq. km (Bajracharya, And, & Shrestha, 2011). Similarly, the lake inventory in Nepal uncovered that there are more than 500 lakes with area <1 ha (Bhujju, Sharma, Jha, & Gaire, 2012). Nepal can be broadly divided into four major river systems (Fig. 1) from east to west: the Koshi River, the Gandaki, the Karnali and the Mahakali River draining in the eastern, central, western and far western region, respectively. All these rivers are originated in glaciated mountains and ultimately drained into Ganges River in India. Each of the river basins comprises a large area of glacier and lakes. Bacteria act as the major participants in biogeochemical cycles of aquatic ecosystems (Gucht et al., 2007; Peter et al., 2014). Especially in glacial ecosystems (Fig.2) where other organisms cannot grow and proliferate, they solely act as the biogeochemical integrators as well as food-web structures (Boetius et al., 2015; Adhikari et al., 2019a).

Owing to the major participants in aquatic systems, bacteriological studies in respective habitat is very important. Numerous abiotic and biotic factors (e.g., temperature, oxygen, pH, conductivity, water transparency, organic matter concentration, biodegradable nutrients, water current, Bacteriophages, Zooplanktons, Chlorophyll *a* (Chl*a*) content are the factors affecting microbial communities in aquatic habitat (Beier et al., 2008; Lliro et al., 2014; Hayden and Beman, 2016). It is very essential to identify and characterize bacterial community to get the information about the ecological niches of bacteria in freshwater bodies (Shafi et al., 2017) and assess the impact of anthropogenic activities (Wang et al., 2017) as well as the status of pollutants in water bodies (Unno et al., 2012). Due to the short generation time, bacteria can rapidly respond to the small change in environmental conditions. That is why; they can be used as an important model in the study of global climate change (Adhikari et al., 2019a).

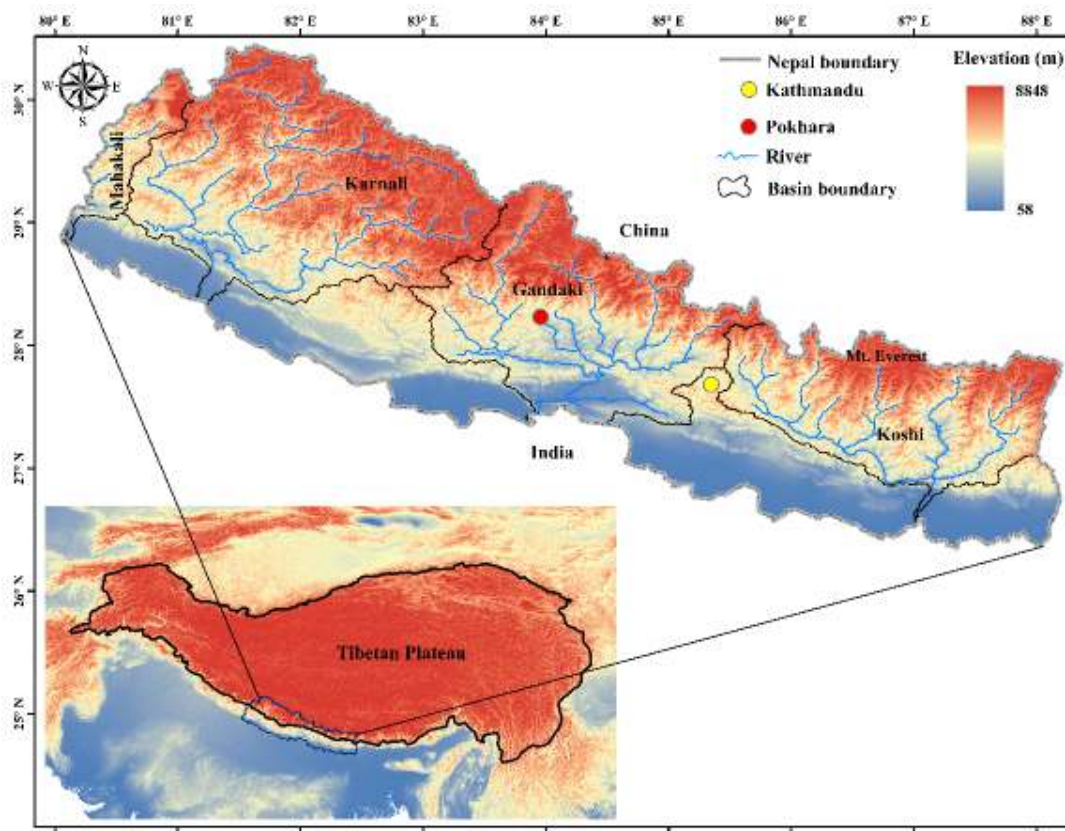
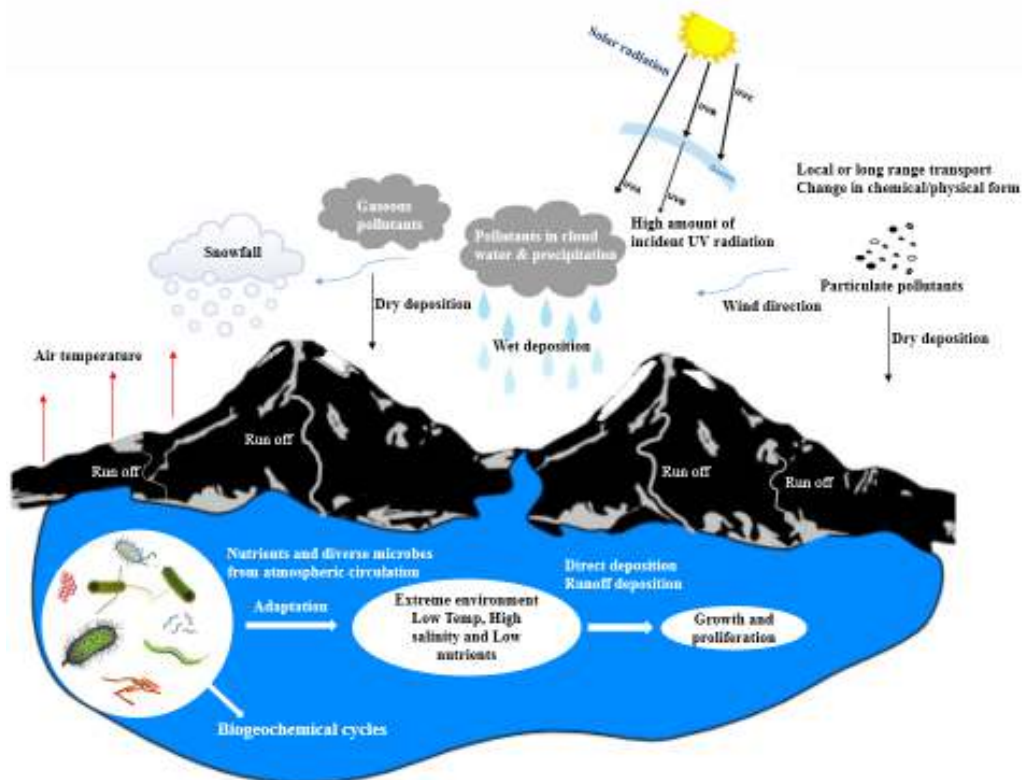


Figure1. Major river basins of Nepal

Despite the fact that microbiological studies are very important in the aspects of environment and ecosystem, a review of the literature indicated that such studies are very limited in the Central Himalayas, Nepal. Thus, this paper aimed to review previous studies on bacterial diversity in Nepal as well as future research perspectives.

Figure 2. An example of an aquatic ecosystem in the alpine region indicating the role of bacteria and their sources (adopted from Adhikari et al., 2019a)



Progress in Bacterial Diversity Studies in Nepal

Though microbial ecological studies are not enough in Nepal, bacterial diversity studies in Nepal was started as early as in 1988 by Japanese Scientists (Konda et al., 1988). The research investigated by Konda et al. (1988), in the three subtropical lakes (listed as a Ramsar site in 2016) of Pokhara valley reported the community of bacteria belonging to genera *Pseudomonas*, *Flavobacterium* and *Corynebacterium* in the water while the genera *Bacillus* in sediment samples. Authors used nucleopore filters of pore size $3\mu\text{m}$ to separate particle-associated and free-living bacteria. However, the composition of water in those lakes is completely changed with rapid urbanization and high anthropogenic activities. Furthermore, the authors used a culture-based method which reveals low coverage value (Muyzer, 1999), and the results obtained may not be fully reasonable in the recent context. Study of European

scientists (Sommaruga & Casamayor, 2009) using DGGE as molecular tool in remote lakes of Khumbu region, Nepal, the windward side of Tibetan Plateau (Dong, Jiang, Yu, Liu, & Zhang, 2010) revealed Betaproteobacteria and Bacteroidetes as the dominant group along with several ubiquitous bacterial groups supporting the bacterial cosmopolitanism in Third Pole lakes. Authors obtained high bacterial load in turbid lakes than in the transparent ones supporting that the limiting factor to shape out the bacterial diversity of alpine lakes is incident UV radiation.

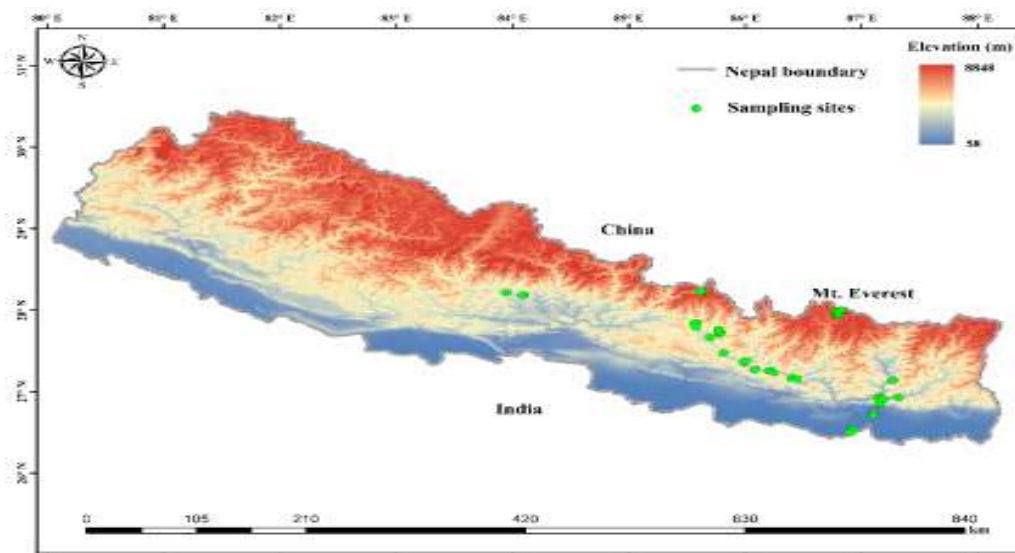
Study of Liu et al., (2011) in moraine lake and a glacial stream of Yala Glacier towards the southern slope of Mount Everest reported the dominance of Bacteroidetes, Betaproteobacteria, and Actinobacteria. Authors used clone library method as the biological analysis tool and noticed the difference in bacterial communities towards the southern slope and the northern slope of Mount Everest and justified that this type of pattern may be due to different climatic, atmospheric and environmental conditions.

Nepal Himalaya is located in the central part of Himalaya Karokaraman, thus attracting several scientists for microbiological studies. Azzoni and Colleagues (Azzoni et al., 2018) did a comprehensive study in four glaciated areas including the Khumbu Valley, Nepal using the Illumina miseq, a type of next-generation sequencing method as the biological analysis tool. Bacterial communities in four glaciated regions differed significantly with each other. Authors reported that Khumbu Valley hosted a significantly higher number of OTUs among four sites. This may be due to the proximity of the Himalayan range to highly polluted areas in the Indo-Gangetic Plain (IGP). Bacterial members of the order Burkholderiales contributed for more than 50% of the total bacterial abundance in Khumbu Glacier. Some genera of this order, i.e. *Polaromonas*, *Comamonas*, and *Limnolobus* are aerobic anoxygenic phototrophs and can use carbon monoxide as a source of energy (Franzetti et al., 2016).

Bacteria in river survive as free-living, particle-attached, and free-living with differences in metabolism as well as activities. A microbiological study in Koshi River, the largest river of Nepal (Adhikari et al., 2019b) posted that bacterial community composition along the tributaries and mainstream are different. Tributaries with comparatively lower human activities harbored the higher abundance of spore-forming bacteria; meanwhile, the mainstream river with higher human activities harbored the higher abundance of fecal indicator and sewage indicator bacteria. The variation of FL bacteria was driven by water physicochemical properties meanwhile that of PA bacteria was explained by geographic distance. All the above studies indicated that only a limited study have been conducted regarding the bacterial diversity in the

aquatic habitat of Nepal (Fig. 3).

Figure3. Bacterial diversity study in Nepal Himalaya that include river, lakes, and glaciers

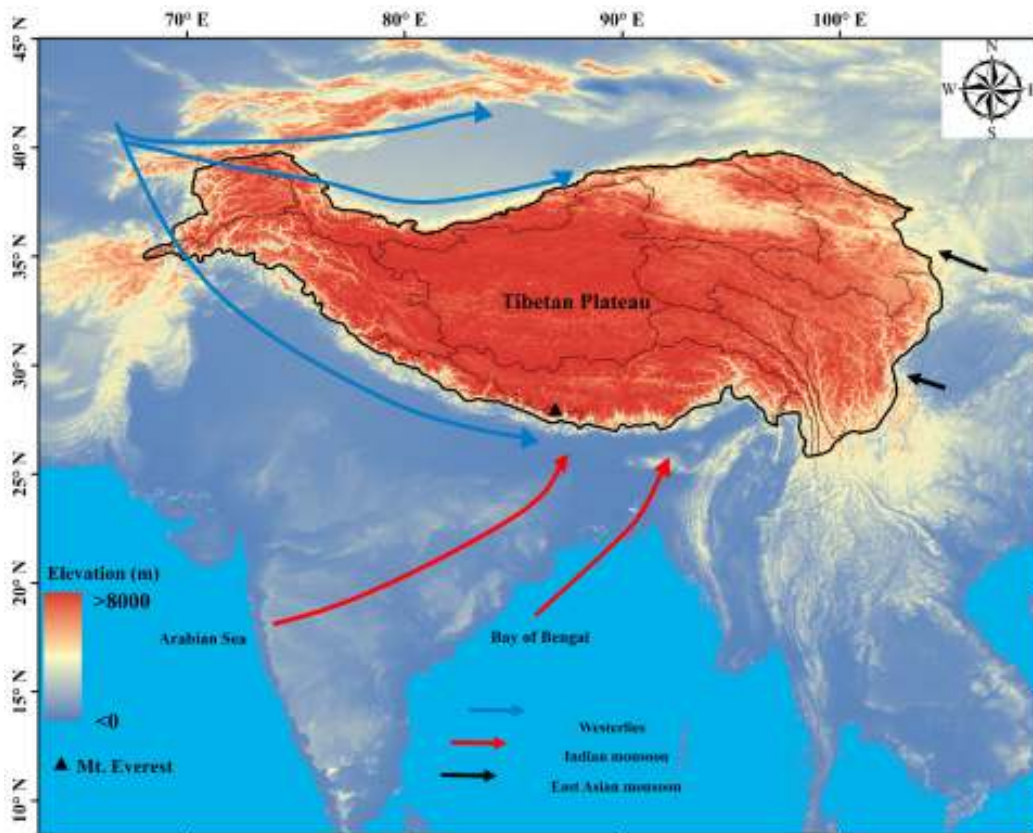


Future Perspectives in Bacterial Diversity Studies in Nepal

Nepal Himalaya is at a high risk of global climate change. Melting glaciers rapidly transport the ice-locked nutrients to the downstream proglacial ecosystem. Bacteriological information can be used as models for the study of climate change. Microorganisms can exclusively control the biogeochemical cycles and food web structure of the cryosphere environment (Boetius et al., 2015). Due to the short generation time, they can rapidly respond to the shifting environmental conditions. Thus, they can be used as important models to study the changing environmental conditions. Due to the climate change induced global warming, Himalayan Glaciers are rapidly retreating in recent years with the cascading effect in the respective proglacial environment. Thus, studies in all glacial habitats i.e. supraglacial, englacial, proglacial, subglacial, and glacial fore fields (Hotaling, Hood, & Hamilton, 2017) of the rapidly retreating glacier can help to study the microbial response to shifting environmental changes. Given that microorganisms solely control the biogeochemical cycles of glacial ecosystems, such studies are very important. However, the review of published literature indicates that microbiological studies have been conducted in only two glaciers indicating that such studies are lacking in the Himalaya-Karakoram region, specifically in the central Himalayas, Nepal. Various research regarding bacterial diversity was conducted in Tibetan Plateau (TP) and adjoining sites but

very few in case of Nepal Himalaya. Tibetan Plateau, the water tower of Asia (Fig.4) is the hot spot to study global climate changes so understanding the scenario of bacterial diversity and their role in the ecosystem in Nepal Himalaya is very important in scientific community study to understand the complete scenario in TP.

Figure4. Tibetan plateau and adjoining sites



Despite the great importance of microbiological studies in aquatic ecosystems, the review of the literature revealed that such studies are limited in Nepal. A large number of previous studies used clone library method (Adhikari et al., 2019a), revealing the low coverage value of bacteria, meanwhile, few studies used high throughput next-generation sequencing method. Nevertheless, very few studies used particle-attached and free-living bacteria in their studies though they play a different but important role in the biogeochemical cycling of nutrients (Adhikari et al., 2019b). Thus, future works need to be proceeded using the high coverage molecular tools, incorporating several water physicochemical factors and environmental

parameters keeping in consideration of particle-attached and free-living bacteria.

In microbial community ecology, the first thing we need to know is what are there, and then only we can know their role in the specific biogeochemical pathway of the respective habitat. Thus, though diversity and community composition studies seem to sound general, such works are very important in aquatic ecosystems of Nepal to further understand the role of various diverse bacteria in biogeochemical cycles. However, there exists a huge scientific research gap in the scenario of Central Himalayan, Nepal.

Conclusion

This review aimed to understand the scenario of microbiological studies in freshwater ecosystems of Central Himalayan, Nepal. Based on the review of previous literature, it is obvious that microbiological studies are limited. There are several related studies in China and the Indian Himalayas. To understand the complete diversity from lowlands to high altitude Tibetan Plateau, the study in Nepal Himalaya is quite essential. Nepal Himalaya is the transit zone for lowlands and TP, therefore, complete study and the exact mechanism cannot be identified unless enough studies emphasized in Nepal. Thus, future research should be accentuated in several aquatic ecosystems of Nepal using the relevant molecular tools and underlining on various type of bacteria in the aquatic ecosystem.

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