This Issue Contains

Non-Positional Numeral System in Different Civilizations

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ABSTRACT

The paper explains how different civilizations systematized the non-positional numeral system and it also carries out a comparative study of non-positional numeral systems in different civilizations. Besides, the paper studies all non-positional numeral systems which were developed in Egyptian, South Asian, Chinese and Greece civilizations. The paper analyzes all numeral systems to explore the rule of base, numeral-signs, numeral-phrase and direction of writing. Furthermore, the paper observes how they express the numerals and undertakes a comparative analysis between them to find out their similarities and differences. Mainly, the paper adopts the descriptive approach of analysis whereby relevant literatures are consulted for data and analyzed. It primarily finds that though there are some areas of differences, there are some outstanding similarities too. Moreover, all non-positional numeral systems have some interesting similarities and differences in their use.

Key Words : Non-Positional Numeral System, Numeral-phrase, Numeral-sign, Civilization, Similarities and Differences.

Introduction

The numeral system has been the topic of scholarly discussion for several centuries. There are first particularity in the earlier period general or regional surveys of numeral systems such works as those of Pott(1949), Conant(1896), Fettwers(1927), Datta and Sing(1935), Thomas(1897-8), Dixon and Kroeber (1907), Schmidt(1915) and above all, the immense worldwide collection of Kluge(1937-42). These studies are showing the typological variety and areal distribution of numeral systems in regard to their basic mathematical structure. A second class of works is by mathematicians concerned with the history and evolution of numeral systems such as Eaves(1285) , Boyer(1944), Wilder(1953), Smeltzer (1959), Menninger(1969), Cajori(1928) and Ifrah(1985), Zhang and Norman (1995). These works contain valuable ideas regarding the mathematical aspects. Chrisomalis's *Numerical Notation:comparative History* (2010) is a cross-cultural reference volume of all attested numerical notation system (graphic, non-phonetic system for representing number), encompassing more than 100 such systems used over the past 5,500years.

In early days, numeral systems were usually broadly classified as being either positional or non-positional. However dichotomous classification is somewhat common. Most of the scholars contributed in evolution of numerical notations and history of mathematics. Hollings (2009)'s study of analysis and classification is the mathematical and symbolical structure of non-positional numeral system. His work contains valuable idea to analysis of non-positional system.

We all are familiar to non-positional numeral system of Roman. Other non- positional systems are not familiar such as Egyptian, South Asian, Chinese and Greece. The study has adopted those non-positional numeral systems which are not familiar with us. An essential part of data collation for the study comprises compilation of non-positional numeral systems of Egyptian, South Asian, Chinese and Greece civilizations.

The study is different from the previous study of non -positional numeral system because the purposes of the study are to explore the system of expression of non-positional system in each civilization by descriptive approach and find out the differences and similarities between them by comparative approach. The interesting questions are raised about non-positional numeral systems, similarities and differences such as how they express numerals, what are the similarities and differences between them and what was the system of the base, numeral-sign: single elementary symbols or graphemes, direction of writing and numeral-phrase: a group of one or more numeral-signs used to express a specific number and the non-positional systems. The study analyzes the system of base, rule of formation of numeral-sign and rule of formation of numeral-phrase. The study is further used for comparative analysis to find the similarities and differences.

Non-Positional Numeral System

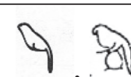
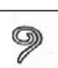
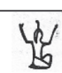
Egyptian Numeral Systems

The Egyptian numeral systems were used in Egypt. It was used from around 3250BC. Its use was restricted geographically to the Nile Valley and nearby areas under Egyptian controls (Chrisomalis, 2010). Hieroglyphic and hieratic both numeral systems were used in Egypt. Hieroglyphic system is the best-known ancient Egyptian system. Hieroglyphic numerals are written in monumental inscriptions. The hieroglyphic numerals were rarely used for mathematics and calculation. All Egyptian mathematical texts are written in the hieratic script (Gillings, 1978). Hieratic script was used around 2600BC. It was designed for cursive writing on papyrus and on ostraca (Chrisomalis, 2010). Egyptian hieratic script which developed from pictographic hieroglyphs was carved on monument (Menninger, 1969; Chrisomalis, 2010). The study includes both hieroglyphic and hieratic numeral system. Both systems are discussed in below.

Egyptian Hieroglyphic Numeral System

Egyptian developed the writing in the form of pictography which was symbols for objects and ideas that took the form of simple pictures. They carved their symbol into stones of their temples and monuments. The writing sign hieroglyph refers specially to ancient Egyptian writing but its meaning has been extended to include any pictograph. Egyptian regarded their writing signs as the god's words (Ifrah, 1985). In inscriptions on monuments, hieroglyphs are read either from left to right or right to left, and either horizontally or vertically (in columns, always read from top to bottom) (Ifrah, 1985). Monument inscriptions express the number using numeral-signs of hieroglyphic system with separate signs corresponding to each power of 10. There were special numeral-signs in decimal order. Hieroglyphic numeral- signs are shown in Table No. 1 (Chrisomalis, 2010).

Table 1 : Egyptian Hieroglyphic Numeral System

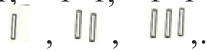
	1	10	100	1000	10,000	1,00,000	1,000,000
L-R							
R-L							

The numeral-sign for 1 is a simple vertical stroke. The sign for 10 has been described as a heel bone (Kavett and Kavett, 1975), a tie made by bending a leaf (McLeish 1991). The sign for 100 () is probably a coiled of rope, that for 1000 () is certainly lotus –plant, the sign for 10,000 () is an extended or bent finger, and that for 1, 00, 000 () is a tadpole (Chrisomalis, 2010), a tadpole or burbot fish resembling a pollywog (Boyer, 1989). All numeral-signs represent the pictography and they purely had decimal structure with signs for each power of 10 up to 1,000,000. The set of signs in the top row of Table No. 1 are reading from left to right and bottom row are reading right to left. Numeral-signs of Egyptian Hieroglyphic Numeral System are formed in following way.

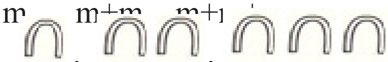
Base m = 10

Basic Signs: 1, m, m^2, m^3, m^4,…

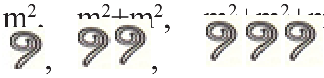
Units: 1, 1+1, 1+1+1,…

Numeral-signs:  ,…

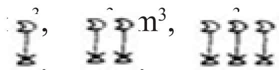
Tens: m, m+m, m+m+m

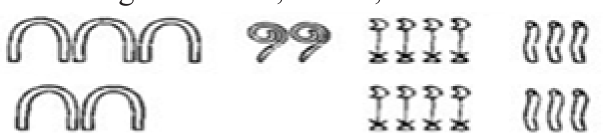
Numeral-signs:  ,..

Hundreds: m^2, m^2+m^2, $m^2+m^2+m^2$, …

Numeral-signs:  ,…

Thousands: m^3, m^3+m^3, $m^3+m^3+m^3$,…

Numeral-signs: 



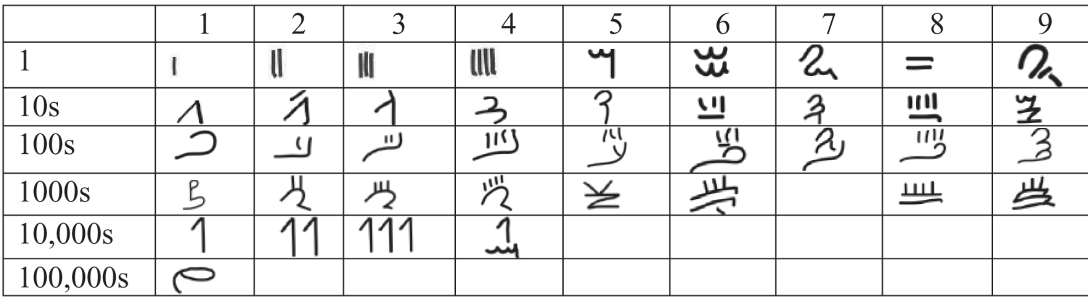
50 + 200 + 8000 + 60,000 = 5m +2m^2 + 8m^3+ 6m^4= 68250

Hieroglyphic numeral system has base-10. The rule of numeral-signs is a power of 10. The numeral-signs for 10000, 1000, 100 and 10 are repeated to represent the number 68250. The principle of the numeral-phrase is repetition and addition: to represent a number, the sign for each decimal order was repeated as nine times as necessary. The structure of numeral-phrase is repetitive-additive. The repetitions of the numeral-signs make a lengthy for calculation. This was not the system most commonly used by Egyptian scribes (Ifrah, 1985). Egyptian scribes developed the hieratic script. Hieratic, and numerals flourished on such documents by Egyptian assigns as a sort of cursive shorthand for the earlier hieroglyphic script, and continued to be used in some parts of Egypt as late as 200 AD (Loprieno, 1995). Egyptian scribes of the early dynasties began a process of gradually simplifying hieroglyphs which led to the cursive signs (Ifrah, 1985).

Egyptian Hieratic

The hieratic script was developed around 2600BC. Hieroglyphic was written in a variety of directions, hieratic texts are always linear and written from right to left. Hieroglyphic numeral system has only seven numeral signs for 1, 100, 1000, 10,000, 1,00 , 000 and 1,000, 000 but hieratic system has numeral-signs for 1 to 9, 10-90, 100-900, 1000-9000, 10,000-90,000 and 1,00,000. These signs are shown in Table No.2.(Chrisomalis, 2010; Ifrah, 1985)

Table 2 : Hieratic Numeral System



	1	2	3	4	5	6	7	8	9
1									
10s									
100s									
1000s									
10,000s									
100,000s									

Hieratic numeral-signs for units were expressed with repeated vertical strokes, tens with horseshoe-shaped curves, and hundreds with coils, in an exact imitation of the hieroglyphic numeral-phrases of the same value (Moller, 1936). The hieratic system had a special sign for each of multiple of ten. It is primarily ciphered system (Chrisomalis, 2010). It is a technical system of symbols used to represent the numbers. The development of hieratic thus represents the first step towards ciphered notation in the history of numerical notation, and an important step away from the use of one-to–one correspondence between signs and numbers. It has also base-10 but the principle of numeral-sign and numeral-phrase are different from hieroglyphic system.

The number 6207 was written as  (7 + 200 + 6000) in hieratic text. The numeral-sign for six thousand is written in right side and the sign for unit is written in left side so the writing direction of numeral system is right to left in hieratic system. It has no repetition of numeral-signs for the number 56207. They had additive principle for represent the numbers so hieratic system is ciphered-additive. Numeral-signs of Egyptian Hieratic Numeral System are formed in following way:

Base m = 10

Basic Sign:

Units:1, 2, 3,…, m-1

Tens: m, 2m, 3m,…,(m-1)m

Hundreds: m^2, $2m^2$, $3m^2$,...,(m-1) m^2

Thousands: m^3, $2m^3$, $3m^3$,…,(m-1)m^3

So on

Summary of Discussion

Egyptian civilization developed the numeral systems as hieroglyphic and hieratic. The connections between the Egyptian hieroglyphic, hieratic systems are well established. The structures of these numeral systems are repetitive-additive and ciphered-additive. Egyptian numeral systems have a base-10. It is also sign-value system. All systems of Egyptian have no sign for zero. Repetitive-additive structure transferred to ciphered-additive structure over a period. The direction of writing of Egyptian numeral system is quite variable (left-right, right-left).

South Asian Numeral Systems

South Asian systems have discussed all the systems that were used in the Indus River Valley civilization such as Indus, Brahmi, and Kharosthi. Indus River Valley civilization was an ancient civilization of South Asian region that played the major role to develop the numeral system. Brahmi and Kharosthi systems were also used in Indus River Valley civilization from third century BC.

Indus Numeral System

Harappan was well established civilization in Indus River Valley. The writing system of the Harappan civilization, centered in the Indus River valley, is one of the great remaining mysteries in the field of script decipherment. It was used from around 2600BC to 1900BC (Subedi, 2074). There have been several earnest attempts to decipher the Indus numerals, mostly relying on the very frequent occurrence of grouping of vertical strokes on the inscriptions (Chrisomalis, 2010). Vertical stroke and combinations of the vertical strokes arranged side by side, or one group below another, have been found (Datta and Sing, 1935). Indus system is earliest system of numerals in South Asia.

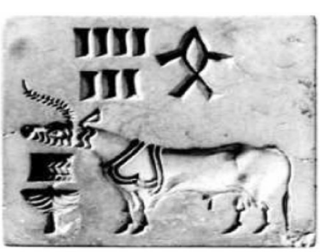


Fig. 1 Inscription of the large Seal H-9 from Harappa
Source: Parpola, 2010

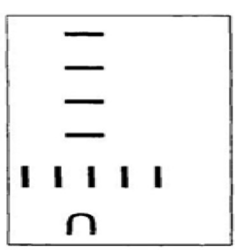


Fig.2. Inscription on artifact DK-7535 from Mohenjo –daro.
Source: Chrisomalis, 2010

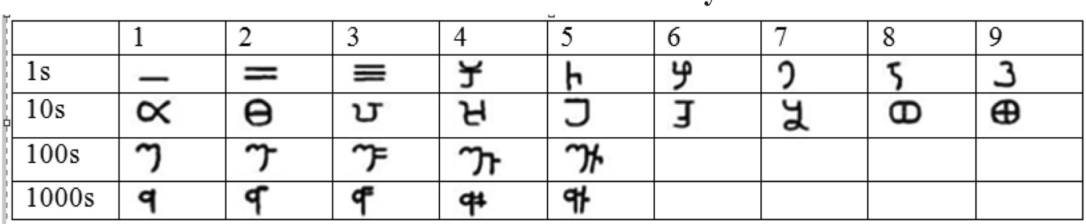
Fig.3 : A Seal from Mohenjo-daro (M-350)
Source: Parpola, 2010

The fish sign is attested in combination with three, four strokes in fig.1. These signs represent the number with repetitive principle. Best evidence for a Indus numerals comes from nine inscribed potsherds found at Mohenjo-daro inscribed with sets of vertical strokes and crescents/hooks. Harappan tool are numerical in function there is no agreement as to the specific structure and value of the sign (Chrisomalis, 2010). The base of Indus numeral system is controversial because Parpola(1994) argues that the crescents/hook probably represents 10 rather than 8. Fairservis(1992) and Pettersson(1999) argue that because none of these nine objects contains more than seven of any sign , the Indus numeral must be octal than decimal. At present, there are not enough evidences to decide whether the crescent-sign had a value of '8' or '10'and 'octal' or 'decimal' base in Indus numeral system. Nine numerals are very limited and there are no sign repeated more than seven times, the numerical base must be Fairservis (1992)'s sign count from the seal inscription is possible evidence in favor of the octal interpretation, but lack of numeral-phrases with different signs combined additively in this type of texts does not give a great faith that there was a unique sign for 8.

Brahmi Numeral System

Brahmi numerals were used from 250 BC, during the region of the Mauryan emperor Asoka. Most Western epigraphers and archaeologist accept, aside from Harappan script, there was no pre-Mauryan writing in India (Salomon, 1995, 1998). Datta and Sing (1935) holds the hypothesis regarding the antiquity of writing in India which is about 1000 BC or earlier. Due to the lack of early documents, the study has not claimed about the date of Brahmi script before third century BC. It was the first used in India after the collapse of the Harappen civilization (Chrisomalis 2010). It appears in the inscriptions of Nana Ghat (first century BC) and Nasik (120 AD), and Ksatrapa coins (second to fourth century AD). Brahmi script was spread over South Asia, some of those used in Central and Southeast Asia (Ifrah, 1985). The basic Brahmi numerals are shown in Table No. 3(Datta and Sing, 1935; Chrisomalis, 2010).

Table 3 : Brahmi Numeral System



The signs for 1 through 3 are essentially repetitive component and the strokes were horizontal; the single-stroke signs found in early inscriptions become ligatured in many later inscriptions, for instance, the seventh/eighth-century AD grants of the Ganga dynasty contain  and  for 2 and 3 (Datta and Sing, 1935).

Brahmi system is ciphered numeral system because it has separate signs for each of the units and the tens. It has base-10. The numeral-phrases are written left to right with higher to lower order; thus, 189 might be written as . Numeral-phrase adopts the additive principle and numeral-sign adopts the ciphered principle up to 100 and above hundred, there are employed the multiplicative principle for formation of numeral-signs. The structure of Brahmi numeral system is ciphered-additive.

The numeral-sign above hundred has employed the multiplicative principle that juxtapose a unit-sign with a power- sign for either hundreds or thousands. But the formation of the signs for 200, 300 and 2000, 3000 are different from the formation numeral-signs of above 300 and 4000. The structural classification of the system of the numerals 200,300 and 2000, 3000 becomes more complex. The signs for 200. 300 and 2000, 3000 are different structure than other signs as the sign for 200 is ; it has one unit-sign and sign of one hundred; two signs are combining to make the number 200. Similarly numeral-signs for three hundred, two thousand and three thousand are formed. The other signs for the hundreds and thousands to the corresponding units are significant. The numbers 400, 700, 1000, 4000, 6000, 10,000 and 20,000 are written in a clearly multiplicative fashion at the early site of Nana Ghat (first century BC) as , , , , , and and thus combined unit-signs with signs for 100 ( )and 1000 ( ).

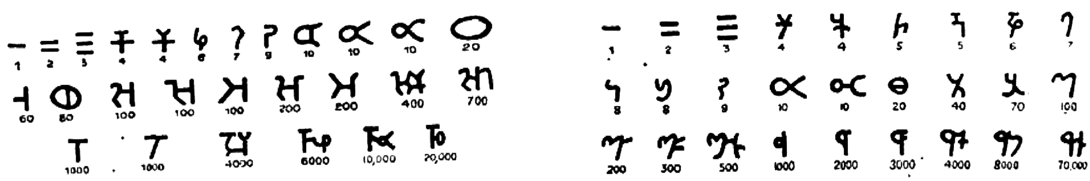


Fig.No.4. .Brahmi numeral, Nana Ghat Inscriptions . Source:Indraji 1876.

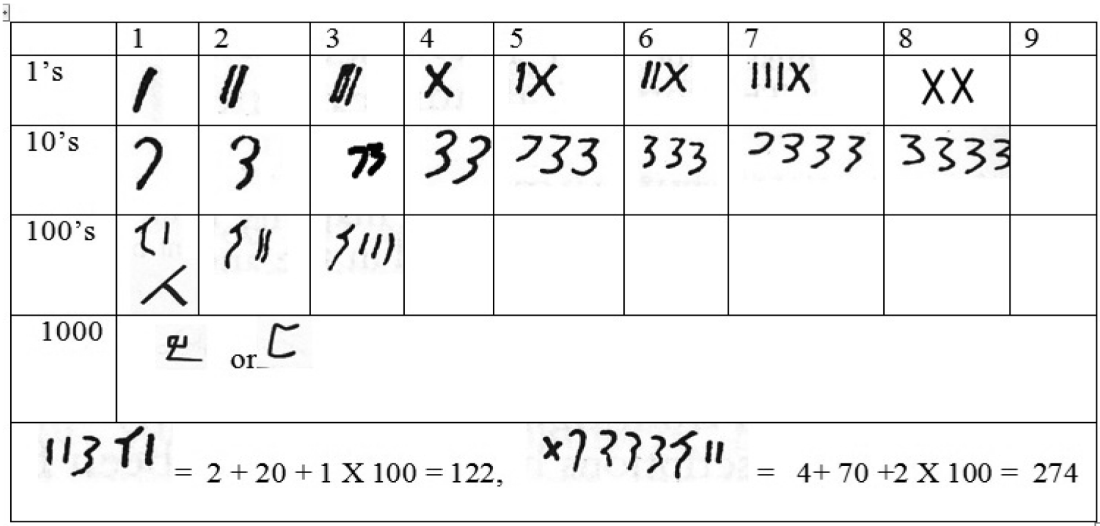
Numeral-signs of Brahmi numeral system is formed by the followinf ways:

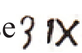
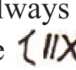
1, 2, 3,…(m-1), m; m, 2m, 3m…(m-1)m; m^2, $2m^2$,$3m^2$,…$(m-1)m^2$; m^3,$2m^3$,$3m^3$,..$(m-1)m^3$.

Kharosthi Numeral System

The Kharosthi script was used in the Asokan period after collapse the Indus civilization. Kharosthi script was also used in the region of Gandhara in eastern Afghanistan and northern Pakistan from around 325 BC to 300AD and from the century onward, in parts of Central Asia (Chrisomalis 2010). Kharosthi inscriptions containing numerals are quite rare, being found in only a few royal inscriptions of Mauryan King Asoka, around third century BC. The Kharosthi numerals are given in Table No.4 (Datta and Singh, 1935; Das, 1927a; Das Gupta, 1958).

Table 4 : Kharosthi Numeral System



This system possessed unique signs for the numbers 1, 4, 10, 20, 100 and 100 as shown in Table No.4. It has no special sign for 5; numbers from 4 to 9 were always expressed through combinations of units and four-signs. Numeral-signs for below 100 are formed by repetition and above 100 multiplications. Numeral-phrase  for 25 (20 + 1+4) is written from right to left. The direction of writing is always from right to left with units to the right (before) the power-sign. Numeral-phrase  (100 x 6) for 600 is written by multiplicative principle. The numeral- phrase for 274 in Table No.4 has used both principle addition and multiplication. Thus, Kharosthi system is repetitive-additive up to 100 and multiplicative-additive thereafter.

Summary of Discussion

South Asian civilization developed basically two structured numeral systems as Brahmi and Kharosthi. Both systems are quite different to each other because Brahmi is ciphered-additive and Kharosthi is hybrid (both multiplication and addition). Discussion of South Asian numeral systems are given below:

- Brahmi and Kharosthi both are used in South Asian civilization.
- Brahmi numeral system has base-10.
- No sign for zero in both systems.
- The structures of Brahmi and Kharosthi are quite different.
- Brahmi writing direction is always from left-to-right and Kharosthi writing direction is always from right-to left.
- Brahmi numerals are formed by ciphered system up to 100 and numerals for

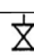
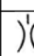
above 100 are formed by multiplicative principle. The structure of Brahmi system is ciphered-additive.

- Kharosthi numerals for below 100 are formed by repetition and for above 100 are formed by multiplication.

Chinese Numeral System

The first well-attested phonetic writing and numeration in China are dated to the later part of the Shang Dynasty (ca.1523-1028 BC). Cook (1997) said that "the Shang rulers controlled the northern part of what is now China"(p 221). Shan inscriptions are record of royal divinations written on oracle bone. These brief texts of royal divinations which date from 1300BC to 1050 BC contain numerical indications of animals hunted, counts of days, months(Takashima 1985). Chinese use a decimal system that has basic signs associated with numbers 1 to 10, 100, 1000 and 10,000. The numeral-signs used on oracle-bone inscriptions are shown in Table No.5 (Needham, 1959; Djamouri, 1994).

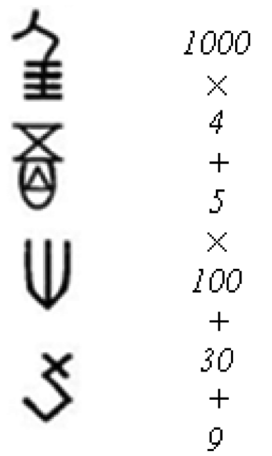
Table 5 : Shang Numeral System

	1	2	3	4	5	6	7	8	9
1									
10									
10^2									
10^3									
10^3									

The Shang numeral system combines the nine unit signs with signs for the power of 10. The numeral-signs for 1 to 4 are repetitive combinations of horizontal strokes; the signs for 10 to 40 are ligatured combinations of vertical strokes. For the numbers 50 and 90, unit –sign was placed below the sign for 10.Tens from 50 to 90 are represented by superposed signs in this form:

10	10	10	10	10
×	×	×	×	×
5	6	7	8	9

For the number hundreds, the unit-sign was placed above the sign for power-sign, while for thousands and ten thousands; the unit-sign was superimposed upon the power-sign. These formation of numeral-signs are employed the multiplicative principle. It is a decimal system; there was no sign for zero. The principle of numeral-signs is the form: 1, 2, 3, 4,…., m-1, m, m^2, m^3,…. , where m = 10 is a base. Numeral–phrases were written in vertical columns and read top to bottom, with the highest component at the top. The number 4539 might be written as



Thus, structure of Shan numeral system is multiplicative-additive and writing system is top to bottom with highest value on top and lowest on bottom.

Summary of Discussion

Chinese numeral system is decimal system but it is different from Egyptian and Brahmi numeral system. The structure of Shang numeral system is multiplicative–additive. Chinese numeral system has following character:

- Chinese decimal numeral system is decimal.
- Numeral-phrases forms through both multiplication and addition.
- The writing direction of Shang numeral system is top to bottom.
- No sign for zero.

Greek Alphabetic Numeral System

Alphabetic numeral system was developed from Greek. The first example of the alphabetic numerals date to the 6th century BC and are written using the letter of the Ionian cities of Caria, such as Miletus (Chrisomalis, 2010). The first epigraphic evidence for alphabetic numerals comes from a vase, dating to around 575 BC, found at Corinth, which contains the inscription "SYMIT" , which Johnston reads as "mix batch of 7"(Johnston, 1973). Twenty-seven signs of the classical Greek alphabet had been used in numerals. These twenty–seven signs are divided into three groups as units, tens and hundred. These signs are shown in Table No. 6(Chrisomalis, 2010).

Table 6 : Greek Numeral System

	1	2	3	4	5	6	7	8	9
1s	Α	Β	Γ	Δ	Ε	F	Ι	Η	⊕
10s	Ι	Κ	Λ	Μ	Ν	Ξ	Ο	Π	Ϙ
100s	Ρ	Σ	Τ	V	Φ	Χ	Ψ	Ω	Ϻ

Greek letters were also used to write numbers. In the classical Ionian system, the first nine letters of the alphabet stood for the numbers from 1 to 9, the next nine letters stood for the multiples of 10, from 10 to 90, and the next nine letters stood for the multiples of 100, from 100 to 900. The numeral system was purely decimal and ciphered. Greek was usually written left to right with highest value on the left as ΩΞΒ = 800 + 60 + 2 = 862 , though right to left and boustrophedon are not unknown. It is generally written in descending order. Greek alphabetic system was ciphered- additive system. The rule of numeral – signs is 1,2,3…m-1, m; m, 2m, 3m…(m-1)m; m^2 ,$2m^2$,$3m^2$,….$(m-1)m^2$ where m =10.

Summary of Discussion

Alphabetic numeral system of ancient Greek has 27 signs to represent the numbers. Greek alphabetic numeral system has the following characters.

- Greek alphabetic system has base-10.
- Greek system was ciphered-additive system
- It has no sign-for zero.
- The direction of writing was used generally left to right.

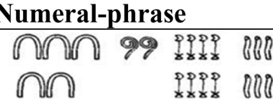
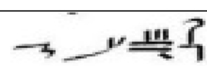
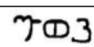
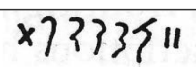
Comparative Analysis of Numeral Systems

The present study has compared between numeral systems of different civilizations to explore the similarities and differences between numeral systems. All systems are decimal systems so the structures of decimal numeral systems and systems of numeral-signs of numeral systems are compared below.

Structural Comparison of Numeral Systems

The numeral systems of different civilizations have been explained in chapter two. Non-positional numeral system was used in different civilization in different times. Here is a comparative between the structures of non-positional numeral systems in Table No. 7.

Table 7 : Structural Comparison of Numeral Systems.

S.N.	Systems	Structure	Base	Numeral-phrase	Direction
1	Egyptian hieroglyphic	repetitive-additive	10	 50 + 200 + 8000 + 60,000 = 68,250	right-to-left
2	Hieratic	ciphered-additive	10	 7 + 200 + 6000 + 50,000 = 56207	right-to-left
4	Greek	ciphered-additive	10	 = 500 + 60 + 2 = 562	left-to-right
6	Brahmi	ciphered-additive	10	 = 200 + 80 + 9 = 289	left-to-right
7	Kharosthi	Hybrid	10	 = 4+70+200	right-to-left
8	Chinese	multiplicative-additive	10	 4000 500 = 5x 100 30 = 4530	top to bottom

Comparison of Numeral-signs

The comparative analysis of numeral-signs of ciphered systems is shown below.

Table 8 : Numeral-signs in Numeral Systems

Units									
Systems	1	2	3	4	5	6	7	8	9
Hieratic	|	||	|||	||||				=	
Greek	Α	Β	Γ	Δ		Ϝ	Ι	Η	⊕
Brahmi	—	=	≡						

Tens									
Systems	10	20	30	40	50	60	70	80	90
Hieratic								=	
Greek	Ι	Κ	Λ	Μ	Ν	Ξ	Ο	Π	Ϙ
Brahmi									

Hundred									
Systems	100	200	300	400	500	600	700	800	900
Hieratic									
Greek	Ρ		Τ	V		Χ	Ψ	Ω	Μ
Brahmi									

Thousands									
Systems	1000	2000	3000	4000	5000	6000	7000	8000	9000
Hieratic									
Greek									
Brahmi									

The observation of the data from Table No.7 and Table no.8 expose all similarities and differences of numeral systems. The observation of data explores the some findings about similarities and differences, principle of formation of ciphered system. The results of the present study are the evidences of that analysis and comparison based on non-positional numeral systems which are shown in Table No. 7 and 8. There are many similarities between Greek and Brahmi system. All systems have similar base. But they have also some differences between them such as Egyptian hieroglyphic, Egyptian hieratic, Chinese and Brahmi have different structures. Ciphered numeral systems have similar principle of formation of numeral-signs but each system has set of numeral-signs. The findings of the study are discussed in below.

Summary of Findings

The analysis of all non-positional numeral systems by the comparison has explored the following Principles, similarities and differences:

Principles

This study explores the principles of non-positional numeral systems of Egyptian, South Asian, Chinese and Greek that all have common features.

- All systems have a base.
- All systems are structured.
- All systems have no sign for zero.
- All systems have additive principle.
- No systems form numeral-phrase through division and subtraction.
- Each system has a set of unique numeral-signs.

Similarities

One result of the study is a similarity between numeral system of different civilizations. The study has explored the following similarities between numeral systems.

- All systems have base-10.
- The structures of Egyptian hieratic, Greek and Brahmi numeral systems are ciphered-additive.
- The principle of numeral-signs for the numbers of Egyptian hieratic, Greek and Brahmi is ciphered.
- The writing direction of Greek and South Asian numeral system is left to right.
- The writing direction of Egyptian and Kharosthi numeral system is right to left.
- Ciphered numeral system has basic principle of formation of the numeral–signs as1, 2…, m-1; m, 2m, 3m, 4m, 5m, …, (m-1)m; m^2, $2m^2$,…,$(m-1)m^2$; m^3, $2m^3$,…,$(m- 1)m^3$; m^4…

Differences

Numeral systems have not only similarities. There are a good number of differences between them. The differences between non-positional numeral systems are discussed in below.

- Principle of numeral-signs for the numbers of Chinese, Egyptian and South Asian are quite different which discussed in chapter 2.
- The structure of Egyptian hieroglyphic, Chinese and South Asian numeral systems are also different.
- Chinese and Egyptian hieroglyphic systems are decimal but different from ciphered decimal system.

Conclusion

Egypt, Chinese, Greek and South Asia have been located in different parts of the world. They used the non-positional numeral system in different period. Non-positional numeral system is basic numeral system of each civilization. Non-positional numeral system of different civilization had employed the base-10 system and additive operation. Each system has set of unique numeral-signs and structures such as repetitive-additive, ciphered-additive and multiplicative-additive. Overall, taking the six numeral systems, there are some difference and some similarities between rules of formation of base, numeral-signs; numeral-phrase and direction of writing. There are some outstanding common features: all have base-10, all are structured, all have no sign for zero and the most common is additive operation. The actual process of systematization of all numeral systems has some similarities. Similarly, there are greater differences between them such as structures of Chinese and Brahmi, Egyptian hieroglyphic and Greek. All non-positional systems were used in different period. Egyptian used hieroglyphic from 3250 and ciphered system from 2600BC, Greek used ciphered system around 600BC and South Asia used ciphered system from third century BC but three numeral systems hieratic, Greek and Brahmi are completely identical in structure. It is clear that they have same idea of representation of the number but each has set of numeral-signs different from other. The study concludes that time and place factors play the fundamental roles in determining how system and numeral-signs are systematized. It also argues that numerals are somewhat universal, somewhat variation abound.

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Measurement of Motivation and Satisfaction Level of the Women Entrepreneur in Thamel Area

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ABSTRACT

The important role that entrepreneurship plays to combat unemployment, wealth creation and the alleviation of poverty should not be underestimated, especially in regions with growing unemployment rates. Women entrepreneurs can contribute significantly to economic development in Nepal but their contribution has not been adequately studied and developed. Although it is challenging for both men and women to start and sustain a successful business, women face unique challenges to self-employment. The objective of this study was to explore nature of women entrepreneurs, to investigate background and motivational factor, to identify the challenges of women entrepreneurs business in Thamel area and to make practical recommendations to enhance women entrepreneurship. A survey of 52 women-owned businesses was conducted. Women entrepreneurs in this study were motivated by pull factors, such as the need for extra income, empowerment and social recognition. Factors such as unemployment and family tradition pushed them into self-employment as well as women empowerment. They are currently facing obstacles, such as high interest, lack of business management skill, pressure of childcare, lack of self confidence and socio-culture environment (dual responsibility, restrictions on mobility). Practical recommendations are suggested to stakeholders and women entrepreneurs to overcome these obstacles and to ensure that women entrepreneurs can sufficiently contribute to the economy and empower themselves economically.

Key words: women entrepreneurship, family businesses, motivational factors, obstacles, self-employment.

1. Introduction

1.1 General Background

Wave of modernization actually has been started from breakthrough of innovation. Discontinuity in every aspect like social cultural, value, perception, etc. leads us in to new global paradigm. Therefore, this movement equally produces opportunities as well as threats in modern social and non social aspects. Failure and nearer to failure political ideology, economic trend and social value create difficulties in existing environment under which new thoughts and innovations have prevailed.

At the first quarter of 19th century non industrialization has shifted into industrialization which pushes signal towards the employment and entrepreneur. The word entrepreneur has taken from French, which means "to undertake". According to French tradition "An entrepreneur is a person translation a profitable idea into productive activity" Japanese industrialization actually has attained when women entered into industrialization process by being simply employees and employers. "An entrepreneur searches for change, responds to it and exploits opportunities. Innovation is a specific tools of an entrepreneur hence an effective entrepreneur converts a sources into resources", (Peter Drucker). This movement has contributed a lot into women empowerment and these days are called as feminism paradigm. Women's are the major founders of the society, yet women have not achieved equality as compared with men. Of the world's 1.3 billion poor people, it is estimated that nearly 70 per cent are women, 80 per cent of the world's i.e. 27 million refugees are women (UNHRC).

In Nepal women are socially, economically, culturally and politically dominated and they are excluded from the opportunities. Status of women primarily linked with family, society and the state structures. The socio-economic status of women in Nepal is very poor. Nepal is a country of great geographic, cultural, ethnic, religious diversity but no matter how talented they are, they never get a chance to develop. According to CBS (National statistics) women's literacy rate is 30 percent. The important role that small businesses and entrepreneurship play in stimulating economic activity, creating jobs, alleviating poverty and uplifting living standards, has been recognized internationally as well as in Nepal (Van Vuuren & Groenewald, 2007).

Nepal is the least developed country with high unemployment rates, low levels of formal and higher education, the migration of individuals from rural areas to cities, corporate restructuring and government policies, and regulations that enforce the restructuring of larger organizations. The region thus has an urgent need for entrepreneurs in the small, micro- and medium enterprises (SMMEs) who can act as a tool to combat unemployment and crime and to stimulate the economy as a whole (Maas & Herrington, 2006).

1.2 Focus of the Study

Since the women in the Thamel area seem to be indulged in various professions which indicates their interest toward the business, but lots of works still have to be done in order to explore their full potentiality and capability. Therefore the main focus of the study is to search and identify the active participation of the women in the business sector and encourage them to work actively as an entrepreneur. This study also motivates the women and helps them to identify the different challenges they face in the business environment. Women are resourceful, revolutionary, productive & innovative of social improvement. They lead society for betterment and today women are upcoming entrepreneurship knowledge. They invest in many sectors of society for employment generation, resource utilization and skill mobilization. They are not only housewife they can do many things for us.

1.3 Statement of the Problem

There are many reasons which hinder the growth of the women entrepreneurs in Nepal. They are low access to credit and marketing networks, reduced risk-taking capacity, lack of knowledge to modern technology, lack of personal security and risk of sexual harassment, severe competition from organized units both in the domestic as well as the international markets, low level of self-confidence, social and cultural barriers such as exclusive responsibility for household works, restrictions on mobility, etc (ADB, Country briefing paper women in Nepal, 1999).

On the other hand, lack of capital is general phenomena to the Nepalese people specially women because decision regarding wealth entirely rests on male in Nepalese culture. Nepal has got great potentiality of strengthening economy of country through tourism since the availability of various beautiful scenic places, cultural heritages some of them are listed in the world heritage and many attractive places. Out of total population of Nepal female population exceeds over male and without making them involve in economic activities, the economic development of the country is quite difficult. Therefore, the women are facing some of the following problems to enter in tourism business as an entrepreneur.

Research questions based on the above statement of problems the following research questions are formed.

- What are the motivational factors for the women entrepreneurs in Thamel?
- What are the financial and non financial challenges of women entrepreneurship in Nepal?
- What are the associations between the demographic factors and the business category?
- How is the performance of women entrepreneurs and their current business status?
- To what extent the women entrepreneurs are satisfied with Business in Thamel?

1.4 Objective of the study

The main objective of the study is to gain an understanding the nature of women entrepreneurship in business sector of Thamel and other objectives are as follows:

- To identify the motivating factors for the women entrepreneurs in Thamel.
- To analyze the challenges that women entrepreneurs are facing in managing their businesses.
- To find the association between the demographic factors and the business categories in Thamel Area.
- To analyze the performance of women entrepreneurs and their current business status.
- To measure the satisfaction level of the women entrepreneurs with Business in Thamel.

1.5 Research hypothesis

- H_1: There is an association between education status and category of business.
- H_2: There is an association between age group and category of business.
- H_3: There is an association between education status and category of business.
- H_4: There is an association between ethnicity and category of business.

2. Literature Review

Entrepreneurship falls within six schools of thought (Great person school, Psychological characteristics school, classical school, Management school, leadership school and entrepreneurship school) with their own underlying set of belief .Each of these schools can be categorized according to its interest in studying personal characteristics, opportunities, management or the need for adopting an existing venture.

Heilman and Chen (2003) as well as Botha (2006) argued that various push-and-pull factors exist that can motivate women to start their own businesses. Maas and Herrington (2006) defined push factors as the more negative factors, such as unemployment and retrenchment, which force people to become entrepreneurial in order to survive. They regard pull factors to be the more positive factors, such as government support and role models, which might influence people to choose entrepreneurship as a career option. Ghosh and Cheruvalath (2007) found that only one-fifth of women are drawn into entrepreneurship by pull factors. The rest are forced into entrepreneurship by push factors. Refer to detailed discussions of these factors in the studies by Kock (2008), Lebakeng (2008) and Meyer (2009).

2.1 Challenges to women entrepreneurship

Richardson, Howarth and Finnegan (2004) commented that women entrepreneurs suffer from significant material constraints through unhelpful attitudes arising from society's negative attitudes towards women in business. Women entrepreneurs often feel that they are victims of discrimination. This statement was also emphasized by Orhan (1999), who found that one of the most interesting issues with regard to women entrepreneurship is the different ways women are discriminated against in concealed ways.

Challenges to women entrepreneurs cover a wide spectrum, including level of education, inter-role conflicts emanating from greater parenting responsibilities, a dearth of financial assistance and socio-cultural constraints (Ghosh & Cheruvalath, 2007). Although men and women both experience personal problems, women recorded more difficulties. This is especially true with regard to a lack of self-confidence and not being taken seriously by providers of funds when applying for funds (Bridge, O'Neill & Cromie, 2003). It is widely acknowledged that African women have access to fewer resources than men. For example, relative to men, they tend to have lower access to land, credit facilities, education and training facilities (Katepa-Kalala, 1999).

2.2 Performance of women entrepreneurs

The performance of women entrepreneurs in their businesses has become an important area of recent policy and academic debate. Comparatively little rigorous and in-depth research, however, has been undertaken on the issues of gender and business performance. Performance is the act of performing; of doing something successfully; using knowledge as distinguished from merely possessing it. However, performance seems to be conceptualized, operationalised and measured in different ways (Srinivasan et al., 1994), thus making cross-comparison difficult. Among the most frequently used operationalisations are survival, growth in employees, and profitability (Lerner, Brush, & Hisrich, 1997).

Chandler and Hanks (1994) argue that the model of individual job performance indicate that performance is a function of ability, motivation and opportunity. The performance of a business founder is measured by the performance of the organization (Schein, 1987), which is in turn influenced by the environment within which the organization emerges (Covin & Slevin, 1989). Based on Rosa et al., (1996) study, they outlined four different measures of comparative performance of business by gender, that is, primary performance measures (number of employees, growth in employees, sales turnover, value of capital assets); proxy performance measures (geographical range of markets; VAT registration); subjective measures (including the ability of the business to meet business and domestic needs); and entrepreneurial performance measures (the desire for growth, the ownership of multiple businesses). Amongst the most frequently used measures of performance are annual sales, number of employees, return on sales, growth in sales, and growth in employee numbers (Brush & Vanderwerf, 1992). Fischer et al., (1993) study found that women's businesses tend to perform less well on measures such as sales, employment and growth, but concluded that the determinants of gender differences in business performance were far more complex than had been recognized in earlier studies.

2.3 Management Practices and Performance

Buttner (2001) reports that the management styles of women entrepreneurs was best described using relational dimensions such as mutual empowering, collaboration, sharing of information, empathy and nurturing. Importantly, these dimensions, which have also been associated with women in different professional occupations, were deemed to be associated with firm performance. Women do work differently from men.

According to Porter (1996) the essence of strategy is choosing to perform activities differently from rivals, which requires creativity and insight. Bracker et al., (1986, 1988) found that firms which undertook strategic planning performed better financially. Iakovleva et al., (2011) suggests three elements of business strategies which have significant relationship with performance, i.e. founder's entrepreneurial competence, founder's managerial competence, and strategies applied by the firm. The strategic adaptation perspective holds that success is primarily dependent on the fit between changes in the environment and entrepreneur's ability to develop and execute effective strategies. This approach takes into the consideration on both environmental influence and entrepreneurial strategies as determinant of firm's performance. In this regard, women entrepreneurs who focused on strategic planning are likely to achieve higher performance.

2.4 Goals and Motivations and Performance

An increasing number of scholars believe that the growth of a business is, at least in part, determined by the entrepreneur's motivation (Shane et al., 1991). Psychological motivations such as achievement, independence, and locus of control (pull factors) have received significant research attention to their influence on business start-up but less attention has been paid to their relationship to business performance (Brockhaus & Horwitz, 1986). Studies conducted by Storey (1994) and Glancey et al., (1998) found that women pulled into establishing their enterprises have more profitable and higher profit margin. According to Brush (1990) individual motivations and goals such as profitability, revenues and sales growth have been found to be related to performance in women owned businesses, albeit their tendency to perform less well than their male counterparts (Fisher et al., 1993). Researchers found that women typically are motivated by a more complex set of objectives for starting a business than male counterparts. Factors related to the desire to achieve flexibility between work and family lives are valued differently by the genders (Cinamon & Rich, 2002; Stephens & Felman, 1997).

2.5 Entrepreneurial Orientation and Performance

"Entrepreneurial" is often associated with venturesome or creative in terms of acquiring the resources an entrepreneur needs to build and grow her business. The entrepreneur is principally characterized by innovative behaviour and will employ in strategic management practices in the business (Birley, 1996). Entrepreneurial orientation such as innovativeness, and risk taking are the factors found to determine the success of a woman entrepreneur in her business. Innovativeness enables women entrepreneurs to venture into new things, that is, technology, products and market whereas risk taking is required if women are to venture into relatively large-scale businesses. Bernama (2006) reported that a Malaysian woman entrepreneur needs to have confidence, courage and strong will power to succeed in business, be efficient and able to produce goods and services of high quality, in steady supply and at competitive prices. This may apply to the Malaysian women entrepreneurs to become more creative in producing and promoting their products and services and as well as willing to take risks with confidence they had to compete with others. However, women view risk as loss, danger ruin and hurt and they do not see risk as affecting their future. In short, women tend to avoid risky actions and decisions compared with men (Henning & Jardim, 1977).

3. Research Methodology

Research methodology of this research deals with the major issues associated with this research describes research design, nature and sources of data, population and sampling framework, data collection tools, method of data analysis and methodological limitations of this study. It includes different dependent & independent variables, research questions and hypothesis etc.

3.1 Research Design

Descriptive approaches have been adopted mainly for describing the situation and conduct a survey of opinions. Based on the self administered questionnaire survey, this study attempts to assess the opinions and characteristics of women entrepreneurs of Thamel. The collected data are analyzed by using arithmetic mean, standard deviation, correlation etc.

3.2 Population and Sample

Under the study the total number of women entrepreneurs involved in business sector are the population, however this study is confined to investigate the case of women entrepreneurs in Thamel. Convenience sampling techniques is used to select women-owned businesses that could participate in this study.

3.3 Sources of Data and Data Collection

This study is based on primary data, which are collected by questionnaire tool from the women entrepreneurs. Five members of our team are involved in data collection for 2 days only. Questionnaires are collected on same day. A total of 52 (98% response rate) usable questionnaires are returned, which were subjected to further statistical analysis.

3.4 Data Analysis Tools

Data collected is statistically analyzed using STATISTICA (Stat Soft, 2009) and SPSS

(SPSS, 2009). Data from the questionnaires are coded, and investigated for its integrity, analyzed and presented in useful outputs, such as frequency tables. The frequency tables, pie charts, hypothesis test and correlation are used to draw conclusions and to make recommendations regarding the women entrepreneurs in Thamel area.

3.5 The Dependent Variables And Independent Variables

Nature of the business, number of women in business sector, family support, capital availability, risk bearing capacity, entrepreneurship, age, education are variables under study. The dependent variable are growth and nature of business. The independent variables are those, which are used as the basis of prediction and the dependent variable is the variable that is being predicted are: Women's age, qualification, ethnicity and women's inspiration like profit potentiality, extra income and social status.

4. Data Presentation and Analysis

4.1 Nature of Business

On the basis of product, our study found that there are five types of business which are Handicraft, Clothes, Curio, Others business and Tea and Coffee.

Table 1 : Nature of Business

Nature of Business	Frequency	Percent
Handicraft	14	26.90
Clothes	14	26.90
Curio	11	21.20
Others	7	13.50
Tea and Coffee	6	11.50
Total	52	100.00

The above frequency table shows that out of 52 respondents, 26.90 per cent representing 14 women are involved in Handicraft and Clothes business each, 21.60 per cent representing 11 women are involved in Curio business, 13.50 per cent representing 7 women are involved in other business (general stores, sweet shop, tailor and fruits shop) and 11.50 per cent representing 6 women are involved in Tea and coffee shop.

4.2 Nature of Business and Initial Capital Investment

It is found that tea and coffee business has the highest mean initial investment i.e.

Rs. 541666.67, curio business has lowest mean initial investment i.e. Rs. 215045.45 whereas overall mean of initial investment in different business is Rs. 327798.08. From this table we can also analyze standard deviation, minimum and maximum amount of initial investment. On the basis of initial capital investment the business in this area can be classified as very small, small and medium sized business.

Table 2 : Initial Investment

Nature of business	No.	Initial investment in nominal price (Rs.)			
		Mean	Std. Deviation	Minimum	Maximum
Handicraft	14	370000.00	256312.61	25000	1000000
Clothes	14	336071.43	502057.99	20000	2000000
Curio	11	215045.45	155029.10	5500	500000
Others	7	220714.29	348358.40	15000	1000000
Tea and coffee	6	541666.67	807128.66	40000	2000000
Overall Business	52	327798.08	417204.70	5500	2000000

It is known that Thamel is well known tourist area so that the further analysis we classified the above business in two categories. Handicraft and Curio business are categorized into Tourist items business and remaining business are categorized into Non tourist items business. The per cent of non tourist items business is 51.92 per cent and tourist items business is 48.08.

Table 3 : Category of business tourist and non tourist items

Business	Frequency	Percent
Non tourist items	27	51.92
Tourist item	25	48.08
Total	52	100.00

4.3 Hypothesis testing of business category on age group, qualification and ethnicity (Chi-square test at the 5% level of significance)

Broad age group (two categories designed up to 40 and over 40) and category of business (two categories designed tourist item and non-tourist items). The research hypothesis is – *there is an association between age group and category of business.*

Table 4 : Test of independence of age and category of business

Age	Category of business: Tourist item	Category of business: Non tourist item	Row Total
Up to 40	18 (46%)	21 (54%)	39 (100%)
Over 40	7 (54%)	6 (46%)	13 (100%)
Column total	25 (48%)	27 (52%)	52 (100%)

Note: Figures within parentheses are row total percent Chi-square value = 0.231 and p-value = 0.436

From the above analysis it shows that women of different age group have no impact on the selection of business category.

4.4 Test of hypothesis on education and category of business.

The research hypothesis– there is an association between education status and category of business.

Table 5 : Test of education status and category of business

Education status	Category of business: Tourist	Category of business: Non tourist	Row Total
Undergraduate	12 (36%)	21 (64%)	39 (100%)
Graduate	13 (68%)	6 (32%)	13 (100%)
Total	25 (48%)	27 (52%)	52 (100%)

Note: Figures within parentheses are row total percent
Chi-square value = 4.964 and p-value = 0.026

The above result shows that, according to education level, women entrepreneurs perceive their degree of involvement into the different types of business. So we can conclude that women's education status have significant impact on the selection of category of business.

4.5 Hypothesis test on Ethnicity and category of business are tested and analyzed to see the association between them.

The research hypothesis is– There is an association between ethnicity and category of business.

Table 6 : Test of independence of ethnicity status and category of business

	Category of business		Row
Ethnicity	Tourist	Non tourist	Total
Newar	22 (58%)	16 (42%)	38 (100%)
Others	3 (21%)	11 (79%)	14 (100.0)
Column total	25 (48%)	27 (52%)	52 (100%)

Note: Figures within parentheses are row total percent
Chi-square value = 5.450 and p-value = 0.020

The p-value is too small as compared to 0.05 there is sufficient evidence in the favor of research hypothesis. So we accept alternative hypothesis that means there is significant difference between ethnicity and category of business. It can be concluded that, there is majority of Newar customers and they want to prefer to purchase from newar entrepreneurs.

4.6 Motivational Factors for the Women Entrepreneurs

According to ranking table, 37 women entrepreneurs have chosen unemployment for most important (Rank 1) motivational factor, 27 women entrepreneurs who are motivated by extra income (Rank 2), 19 women entrepreneurs have chosen family tradition (Rank 3) is motivational factor to do their business. Similarly, 22 women entrepreneurs have chosen empowerment (Rank 4) is motivational factor to do their business and 20 women entrepreneurs have chosen social recognition (Rank 5) is motivational factor to do their business. Therefore, it can be presented that unemployment, extra income, family tradition, empowerment and social recognition factors are most important to least important factors for motivation for women entrepreneurship in Thamel area.

Table 7 : Motivational factors for women entrepreneurship

Motivational Factors	Ranking(1 for most & 5 for least Important)					Total	Mode Value
	1	2	3	4	5		
Unemployment	37	8	1	3	3	52	1
Extra Income	9	27	11	3	2	52	2
Family tradition	3	11	19	10	9	52	3
Empowerment	1	1	10	22	18	52	4
Social Recognition	2	5	11	14	20	52	5
	52	52	52	52	52		

4.7 Challenges Faced by Women Entrepreneurs

According to our study women entrepreneurs in Thamel area have faced different kinds of challenges which can be classified as financial and non financial challenges.

A. Financial Challenge

According to the study, 94 percent representing 49 women think that there is difficulties to get loan and only 6 percent representing 3 women entrepreneurs say that there is no difficulties to get loan for business. For further analysis we ask the women entrepreneurs what factors make them difficult to get the loan for business their views are presented in the table below.

Table 8 : Difficulties to get loan

	Frequency	Percent
High interest	29	55.80
Legal formalities	11	21.20
Lack of faith upon women	8	15.40
Lack of Financial Institution	1	1.90
No response(Missing)	3	5.80
Total	52	100.00

B. Non Financial Challenge

Main non financial challenges factors of women entrepreneurship around our study area are different according to the respondents. The table shows that 35 percent representing 18 women entrepreneurs, indicate that lack business skills, while 29 percent representing 15 women entrepreneurs say that pressure of childcare, 19 percent representing 10 women entrepreneurs perceive that lack of self-confidence and 17 percent representing 10 women entrepreneurs feel that socio-cultural environment are the challenges for their business.

Table 9 : Factors affecting women entrepreneurs

Factor	Frequency	Percentage
Lack of business skills	18	34.62
Pressure of childcare	15	28.85
Lack of self-confidence	10	19.23
Socio-cultural environment	9	17.31
Total	52	100.00

Family support towards the women business is quite significant, from frequency table, 28 out of 52 respondents think that they have got full support of business, which is 53.8 percent. Similarly 16 respondents think that they have gone through support of family which is 30.8 percent. From this finding we can conclude that there is "family business nexus".

Table 10 : Family support on business

Factor	Frequency	Percent
Full support	28	53.8
Support	16	30.8
No support	6	11.5
Least support	2	3.8
Total	52	100

There is positive correlation 0.688 between family support and society perception because that entrepreneur who is getting support and full family support, they are also positively perceived by the society. There are two different reasons behind this finding:-

First, they are keeping busy themselves into the productive sector. Secondly, they are generating extra income for their family. The two variables societies' perception and family support are tested and analyzed to see the association between them. The research hypothesis is – there is an association between society's perception and family support.

Table 11 : Societies Perception and Family Support Cross Tabulation

Societies Perception	Family support: No support	Support	Total
Unfavorable	6	3	9
	66.70%	33.30%	100.00%
Favorable	2	41	43
	4.70%	95.30%	100.00%
Total	8	44	52
	15.40%	84.60%	100.00%

Pearson Chi-Square 21.987 and P Value 0.000

The above analysis shows that there is strong relationship between society's perception and family support to women.

4.8 Satisfaction Level with Business

In the study satisfaction level is the other factors to measure business performance, the high level of satisfaction indicates the high performance of the business and dissatisfaction represents the low performance. The study shows that 63.5 percent representing 33 women entrepreneurs are satisfied, 25 percent representing 13 women are neither satisfied nor dissatisfied, while 11.5 percent representing 6 women are dissatisfied with their owned business.

5. Summary

5. 1. Conclusion

- Women entrepreneurs in Thamel area are motivated to start their own business by both and pull factors which are unemployment, extra income, family tradition, empowerment and social recognition.
- The result of this study found that the Handicraft and Clothes are equal priorities to establish their business than other business items.
- We find that Clothes, Tea and Coffee cost the maximum initial investment than other business of Thamel area.
- In this study we found that overall performance growth rate of business is quite satisfactory of the economy condition of our country.
- Most of the women entrepreneurs are involved in their own business so we conclude that there is no more contribution to create employment from their business.

- In this study we found that majority of (63%) are satisfied with their business. They acquire additional assets from their business.

5.2 Implications

After collection, analyzing and summarizing the data, the following recommendations are presented:

- Since there is no association between age and category of business, it is recommend that entrepreneur of any active age can run any category of business.
- It is strongly recommended to Newar ethnicity to run business in Thamel area because of the most the customers are from the same ethnicity.
- There is strong relationship between family support and society perception. Therefore, it is recommended that the family should support to enhance morale women entrepreneurs in the society.
- It is found that most of the entrepreneurs are lacking self confidence, risk taking ability and running in traditional way. Furthermore, their business income is used for household consumption expenditure so the growth of business is not satisfactory. It is strongly recommended that the business should be run and ongoing entity concept.

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Awareness on Breast Cancer Among the Adolescent Girls of Higher Secondary Level in Kathmandu

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ABSTRACT

The study entitled "Awareness on Breast Cancer among the Adolescents Girls of Higher Secondary Level" was based on Primary Data Collected from 200 respondents. Purposive sampling method was applied and structured questionnaires was used to collect the information. The main objective of the study was to assess the level of awareness on breast cancer among the adolescent girls students in Kathmandu.

In this study, higher secondary level girls students had little knowledge regarding breast cancer and its risk factors. Students were also not familiar with Breast Self-Examination (BSE). There is a need to increase knowledge of adolescent girls students about breast cancer and its risk factors. So that there is need to conduct formal and informal breast health awareness classes in higher secondary level. Health care professionals should develop effective breast health programs for adolescent girls and Curriculum planners should plan, modify and improve the appropriate curriculum and text books at higher secondary level.

Key words : Prevention, Screening, Mammography, Glandular Tissue, Diagnosis, Biopsy, Radiation Therapy, Breast Self-Examination.

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Background of the Study

Breast cancer is the most common cancer in women both in the developed and developing countries. The incidence of breast cancer is increasing in the developing countries due to increase of life expectancy, urbanization and adoption of western life styles. Although some risk reduction might be achieved with prevention of breast cancer that develop in low and middle-income countries where breast cancer is diagnosed in very late stage. Therefore early detection in order to improve breast cancer outcome and survival remains the cornerstone in breast cancer control (WHO, 2008).

Breast cancer is also common among women worldwide and many regions including Europe, Japan, Australia, USA, China, and India. It is still the most common cause of death of women (Barnard, 2003). Breast cancer in women has increased from 1 in 20 in 1960 to 1 in 8 today (about 12%). In 2008,WHO estimated 182, 400 new cases of invasive breast are expected to be diagnosed along with 67,770 new cases of non invasive breast cancer and about 40,480 women are expected to die in 2008 from breast cancer. For women in United States breast cancer death rates are higher than any other cancer besides lung cancer. Breast cancer is the most commonly diagnosed than skin cancer among the women (American Cancer Society, 2008).

The recommended early detection strategies for low and middle income countries are awareness of early signs and symptoms and screening by Clinical Breast Examination in demonstration areas. Mammography screening is very costly and is recommended for countries with good health infrastructure that can afford a long term programme. Many low and middle income countries that face the double burden of cervical and breast cancer need to implement combined cost effective and affordable interventions to tackle these high preventable diseases. Young women's cancers are generally more aggressive and results in lower survival rates. Making early diagnosis, treatment, prevention of diseases and promotion of self care attitude fostered early in life, may pay life long dividends. The adolescent period is the time of rapid change that provides teaching opportunities for shaping health behaviors into adulthood. For example, teaching breast self care may encourage positive behaviors such as performing breast self examination and seeking regular professional breast examination (Ludwick and Gaczkowshis, 2008).

Health behaviors such as BSE can help and empower women to take some controlled responsibility over their health promotion. For younger women, BSE education and adherence to gate way to health promotion behaviors which set the stage for adherence to clinical breast examination and mammography screening later in life (Rosenberg and levy-Schwartz 2003).

Breast cancer is a type of uncontrolled growth of abnormal cell that can develop in one of several areas of the breast including the ducts that carry milk to the nipple, the small sacs that produce milk (lobules) and the glandular tissue. Breast cancer is the mostly prevailed cancer in women, but it can also appear in men. There are two types of breast cancer- they are ductal and lobular carcinoma. Breast carcinoma may be invasive and non invasive. They have four stages-I, II, III and IV (Stephan, 2010).

Nepal is the landlocked country and geographically it is divided into High Mountain, middle hills and plain Tarai. In spite of having most of the health services and facilities, accessibility is the major difficulty because of communication, transportation and other problems. Nepal has population of 26494504 comprise of different races and tribes, living in different geographical areas (CBS, 2014). Nepal Government is involved in controlling the prevalent infectious disease in the country, but giving less priority to the breast cancer. Increasing number of cases of malignant diseases is coming to the hospital rather than in earlier stages because of lack of self-awareness about the early detection of the breast cancer. The exact number of cancer cases couldn't be predicted with certainty due to the absence of center registry in hospital. Nepal Cancer Relief Society (NCRS) estimated rough incidence i.e. about 40 to 50 thousands people suffer from malignant diseases and the incidence is rising every year (Nepal Cancer Relief Society, 2005).

Statement of the Problem

Breast cancer is the most common cancer in women worldwide, comprising 16 percent of all female cancers. It is estimated that 5, 19,000 women died in 2004 due to breast cancer and although breast cancer is thought to be disease of the developed world, a majority (69 percent) of all breast cancer death occurs in developing countries. Breast cancer in women has increased from 1 in 20 in 1960 to 1 in 8 today about 12 percent worldwide (WHO, 2008). Incidence rates vary greatly worldwide, with age standardized rates as high as 99.4 per 100,000 in North America, Eastern Europe, South America, South Africa and western Asia have moderate incidence rates but these are increasing. The lowest incidence rates are found in most African countries but here breast cancer incidence rates are also increasing.

Nepal is a developing country and the government is involved in controlling the prevalent infectious diseases in the country, but is giving less priority to the breast cancer. It is second most common cancer in women. Increasing number of malignant disease is coming to the hospital rather than in earlier stages because of lack of self awareness about early detection of the breast cancer. In Nepal the impact on the diagnosis, treatment and prognosis of breast cancer includes the cultural impact on women's role, low women empowerment, education and lack of cancer screening and prevention programme. The exact number of breast cancer cases could not be predicted with certainty due to the absence of center registry in hospital. Nepal Cancer Relief Society, 2005, estimated rough incidence i.e. about 50 to 60 thousand people are suffering from malignant diseases with prevalence of 2.3 to 2.8 per 100,000 populations.

Younger women's cancers are generally more aggressive and result in lower survival rate. The adolescence period is the time of rapid change and growth. If they don't get chance of learning opportunities for shaping health behaviors into adulthood, that may harm their adulthood life and there is a big problem of early detection, diagnosis, prevention, treatment and rehabilitation of breast cancer. The education level of higher secondary is foundation for adolescent girls. If they don't get chance of learning opportunities about breast cancer awareness in this stage, they will face more problems of their breast in future life.

Objective of the Study

The main objective of the study was to asses the level of awareness on breast cancer among the adolescent girls of higher secondary level.

Methodological Consideration

This study was completely based on descriptive as well as quantitative method. The primary information were collected from higher secondary level adolescence girls in Janamaitri Multiple Campus Kuleshwar, Kathmandu. The researcher selected only 200 sample girls student including of 100 girls from class XI and 100 girls from class XII by using purposive sampling method among the total students.

In this study, information were collected with the help of questionnaire. The questionnaire was on structured form which was divided into different headings as per need of the objectives. The filled up questionnaire were collected by the researcher and then rechecked, verified, analyzed and interpreted manually for analysis and derive.

Result and Discussion

Awareness/Knowledge Level of Respondents on Breast Cancer

Breast cancer awareness is necessary for every woman. There is no need to remove breast in all women who were aware of breast cancer. It is very important for proper diagnosis, staging and treatment to achieve long-term control. It also helps to create awareness in women about life style changes that could actually decrease the incidence of breast cancer. Knowledge/awareness level of respondents is discussed in the following tables and topics.

Source of Knowledge on Breast Cancer

Distribution of respondents according to expose media is shown in the following table.

Table 1 : Distribution of Respondents According to Sources of Knowledge

Description	Number	Percentage
Heard about Breast Cancer		
Yes	170	85
No	30	15
If Yes, Source of Information		
School	52	26
Book/Magazine	25	12.5
T.V./Radio	80	40
Internet	4	2
Friends	9	4.5
Not Exposed	30	15

Above Table indicates that distribution of respondent's knowledge/awareness on breast cancer. A total of 85 percent of respondents heard about breast cancer and only 15 percent did not heard about breast cancer. Among 200 respondents, 40 percent of respondents obtained information about breast cancer from TV/Radio, 12.5 percent from books/magazine and 15 percent did not expose to any media.

It is concluded that 85 percent of respondents heard about breast cancer. The effective source of information of respondents was TV/Radio.

Distribution of Respondents According to their Knowledge/ Awareness Level

Distribution of respondents according to their Knowledge/ Awareness level is shown in the following table.

Table 2 : Distribution of Respondents According to their Knowledge/ Awareness Level on BSE

Knowledge on Breast Cancer	Number	Percentage
Knowledge of BSE		
Yes	12	6
No	164	82
Don't Know	24	12
BSE Performance		
Yes	4	2
No	174	87
Don't Know	22	11
Need of Breast Cancer Awareness Classes at Higher Secondary Level at School		
Yes	190	95
No	5	2.5
Don't Know	5	2.5
Knowledge about Hospitals/Institutions that Provides Cancer Services		
Yes	46	23
No	140	70
Don't Know	14	7
Knowledge on Mammography		
Yes	19	9.5
No	150	75
Don't Know	31	12.5
Knowledge on Biopsy of the Breast Cells		
Yes	36	18
No	112	56
Don't Know	5	25

Above Table indicates the distribution of respondents according to their knowledge/ awareness level on breast cancer. Out of total respondents only 6 percent had knowledge about Breast Self Examination (BSE), 12 percent of respondents did not have knowledge about Breast Self Examination and majority of respondents 82 percent stated that they did not know about it.

Only 2 percent of respondent performed BSE, 87 percent did not perform BSE, 11 percent stated that they did not know. A total of 95 of respondents felt need about breast cancer awareness classes at higher secondary level school but 2.5 percent of respondents did not feel need of breast cancer awareness classes and similarly 2.5 percent stated that they did not know. 23 percent of respondents stated that they had knowledge about hospitals/institutions that provide cancer services, 70 percent did not have knowledge about those hospital/institutions and only 7 percent stated that they did not know it

Among 200 respondents, 9.5 percent had knowledge about mammography, 75 percent did not have knowledge about mammography and 15.5 percent stated that they did not know about it. Similarly 18 percent had knowledge about biopsy of breast cells, 56 percent did not have knowledge about biopsy of breast cells. 25 percent of respondents stated that they did not know about it.

It is concluded that majority of respondents had poor knowledge level (<40%) about breast cancer. Majority of respondents do not know about BSE and how to perform on self and 70 percent of respondents did not have information of hospital/institution that provide services related to breast cancer. Thus, it proves that awareness of breast cancer is needed to reduce risk of breast cancer among respondents. If they had been aware of it, it would prevent chance of untimely death from breast cancer.

Awareness of Respondents on Risk Factors of Breast Cancer

Awareness of risk factors for breast cancer by promoting healthy diet, physical activities and control of alcohol intake, overweight and obesity could eventually have an impact in reducing the incidence of breast cancer in long-term. So that researcher assessed the knowledge/awareness of risk factors for breast cancer. Distributions of awareness/ knowledge level of respondents on risk factors for breast cancer are shown in the following tables.

Distribution of Girls by their Awareness of Risk Factors on Breast Cancer

Distribution of respondents according to their awareness of risk factors for Breast Cancer is shown in the following table.

Table 3 : Distribution of Respondents According to their Awareness of Risk Factors for Breast Cancer

Risk Factors for Breast Cancer	Number	Percentage
Family history of breast cancer		
Yes	3	1.5
No	174	87
Don't Know	23	11.5
Personal history of breast cancer		
Yes	-	-
No	185	92.5
Don't Know	15	7.5
Menstruating before the age of 12		
Yes	8	4
No	192	96
Environmental pollution, dust, waste products, chemical mixed foods and pesticides for crops may increase risk for breast cancer		
Yes	65	32.5
No	33	16.5
Don't Know	102	51.5
High dose radiation therapy to chest		
Yes	31	15.5
No	110	55
Don’t' Know	59	29.5
Recurrent abortion and prolonged use of hormonal contraceptive		
Yes	62	31
No	40	20
Don't Know	98	49

Above table indicates that distribution of respondents according to their awareness of risk factors for breast cancer. Among 200 respondents, 1.5 percent had family history of breast cancer with mother or grandmother, majority of respondents (87 percent) did not have family history of breast cancer and 11.5 percent of respondents stated that they did not know about it. Almost of respondents (92.5 percent) did not have personal history of breast cancer and 7.5 percent stated that they did not know. Small numbers (4 percent) of respondents were menstruated before age of 12 year and a total of 96 percent of respondents did not menstruated before the age of 12 year.

Among 200 respondents, 32.5 percent of respondents gave correct response about environmental pollution, dust, waste products, chemical foods addiction and use of the pesticides for crops, 16.5 percent gave incorrect response and 51 percent stated that they did not know. Out of total respondents, 15 percent of respondents stated that they had knowledge about radiation therapy to chest, More than half (55 percent) did not have knowledge about this and 19.5 percent of respondents stated that they did not know it. About one third (31 percent) of respondents stated that they had knowledge about recurrent abortion and prolong use of hormonal contraceptive increases the risk of breast cancer, 20 percent of respondents did not have knowledge about those matters and 49 percent of respondents answered that they did not know it.

It can be concluded that majority of respondents did not have family and personal history of breast cancer and they did not have menstruation before 12 of age. Most of the respondents had little knowledge about risk factors of breast cancer. Thus it proves that, if they did not have knowledge on risk factors for breast cancer ,they are not aware about breast cancer as well.

Conclusion

The results of the study showed that higher proportion of respondents heard about breast cancer but they did not have knowledge and did not perform Breast Self Examination. Almost of respondents felt need of breast cancer awareness classes at higher secondary level at school. More than half of the respondents did not have knowledge about hospital and institutions that provide cancer service, mammography and biopsy of breast cells. They were not familiar with radiation therapy, pesticides and prolonged hormonal contraceptive users as probable cancer receptor.

The majority of respondents did not have knowledge on breast cancer and its risk factors and they did not practice breast self examination because of the lack of knowledge, lack of sufficient educational programs for breast cancer awareness, even they did not know how to perform breast self-examination, they did not expect to get breast cancer in adolescent period and they did not have close relative with breast cancer, and did not have family history of breast cancer. Average knowledge level of respondents was below 37 percent on breast cancer and 35 percent were on risk factors for breast cancer.

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Party Politics in Broadsheet Dailies: A Comparison Between Public and Private Press

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ABSTRACT

This study has analysed the coverage of Federal and Provincial Parliamentary election in Nepal in 2017 which was held in two phases in November and December. Through content analysis, this study found that although the number of stories and space given to the either alliance, Democratic or Left, was by and large equal, prominence was given to the Nepali Congress. The government press covered more stories of the ruling party Nepali Congress and its alliance partners, and gave more prominence with front page coverage as compared to the Left alliance. The press did not maintain its neutrality during the election campaign and favoured the large electoral alliances but offered very less or no space to the fringe parties and independent candidates.

Key words : Election, public and private press, political parties, press neutrality.

Introduction

Democracy is considered as the best governance system so far put into practice while election is known as the lifeline of democracy. Therefore, elections are eagerly awaited, cherished, promoted and highlighted in all democracies. Elections are widely seen as an important tool for bringing about peaceful changes in any society. According to Ali (2011), in societies facing conflict, they become even more crucial, as they can lead to the resolution or escalation of conflict. It was even more important for Nepal as people

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were electing leaders who will not only implement the new constitution formulated by spending about a decade's time and lots of resources but also institutionalize the federal system in the country. In eight months period, the country witnessed polls for three levels of government – Federal, Provincial and Local – organized in multiple phases.

The local polls were organized in three phases in May, July and September while the provincial and federal elections were organized in two phases in November and December 2017. The elections were supposed to push the country in the path of political stability which was a wish for a country that has been witnessing a new government in every 9-10 months. Political instability had severe repercussion on development, investment, employment, and peace and security.

A surprise move from the two largest left parties, Communist Party of Nepal (Unified Marxist and Leninist) - CPN-UML and Communist Party of Nepal (Maoist Centre) – CPN-MC, to create an alliance for the elections of the House of Representatives and Provincial Assemblies forced the Nepali Congress, Madhesh-based parties and other political forces also to form an alliance. So, except in Province 2, the election was fought between the two major forces of Nepali politics: Left and Democratic Alliances.

First phase of Federal Parliament and Provincial Assembly polls were held in 32 districts on 26 November 2017. There were 37 electoral constituencies for the House of Representatives (Federal Parliament) and 74 constituencies for the Provincial Assemblies. There were 3.19 million voters in 32 districts, and more than 65 per cent votes were cast (Yadav, 2017a).

Similarly, second phase of elections were organized in 45 districts on 7 December 2017.There were 128 electoral constituencies for the House of Representatives and 256 constituencies for the Provincial Assemblies. According to Yadav (2017b), there were 12.2 million voters in 45 districts and more than 67 per cent votes were cast.

Nepal witnessed a tremendous growth in media following the implementation of liberal policy in the early 1990s. As the democratic government deregulated the media sector along with other businesses, there was an unparalleled media development. As per the recent statistics of the Ministry of Information and Communication (MoIC), the government has issued licenses to 831 FM radio stations, of which 620 are in operation. About 32 television channels are in operation while 118 TV channels have obtained broadcast permission (Personal communication with YagyaOjha, MoIC Officer, on January 22, 2018). Similarly, 853 cable transmission companies, 7 digital cable, 4 IP (Internet Protocol) TV and 8 satellite radio are in operation.

Likewise, the Department of Information (DoI) statistics (2017) show that approximately

7,528 newspapers and magazines have been registered in the country with 30 million people. Of them, 188 daily newspapers, 4 half-weeklies, 500 weeklies, 17 fortnightlies, 87 monthlies, 18 bi-monthlies and 54 literary magazines are in regular publication. Online media have mushroomed in Nepal in the last couple of years. About 693 online news portals are registered with the DoI (2018).

The media are essential to democracy, and a democratic election is impossible without media (Ace Electoral Knowledge Network, 2012). Due to its watchdog role and public responsibility, media plays an important role in informing and educating the public about the election process, voting activities, schedules and election campaigns of the political parties.

> *A free and fair election is not only about the freedom to vote and the knowledge of how to cast a vote, but also about a participatory process where voters engage in public debate and have adequate information about parties, policies, candidates and the election process itself in order to make informed choices (AEKN, 2012).*

Media perform crucial role in creating linkage between the candidates and voters, informing about the issues in the election manifesto of the political parties, supporting the election management bodies in educating the public about voting behaviour, and making higher voters turn out. According to AEKN (2012), media can have multiple contributions to election – as a watchdog, civic educator, campaign platform and public voice, analyst and interpreter. Similarly, the elections could be less transparent and free in absence of critical media which is possible only in a democratic society. Nepal has a thriving democracy with 79 political parties registered with the Election Commission of Nepal (2017).

Literature Review

Newspapers are one of the primary sources of information for public, and they have power to influence people's thinking and set an agenda. Because of their format and archival value, Newspapers can be read, re-read and stored for the future use. Most of the people believe those issues important which are carried prominently in the media (McCombs & Shaw, 1972). By including or omitting as well as priming or sub-priming, media tells people that certain people and issues have more importance than the other and thus have impact on people's political thinking and behaviour during election campaign and the polls day.

McCombs and Shaw (1972) concluded that in choosing and displaying news, editors, newsroom staff, and broadcasters play an important part in shaping political reality. It is important to note that the newspapers stories are not only published in print formats but they are also posted online on the website of the respective newspapers, and shared through various social media platforms such as Facebook, and Twitter. Readers learn not only about given issue, but also how much importance to attach to that issue from the amount of information in a news story and its position.

Democracy is all about the participation of people in various political activities, ranging from participating in choosing their representative, political activities and decision making processes. Civil participation makes democracy a best political system. Weaver (1996) says that the role of the media in the political process is one of the most important as it can increase civil participation in every democratic society. However, after studying the voting behaviour of 3,374 households in Virginia of the United States in 2005 and 2006, Gerber, Karlan& Bergan (2009) concluded that informational effect of more exposure to news was stronger than the effect of its slant. It means that whether the news covered by the media favoured a certain political party or not, it will definitely supports in the publicity of that party because people think that the issues and personalities, and even the political parties, which were given higher coverage by the media are more important and powerful.

Various studies, such as Data Face Study (Sides, 2016), found that although the extent may vary, media become biased during election campaign. In an interview for the Washington Post with Sides, Data Face chiefs said that they found that all of the media outlets that they considered 'liberal' treated Hilary Clinton more favourably during the Presidential Elections in the United States. The more conservative outlet seemed more on the fence about Donald Trump.

Dennis and Merill (1996) say, notice who is quoted, what quotes are selected for use, what pictures are used, and so on. It is not too difficult for a reader to tell which is the liberal and which is conservative paper. If one is to believe their view, people do know about the nature of media therefore might not be influenced by the newspaper coverage about the political parties. But, in any case biasedness of media is not good for the health of media itself.

Biased media has can have negative impact on the political public sphere. According to Kharel (2017), partisan press with flagrant biases can vitiate the atmosphere through deliberate miscommunication. […] Since most journalists in Nepal are affiliated to political parties, chances of deliberate slants in news are considerable. His conclusion is valid since thousands of journalists are affiliated to journalists group like Press Union, Press Chautari and Press Centre -sister organisations of major political parties Nepali Congress, CPN-UML and CPN-MC respectively.

Therefore, this study tries to look into the practice of election coverage in the broadsheet dailies run by the government and private media houses. Though this study does not aim at labelling any newspaper as liberal and conservative as in the USA, it will try to find out if the dailies included in the study favoured any political party.

Scholars like Wolf (2015) say that when media play a crucial role in political movements, it becomes partisan and politicized. This is true in case of Nepal, too. A study on the role of local FM radio in opinion formation towards the democracy during the political movement has found that the FM radios had a visible 'liberal bias' and took the side to democratic political parties during the April Movement 2006 in Nepal (Dhakal, 2012).

Newspapers in South Korea are quite politically biased and express their political opinion directly or indirectly through various types of stories (Kim, 2012). He cites example that the major conservative papers focused more on the negative aspects of the ruling party's campaign, especially in comparison with that of the opposition party, during the 2007 presidential election period.

Similarly, a study on the United Kingdom general election campaign 2017 conducted by the Centre for Research in Communication and Culture at the Loughborough University (2017) found that the two major political parties Conservative and Labour commanded 71 per cent of the appearances on television and 85 per cent in the press in coverage while many fringe parties just got 15 per cent space in newspapers.

The scenario is not much different in Nepal. Media here also give more time and space to the large political parties and their leaders. Media monitoring of the 2008 Constituent Assembly Polls in Nepal had concluded that of the 54 political parties contesting the election, only a few of them got the most of the air and print space. Most news media gave prominent total time and space coverage to the Nepali Congress (NC), followed by the Communist Party of Nepal - Unified Marxist Leninist (CPN-UML) and the Communist Party of Nepal (Maoist) (Adhikari and Pokharel, 2008). The three largest parties collectively got about three quarters of the total time and space in coverage. The media monitoring found that the NC and UML earned the largest total time and space coverage in the government media.

The media monitoring of the 2008 CA elections in Nepal also found that the private media gave more quality time to the NC and UML whereas CPN (Maoist), now CPN-MC, earned more quality time in government media which was controlled by that party. Women and minority candidates rarely figured in coverage (Adhikari, 2010).

Another media monitoring during the CA elections in 2013 showed that there was no improvements in the media coverage. The monitoring conducted by the Nepal Press Institute for the Election Commission, Nepal revealed that the media demonstrated bias in their coverage of the elections favouring the four main parties – NC, CPN-UML, CPN-Maoist and RPP-Nepal (2013, p. 156). The monitoring found that the print media was positive to the NC in 220 news stories, UML in 188 stories and Maoists in 36 stories (p. 150). The report mentioned that the trend was evident in all of the media monitored, but was more pronounced in the state controlled media where the imbalance in covering was overwhelming. The report concluded that the media, therefore, failed to serve democracy and it has failed to reach international standards that have been developed to ensure that the media cover elections according to democratic and transparent principles (Election Commission, 2013).

But, none of the studies made a comparison between the public and private media. As the government-run media operate with the public money, they are supposed to be more neutral and give due space and airing time to all the political parties and candidates. But the past studies of the election coverage have missed the point to make a comparison between the government and private media.

Hence, although there have been many studies in this area around the globe, there are very less study in Nepal. Some of the studies of the coverage of election campaigns are carried out by various International Non-Governmental Organizations but they have not compared the government and private media as the present study has done. Therefore, this study has created new knowledge and results that can be applied by Nepali media to improve their news coverage during elections, particularly the print media as it has tried to find out whether the media were biased and need improvements.

Research Questions

- Which political party or alliance got higher coverage in the public and private newspapers?
- Have the major dailies maintained the neutrality during the election campaign?
- Has there been any differences in terms of maintaining political neutrality between the public and private newspapers during the election campaigns?

Objectives of the Study

This study aims at finding out the extent of space given to the two major election alliances and small parties during the parliamentary elections in 2017 in Nepal by the government and private dailies. It's main objective is to find out if the government and private media had a political inclination or priorities during the election campaign. Objectivity or neutrality is the fundamental principle of journalism so the study will try to find out the neutrality maintained by the government and private media in covering the election-related news. Additionally, it will also look into the type of items carried out by the newspapers.

Research Design and Methodology

This study adopted content analysis, a quantitative research method used to describe media content. According to Walizer and Wienir (1978), it is a systematic procedure devised to examine the content of recorded information.

As per the study objectives of describing the coverage given to the political parties by the government and private newspapers, issues of Gorkhapatra, The Rising Nepal, Kantipur and The Kathmandu Post dailies were observed from 17 to 23 November 2017 (1 to 7 Mangsir 2074) –before the first phase of elections and 28 November to 4 December 2017 (12 to 18 Mangsir 2074) –before the second phase of elections. Gorkhapatra and The Rising Nepal are the only newspapers published by the government owned media house while Kantipur and The Kathmandu Post were selected as the representatives of private media due to their popularity and circulation. As there is no Audit Bureau of Circulation (ABC) in the country, the private sector newspapers were selected on the basis of their popularity. Therefore, the study applied purposive sampling method while selecting the newspapers.

The periods were chosen because it was the final phase of election campaigning during the both phases of polls. Therefore, altogether 14 issues of each newspaper and 56 issues of all newspapers were included in the study. Content of all pages of the four dailies were recorded and analysed except editorial, op-ed, sports, entertainment, economy pages as well as language special pages in Gorkhapatra daily. A coding sheet was designed and data was recorded in the sheet and analysed using the Microsoft Excel.

News were categorised as Left Alliance, Democratic Alliance, Madheshi Parties and other Fringe Parties. News on Communist Party of Nepal – Unified Marxist and Leninist (CPN-UML) and Communist Party of Nepal – Maoist Centre (CPN-MC) were marked as Left Alliance while news on Nepali Congress (NC), Rastriya Prajatantra Party (RPP) and Naya Shakti Party Nepal (NSPN) were marked as Democratic Alliance while other parties were coded under Fringe Parties. Space of the news that talked about only one party was measured to find out the total space given to a certain political parties. Every news having information on more than one parties and election-related violence were marked as neutral. The collected date is analysed on two dimensions – total and front page coverage.

Gorkhapatra and The Rising Nepal are the oldest newspaper and first English daily in the country respectively. Similarly, Kantipur is assumed as the largest selling daily in the country while The Kathmandu Post is also widely read.

Limitations of the Study

Every medium, newspaper, television, radio and online, covered the election campaign through various items such as news, interview, photo, feature, vox-pop and cartoon. But, this study is limited to the print media and includes only four newspapers. Although the four newspapers are widely circulated and read and represent the public and private media as well as vernacular Nepali and English, the sample size is small against about 188 daily newspapers. Published materials are calculated under the category of type of item, page, support items, columns, size and political party. Size of the items is calculated under the categories of Democratic Alliance, Left Alliance and other parties, and all the news that include more than one alliance or parties and deals with election process and election-violence, has been counted under 'neutral' category.

Newspapers included in the study are published from the Kathmandu Valley thus limiting the study to the capital city. Similarly, it has covered the time-span of only two weeks – one week during the campaign of each of the two phase elections. This study hasn't studied the coverage during the normal times.

This study aims at presenting the details of coverage given to the political parties, and does not try to find the reasons behind providing more or less space to any political party.

Data Analysis and Findings

This study observed total of 14 issues of a newspaper and 56 issues of four dailies and analysed 1034 items including news, feature, photo, cartoon and interview. The number of news items was increased during the second phase polls as compared to the first phase, it reached to 573 from 461. Elections were conducted in 32 districts in the first phase and 45 districts in the second phase. It should also be noted that the 32 districts, were the polls were held in the first phase, are the hill and mountain districts and there were only 3.19 million voters while the number of district where the elections were held was 45 and voters were 12.2 million. Although more districts and a large number of population could be the reasons behind the increased coverage of second phase elections, the coverage does not justifies the size of voters and news coverage. Perhaps, the media don't plan well while covering any event or issue or don't consider the magnitude of the event.

A cursory look on the data demands three folds coverage during the second phase elections as the number of voters is about three-time higher but the news coverage is just about 24 per cent higher while the front page coverage is up by just 15 per cent. It clearly tells that the media coverage is not as per the size of the population, or voters. Quite contrary, Kantipur carried less news items during the second phase, 135 stories, than the first phase, 140 stories.

Gorkhapatra published the highest number of stories both the times. During the first phase 195 election related items were published in Gorkhapatra, and 291 items were published in a week during the second phase while both the English dailies carried astonishingly fewer stories as compared to the vernaculars - Gorkhapatra and Kantipur. The Rising Nepal had 70 and 81 election related items in the first and second phase respectively while The Kathmandu Post had the lowest number of news items, only 56 and 66 stories respectively.

The news and other items published in Gorkhapatra and The Rising Nepal were shorter and without photograph, illustration and other decorative items as compared to Kantipur and The Kathmandu Post. About half of the items in the government-run newspapers were single or double column while the private newspapers had news items or photos spread across more than three columns, and they used lots of photos, photo features, screen and illustrations. For example during the second phase campaign, 41 and 52 stories in Gorkhaptra were single and double column respectively while Kantipur carried out only 12 and 25 single and double column news stories. Gorkhapatra carried up to 39 election related news in a day while Kantipur published up to 20 news. Thus the private newspapers were more attractive and readable. Similarly, the private media was better in terms of varieties of items as it frequently carried feature news, photo stories, interviews and cartoons but the government media had occasional use of photo and feature news. There were no photo stories in Gorkhapatra and The Rising Nepal.

The category-wise analysis of the news published during the elections campaigning period in the first and second phase parliamentary polls in 2017 shows that the four newspapers published 1034 election related news, photo and other content of which exactly two-third were neutral. News on the ECN, election process, election-related violence, security mobilization, and news that included information of more than one political parties were recorded as 'neutral'. The overall calculation shows that about 16 per cent news in the four newspapers were related to the Democratic Alliance and 15 per cent were exclusively related to the Left Alliance. A single political party or related alliance partners were only quoted or presented in those news items therefore, it can be said that media, although slightly, favoured the NC-led Democratic Alliance.

Another astonishing fact found by the study was the exactly same space given to the Democratic and Left alliance. In the study period of the 14 days the Democratic and Left got the space of 3,561 square inches and 3,542 sq. inches respectively. This is the amount of space given to the stories that talked about only one of the alliances. Such news items just gave the details of the election related activities of a single alliance such as a public speech by their leader or a rally. This finding might create confusion that the newspapers included in the study were tremendously balanced in terms of political coverage during election period. But, if seen from the perspective of the 'balance principle' of journalism, the one sided stories are not considered as the good practice. Specially, during the time of elections, people need balanced information to make informed decision making. Publishing one-sided news and other journalistic items may influence the common people and affect their political and voting behaviour. This situation is more or less related to McCombs and Shaw (1972) that the media play an important part in shaping reality. Similarly, higher exposure to certain news or information causes more impact on readers than the effect or slant (Gerber, Karlan& Bergan, 2009). Therefore, having story on any particular party, unless there is a valid and strong reason to do so, is being unbalanced and biased, specially during the election campaigns.

Gorkhapatra carried a total of 486 election items of which only 305 stories, 63 per cent were neutral, 17 per cent were on Democrats and 18 per cent were on the Left. But the number of stories on the Left was higher than the Democrats, 90 and 82 respectively. It can be interpreted both the ways that the newspaper favoured the Left Alliance or the stories on the Left were portrayed less prominently. But, the space provided to the Democrats and Left is almost equal, they get 1940 sq. inches and 2000 sq. inches space respectively. From the space perspective Gorkhapatra is completely balanced. The private vernacular daily Kantipur carried 275 stories on election of which 85 per cent were neutral, 18 on the Democrats and 22 on the Left. It gave 671 sq. inches and 600 sq. inches to the Democratic and Left alliance respectively.

The English dailies, The Rising Nepal and The Kathmandu Post carried 151 and 122 items on election in two phases. In terms of neutrality, The Rising Nepal performed very poorly with only 45 per cent 'neutral' stories, and it gave more space to the Democrats, 659 sq. inches with 52 stories, than the Left, 600 sq. inches with 27 stories. The Kathmandu Post had 69 per cent neutral stories, 12 per cent items were on Democrats and 11.5 per cent on the Left while 7.5 per cent stories were about the fringe parties, including Madhes-based parties, Naya Shakti Nepal, Rastriya Prajatantra Party, Bibeksheel Sajha Party and Independent candidates.

An astonishing fact was found by the analysis of the collected data that the small parties were not visible in the newspapers. Only 24 news, slightly more than 2 per cent, were about the fringe parties. The Kathmandu Post had given the highest space to the fringe parties with 9 stories, 7.5 per cent of the total while Gorkhapatra, The Rising Nepal and Kantipur carried 9 stories (2 per cent), 4 (2.5 per cent) and 2 (0.7 per cent) stories about them. Although, some of the small parties that have prominent national leaders such as the Bibeksheel Sajha Party, Naya Shakti Party, Janata Party, Federal Socialist Party and Rastriya Prajatantra Party got a bit of coverage in the 'neutral' stories in Kantipur and The Kathmandu Post, other parties were not visible in the media. Thus in terms of giving coverage to the small political parties, Kantpur daily performed very poorly.

These findings have supported the British study of media coverage by the Centre for Research in Communication and Culture at the Loughborough University (2017) which found that two major political parties in the country got 71 per cent television time and 85 per cent newspaper space in 2017 general election campaign.

There was a huge difference in the space given to both the alliances in the first and second phase of elections. In the first phase, except The Kathmandu Post, all other three newspapers gave more space to the Democrats against the Left – Gorkhapatra 862 sq. inches and 240 sq. inches respectively, Kantipur 261 sq. inches and 102 sq. inches respectively, and The Rising Nepal 299 sq. inches and 168 sq. inches respectively. But in the second phase, except the Rising Nepal, all other newspapers allotted more space to the Left Alliance than the Democratic Alliance – Gorkhapatra 1857 sq. inches and 1079 sq. inches respectively, Kantipur 498 sq. inches and 410 sq. inches respectively, and The Kathmandu Post 231 sq. inches and 182 sq. inches resepectively. This study couldn't make any inference regarding this disparity or change in coverage of the political parties. But, it's clear that the even in their favouritism, the newspapers lacked consistency.

Another surprising fact is derived from the analysis of the front page coverage of the four broadsheets included in the study. The total news coverage and front page coverage of the newspapers is drastically different. Although, they appeared more or less neutral in terms of total coverage of election news, the first page data tells a different story. All the newspapers favoured the Democratic Alliance, primarily Nepali Congress, in their news coverage on the front page.

Of the 151 news that saw the front page coverage in the four dailies, 58.5 per cent were 'neutral', and 22.5 per cent and 17 per cent were about the Democrats and Left respectively. Gorkhapatra offered 672 sq. inches space to the Democratic Alliance while about half of it, 372 sq. inches, was given to the Left. The rising Nepal provided only 200 sq. inches space to the Left against 474 sq. inches of the Democrats. Likewise, Kantipur gave 236 sq. inches and 164 inches to the Democrats and the Left respectively. In total, the Democratic Alliance received 1382 sq. inches space against 736 sq. inches of the Left.

As the front page is considered as the face of the newspapers and shows the preference of the editorial policy of the respective publishing house, the broadsheets included in the study can be said biased and unbalanced except The Kathmandu Post which didn't carry a single story on any individual party, rather published neutral stories on the front page. However, the government media were more biased towards the Left and gave almost double the space to the Democrats, who were the ruling parties. The government press has explicitly shown its loyalty to the government, the ultimate owner of the newspapers. It is interesting that the previous media monitoring reports had also found that the government media had given priority and coverage to the ruling parties during the election campaigns (Adhikari, 2010).

There was no news coverage of the small parties on the front page, except a story on independent candidate in the Kathmandu Post.

Conclusion

After the analysis of the 14-day content of four major dailies – Gorkapatra, Kantipur, The Rising Nepal and The Kathmandu Post – on the Federal and Provincial parliament election in Nepal in 2017, this study concludes that the both the government and private newspapers were biased to some extent, except The Kathmandu Post that was completely unbiased to any alliance in its front page coverage. The government-run media massively favoured the Democratic Alliance, specially the Nepali Congress, in its front page coverage, and the private-run Kantipur daily was also more inclined to the Democrats.

In terms total coverage, all the newspapers were biased and carried many stories on a single party or alliance, and the Democratic Alliance got slightly higher coverage during the election campaign. Thus the press did not maintain its neutrality during the election campaign and favoured the large electoral alliances but offered very less or no space to the fringe parties and independent candidates. The media has not been improved since the first Constituent Assembly Elections in 2008 and still printing the news that are exclusively on single political parties.

In terms of maintaining political neutrality, the private media was better than the government-run broadsheets, The Rising Nepal performed the worst and The

Kathmandu Post performed the best in comparison to the other three newspapers. The government media as in the past gave more space to the ruling political party – Nepali Congress.

There were discrepancies even the publications of a single house such as Gorkhapatra was more balanced than its sister publication, and The Kathmandu Post was better against Kantipur, another publication of the same company. Therefore, it can be said that regardless of the ownership and nature of the media company, all the publications of the same publication do not adhere to the same editorial policy.

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A Comparison on Physical Fitness of Indigenous and Non-Indigenous Students

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ABSTRACT

*This study entitled "A **Compurison on Physical Fitness of Indigenous and Non-Indigenous Students**", was carried out to find out the physical fitness of indigenous and non-indigenous students and to compare the level of physical fitness between them. The necessary information was taken from ten secondary schools' students. Altogether, there were two hundred respondents from different ten schools. The major source of data was primary. The researcher used ready-made tools made by AAHPER. The research was fundamentally based on descriptive type. The researcher compared each test separately. The indigenous students were found significantly better in arms strength and leg power than the non-indigenous students. Non-indigenous students were found better in speed, but in other five components, indigenous students were found better than non-indigenous students.*

Key words : Physical fitness, Physical activities, speed, endurance, strength, motor skills, agility.

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Introduction

Physical fitness is necessity for everyone regardless of race, culture, or sex in order to live a healthy life. In order to achieve the objectives of physical education, one must be able to perform daily tasks vigorously while avoiding diseases related to a lack of activity. There are many benefits of fitness related activities or meditation, yoga, physical exercise and sport activity for keeping endurance, good figure, muscular strength, and flexibility. Some mental benefits include positive attitude, high self-esteem, and the production of endorphins which act as a natural painkiller.

In the context of Nepal, there are more than 100 ethnic groups (Aadibasi Janajati Utthan Rastriya Prastisthan, 2058 BS). Those ethnic groups have two major sub groups such as indigenous and non-indigenous groups. Indigenous Nationalities means a tribe or community as mentioned in the schedule having its own mother language and traditional rituals and customs. The Nepalese janajati or indigenous groups are spread out almost in every part of the country (Adibasi Janajati Utthan Rastriya Prastisthan, 2058 BS). According to the race it is seen that people have different physical size, quality and capacity, social behavior, cultural values, traditions and occupations.

In the case of history of sports and physical activities in Nepal, almost all games were imported through the students who went to abroad for study, teachers to get training, Gorkhas armies and tourists who came to visit in Nepal (Maharjan and Adhikari, 2065). The Rana rule was overthrown in 2007B.S. Consequently with the wave of education, the developing wave of sports and physical activities also tremendously began in the country. But Nepal cricket organization was already established in 2004 BS. After the democracy in Nepal, other games such as tennis, hockey, football, volleyball and athletics organizations were gradually established (Maharjan and Adhikari, 2065). The health and sports council was established on the chairmanship of Parshu Narayan Chaudhary in 2015BS. Later, it was named Nepal Sports Council in 2017 BS and Basundhara Bir Bikram Shah was nominated as the Chairman of the council (Baruwal, 2041)

The American Association of Health, Physical Education and Recreation (AHPER) forwarded lots of fitness test items in 1957. At that time the association took 8500 boys and girls for the test (Baruwal et al, 271). The association revised the test items in 1965 and in 1976 respectively. In this study researcher used the revised test items of 1976 AD. There are pull-ups, flexed arm hang, sit-ups, shuttle run, standing broad jump, fifty yard dash and 600 yards run walk in this test (Baruwal et al, 271). It is very useful to measure physical fitness of the secondary level students.

Rational of the Problems

General people perceive that indigenous people are physically stronger and more powerful than the non –indigenous people. This statement may not be right because it is the product of surface study of people and vision of naked eyes. The people from indigenous group are involved in army and police force in more numbers than non-indigenous group. Physical activities or physical fitness activities are emphasized those sectors but there is no poor performance of non-indigenous group in the field. In games and sports, both indigenous groups and non-indigenous groups have better performance. Its reason may be the equal physical fitness of indigenous and non-indigenous groups.

Generally the indigenous groups are involving in physical activity based profession to fulfill their basic needs and non-indigenous groups do not need to involve in those activities to fulfill their basic needs. There are equal chances for playing or doing physical activities in school and their physical environment is also same. So, present study was conducted to use differences in the aspect of physical fitness among indigenous and non-indigenous groups of secondary level students.

Objectives of the Study

- To find out the physical fitness of indigenous and non-indigenous students
- To compare the physical fitness among indigenous and non-indigenous students

Review of Related Literature

Colgan (1978) conducted a study to compare the AAHPER youth fitness test and proposed fitness test to determine the tests that measured the same fitness components. Boys and girls, 326 in number from St. John's English School in Waterloo, Belgium (Grade 5 – 12) were evaluated in both the tests. The fitness components used were the six items of the AAHPER Youth Fitness Test and three items recommended by ARAPCS Committee. Both the test batteries when satisfactorily treated revealed that the AAHPER Youth Fitness and the proposed test were measuring different components of fitness. It calculates that the AAHPER Youth fitness Test Battery measures "motor performance" , while the proposed fitness test measures fitness and endurance. AAHPER Youth fitness Test Battery measures the same components for males and females, but age interacts with performance to a greater extent in females.

Gross and Casciani (1962) conducted the seven tests reported in the AAHPER Youth fitness Test Manual on more than 13,000 secondary school children to determine the value of age, height and weight as a classification device. An IBM type 650 magnetic Drum Data Processing Machine was used to calculate simple correlations, multiple correlations and regression co-efficient for the ten variables of age ,height and weight and seven tests for each of the four groups of senior high school girls, junior high school girls, senior high school boys and junior high school boys. In general age, height and weight have negligible value for classification purposes in all the four groups. The present study indicates that if classification indices are used, they should be calculated for the specific selected events.

Ikada (1962) compared physical fitness of children in Lowa and Tokyo. The Lowa test of Motor Fitness was given to 395 Tokyo children and 355 Lowa children, 9 to 12 years of the age. The test battery includes sit-ups, standing broad jump, shuttle run, pull – ups for boys, bent arm hang for girls and 50 yard dash. Anthropometric measurements in height, weight and leg length were taken. The results indicate that Lowa children were heavier, taller and had long legs than Tokyo children but Tokyo children scored better in all motor performance tests except in sit-ups.

Klesius (1968) conducted a study to consider the effect of correlating various combinations of measures collected in the administration of the AAHPER Youth Fitness Test Battery in context of a test-retest reliability to determine the reliability of the selected items and related efficiency of the performance measures. The test items were administered on 150 tenth grade male students at Peom Senior High School, Florida. The test were administered in the following order : standing broad jump and 50 yard dash – three traits each, shuttle run and soft ball throw – three traits each, pull-ups, sit – ups and 600 yard run/walk – one trail each. Through the statistical analysis it was found that with the exception of the sit-ups, all the items were reliable. In case of sit-up and shuttle run, the first run itself gave satisfactory performance.

Sloan (1963) conducted the Harvard Steps Test on male students of physical education and male sophomores not specializing in physical education in Cape Provence (South Africa), North Carolina and England. A modified Harvard Step Test was performed by corresponding groups of women. Assessed by this test, the fittest male physical education students were the English, and the South Africans were fitter than Americans. English female students of physical education were not as fit as South Africans but were fitter than Americans. No correlation was found between fitness index and height, weight or time devoted to organized physical training.

Stein (1964) conducted a study to ascertain the reliability of individual test items of the youth fitness test. Tenth and eleventh grade students of Wake Field High School were selected as subjects. The AAHPER Youth fitness Test was administered and the reliability co- efficient for all the items was determined. He found that five of the seven test items (pull-ups, broad jump,sit-ups,50 yard dash and soft ball throw) have shown reliability co-efficient ranging between 0.90 and 0.98. The other two items (shuttle run and 600 yard run/walk) showed average to high relationship ranging between 0.74 and 0.83. The entire reliability coefficients were significant beyond 0.01 level.

Methodology

The researcher employed the descriptive quantitative research design. The populations of this study were 100 indigenous and 100 non-indigenous students, selected from simple random sampling method from ten schools. Researcher had applied readymade standard AAHPER youth physical fitness test battery for data collection. The events of AAHPER youth fitness test are pull-ups for boy, flexed arm hang for girls, sit-ups, shuttle run, standing broad jump, fifty yard dash and 600 yard run-walk. It measured the abdominal and arms muscle strength endurance, speed, power, agility etc. All the test items were administrated in the sample schools and collected required data about physical fitness.

Analysis and Discussion of Result

The researcher tried to differentiate statically on knee bent sit-up to test the abdominal muscles' strength and endurance between the secondary school level indigenous and non-indigenous students. The researcher found the result as follows:

Table 1 : Comparison on Knee Bent Sit-up

Categories	Indigenous	Non-indigenous
Mean	32.49	30.79
Coefficient of variation	21	26
Standard deviation	6.96	7.96
Degree of freedom	198	
Calculated T-value	1.608	
Tabulated T-value	1.97	
Level of significance	Not significant	

Table No. 1 shows that the mean score on knee bent sit-up of indigenous and non-indigenous students are 32.49 and 30.79 times respectively. The mean score of indigenous compared to non-indigenous students. The indigenous students' abdominal muscles fitness is found better than non-indigenous students. It means the indigenous students abdominal muscle strength and endurance are better than non-indigenous students. While the variance of the scores of indigenous and non-indigenous students are 21 and 26 respectively. It means non-indigenous students' score is found more than indigenous students' score.

The researcher used T-test to see the significant difference in all events. The calculated T-value is found 1.608, but the tabulated T-value at 0.05 level is 1.97. Thus, in the knee bent sit-up there is no significant difference between indigenous and non-indigenous students.

Table 2 : Comparison on Pull-ups

Categories	Indigenous	Non-indigenous
Mean	10.84	8.02
Coefficient of variation	32	44
Standard deviation	3.49	3.53
Degree of freedom	198	
Calculated T-value	5.681	
Tabulated T-value	1.97	
Level of significance	Significant	

Table No. 2 shows that the mean score of pull-ups were 10.84 and 8.02 times of indigenous and non-indigenous students respectively. The mean score of the non-indigenous students is found better in the arms strength, endurance and fitness than indigenous students.

The calculated T-value 5.681 was found, where tabulated value at 0.05 levels is 1.97 for the degree of freedom. Thus, it was found significant difference between indigenous and non-indigenous students on the pull-ups performance test.

Table 3 : Comparison on Standing Broad Jump

Categories	Indigenous	Non-indigenous
Mean	2.04m	1.89m
Coefficient of variation	12	15
Standard deviation	0.2353	0.2773
Degree of freedom	198	
Calculated T-value	4.177	
Tabulated T-value	1.97	
Level of significance	Significant	

Table No. 3 shows that the mean score on standing broad jump of were 2.04m and 1.89m of indigenous and non-indigenous students respectively. When it was compared with the mean score of the indigenous students, they were found better in the muscles power and jumping ability than non-indigenous students.

The calculated T-value 4.177 was found, but tabulated value at 0.05 levels is 1.97 for the 198 degree of freedom. Thus, there was found significant difference between indigenous and non-indigenous students on the standing broad jump performance test.

Table 4 : Comparison on Shuttle Run

Categories	Indigenous	Non-indigenous
Mean	0:00:10:29	0:00:10:44
Coefficient of variation	07	07
Degree of freedom	198	
Calculated T-value	-1.47	
Tabulated T-value	1.97	
Level of significance	Not-significant	

Table No. 4 shows that the mean score on shuttle run performance of indigenous and non-indigenous students were 0:00:10:29 and 0:00:10:44 see respectively. When it was compared with the mean score of the indigenous students were found better running ability than non-indigenous students.

The calculated T-value is 1.474 was found, but tabulated value at 0.05 levels is 1.97 for the 198 degree of freedom. Thus, it was found not-significant difference between indigenous and non-indigenous students on the shuttle run performance test.

Table 5 : Comparison on 50 Yard Dash Running

Categories	Indigenous	Non-indigenous
Mean	0:00:08:23	0:00:08:21 See
Coefficient of variation	6	8
Degree of freedom	198	
Calculated T-value	0.287	
Tabulated T-value	1.97	
Level of significance	Not-significant	

Table No. 5 shows that the mean score on 50 yard dash running performance of indigenous and non-indigenous students were 0:00:08:23 and 0:00:08:21 respectively. The mean score of the non-indigenous students were found slightly better running ability than indigenous students.

The calculated T-value is 0.287 was found, but tabulated value at 0.05 levels is 1.97

for the 198 degree of freedom. Thus, it was found not-significant difference between indigenous and non-indigenous students on the 50 yard dash running performance test.

Table 6 : Comparison on 600 Yard Run-Walk

Categories	Indigenous	Non-indigenous
Mean	147	154
Coefficient of variation	20	19
Degree of freedom	198	
Calculated T-value	-1.596	
Tabulated T-value	1.97	
Level of significance	Not-significant	

Table No. 6 shows that the mean scores on 600 yard run-walk performance of indigenous and non-indigenous students were 0147 and 154 second respectively. The mean score and coefficient of variance, indigenous students were found slightly better running ability than non-indigenous students.

The calculated T-value is -1.596 was found, but tabulated value at 0.05 levels is 1.97 for the 198 degree of freedom. Thus, it was found not-significant difference between indigenous and non-indigenous students on the 600 yard run-walk running performance test.

Conclusion

Researcher didn't find significant difference between indigenous and non-indigenous students' physical fitness and the comparison on mean score, indigenous students found slightly better than non-indigenous students. When compared each test separately, the indigenous students were found significantly better in arms strength and leg power than the non-indigenous students. Non-indigenous students were found better in speed, but in other five components, indigenous students were found better than non-indigenous students.

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Exercise of Right to Freedom of Information: A Critical Analysis of the 'Right to Information Law in Nepal'

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ABSTRACT

This study entitled: Exercise of Right to Freedom of Information: A Critical Analysis of the 'Right to Information law in Nepal, a portion of legislation that empowers all citizens to access to information in control of the State. The right of access to information gives practical meaning to the values of participatory democracy and empowering humanity as it is the foundation of all other rights and freedoms.

The exercise of RTI mostly by journalist in Nepal. Normal people don't know the practice of right to information. If they know, they are educated. It is difficult to implement in illiterate to society. Without access to information, there can be no meaningful progress in society in terms of human development, service delivery and accountability among other issues.

Key Words : Access to Information, Access to Information Act, Freedom of Expression, Freedom of Information (FOI), Official Information, Public Body

Background

In international context the practice of RTI Acts guarantee right to every individual however, the Act access to information only to a Nepali citizen and not to an individual. This provision limits the access of other people who are not citizens but have a real concern about the information being sought.

The first FOI law was enacted in Sweden in 1766 and was in large part motivated by the Parliament's interest in accessing information held by the King. Finland and the United States adopted laws in the 1950's and 1960's (along with Norway in 1970), but interest in RTI really started to take off in 1976, after the US passed a tough FOI law in response to the Watergate Scandal. This was followed by the adoption of similar laws in several western democracies, and by 1990, 14 countries had passed with RTI/FOI laws.

It is continuously arguable to implement the right to information and privacy along with official secrecy in the practical scenario. Preserving the right to information with securing fundamental right of privacy to an individual citizen is in great confusion. It is the primary role of journalist to keep balance between right to privacy and right to information. With the conversation with the media expert what we came to conclusion that right to privacy should be preserved at first rather the right to information. Ignoring right to privacy of individual and secrecy of official document may hamper the prestige, economic and social status. It is the duty of editor in chief and media to be accountable preserving the right to privacy and right to information in balance and progressive manner.

The right to freedom of information the world over is a fundamental human right and an ingredient of participatory democracy. The right to access to information is therefore a principle that demonstrates participatory democracy. (GCFE article 19, 2004).

According to the United Nations General Assembly (1946), Resolution 59 (1), Access to information is a fundamental human right and the touchstone of all the freedoms recognized by the United Nations. The right to access public information is the right of every person to know and to have access to the information he or she needs to make free choices and to live an autonomous life.

Freedom of information is a human right that secures access to publicly held information and the corresponding duty upon a public body to make information available to the public. (UNDP Report: 2003).

Universal Declaration of Human Rights which states that:

> Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive, and impart information and ideas through any media and regardless of frontiers. (Article 19, 2006: 17)

This freedom is divided into two parts namely: the right of everyone to express their opinions and the right of everyone to seek and receive information. It is only an informed public that can contribute effectively to the shaping of government and the political institutions.

The International Covenant on Civil and Political Rights (ICCPR) which Nepal ratified in

1995 provides a corresponding provision in its Article 19. Article 19 (2) states:

> Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice.

The United Nations Convention on Anti-corruption was also approved by the General Assembly in October 2003 and adopted in December 2005 after it was ratified by 30 countries. Article 10 of the Convention on "Public reporting" encourages countries to adopt measures to improve public access to information to fight corruption and it states:

> Considering the need to combat corruption, each State Party shall, in accordance with the fundamental principles of its domestic law, take such measures as may be necessary to enhance transparency in its public administration, including about its organization, functioning and decision-making processes, where appropriate.

These measures include member states adopting regulations that allow the public to obtain information regarding decision-making processes in addition to publishing periodic reports on the risks of corruption.

In addition, Article 13 on "Participation of Society" states:

> Each State Party shall take appropriate measures, within its means and in accordance with fundamental principles of its domestic law, to promote the active participation of individuals and groups outside the public sector, such as civil society, non-governmental organizations and community-based organizations, in the prevention of and the fight against corruption and to raise public awareness regarding the existence, causes and gravity of and the threat posed by corruption.

Right to Information in Nepal

In Nepal, Article 16 of the Constitution of Kingdom of Nepal 1990 has defined the Right to Information (RTI) as a fundamental right; Article 27 of the Interim Constitution of 2007 guaranteed this right; and the Right to Information Act of 2007 enshrined RTI in law. Subsequently, a National Information Commission (NIC) was established in Nepal in 2008 and RTI regulation was passed in 2009 to support implementation of the law. However, because the RTI movement in Nepal was driven largely by journalists (and the FNJ) with limited support from civil society, its operationalization has been slow.

Recently however, RTI has begun to be leveraged in positive and public ways to hold the government and donors accountable. In 2011, Freedom Forum organized the first national convention on RTI in Nepal; and more recently there have been many high-profile requests for information that have led to the exposure of corruption scandals and catalyzed government action in response. A Supreme Court judgment in May 2011 on students' right to see exam answer sheets added significantly to the RTI movement and debate in Nepal.

On the demand side, the number of requests from both civil society groups and the public has been low and there has been little pressure on public bodies to be more open. The National Information Commission (NIC), formed in 2008, has until recently been under-staffed and under-resourced, although that is starting to change.

Effective implementation of the RTI not merely depends on its jurisdiction; rather it needs strong back office support such as file management and dissemination skills to the information officials. I do agree that there is reluctant response still among the information officials. For the last six years, we have been learning by our own experiences.

At the same time, the judiciary played a very significant role in the interpretation of the fundamental right to information and the development of RTI jurisprudence in Nepal. In 1991, some citizens approached the Supreme Court (SC) seeking information about the dispute about the use of water resource of two rivers in Nepal. The first debate arose when India constructed the Tanakpur dam on the Mahakali River on both sides of the border to generate hydropower for its own purpose. (A. Tanka, Legal Prospective)

There was no room for the RTI and seeking the information held in public bodies was beyond the imagination. There for Nepali people had to wait for 1990's movement to get the constitutional guarantee of the right. The People's Movement of 1990 has stood as one of the major historical turning points in the political history of Nepal. It was important from the point of view of a paradigm shift in the political system that recognized people's fundamental rights and accepted people's participation in governance.

After the restoration of democracy followed by the popular people's movement the new constitution Interim Constitution of Nepal 2007 was promulgated. As in 1990 constitution the Interim constitution also ensured Right to Information under the Article 27 as a fundamental right. The article states: Every citizen shall have the right to demand and receive information on any matter of public importance: If nothing in this Article shall compel any person to provide information on any matter about which secrecy is to be maintained by law.

Following the immense pressure of and recommendation made by the peoples from the various walks of life a commission was made to look after the matter. The government in September 2007 formed a taskforce to draft a Bill on right to information in. The seven-member taskforce headed by former secretary of the Judicial Council Kashi Raj Dahal made a draft which was endorsed by the parliament with the amendments in July 18, 2007 and the Act came in force from August 19, 2007. (www.ccrinepal.org)

Statement of the Problem

Why has the RTI not been successful in Nepal?

Objectives of the Study

The main objective of this study is to make a critical analysis of exercise of RTI in Nepal with a view to identifying its strength and weaknesses, and challenges in its implementation with specific reference to journalism. The specific objectives are as follows:

To analyze the legal situation and trends of right to freedom of information.

Limitation of the Study

The study is limited only in right to freedom of information and related act and laws.

- Document analysis related with RTI law and acts.
- Qualitative analysis of the RTI.

Literature Review

The literature swotted under this section relates to the importance of freedom of information and access to information and exercise of freedom of information. Freedom of information is a fundamental human right which is essential in a precise democracy. Here I have reviews book, journal, RTI related law & act and website. Present differently in following ways:

Verma Anuradha - gives a comprehensive guide to RTI Act for Public Information Officers, First Appellate Authorities and other government servants. The author explains about RTI Act, its originate criticisms and role of government servants in RTI Act. The book gives clear and detailed information on scrutiny on receipt of an application, processing of an application and invoking exemptions. It explains corruption, its types and gives illustrative cases on corruption and human rights. (Verma A. 2011)

In a modern democracy, good governance is essential. Among the chief characteristics of good governance are transparency and accountability, elements that can be best ensured only when information is available abundantly and as speedily as possible? Right to information (RTI) empowers public for questioning government agencies about the process, status and result of different activities. (Kharel P. 2001)

The government formed a taskforce to draft a Bill on right to information in September 2007. The seven-member taskforce was headed by former secretary of the Judicial Council Kashi Raj Dahal. The parliament endorsed the draft produced by the taskforce with amendments in July 18, 2007 and the Act came in force from August 19, 20. (www.ccrinepal.org/)

"Assessment of Right to Information Law Regime in Nepal for Creating Conducive Environment for Effective Implementation" by Tanka Raj Aryal General Secretary, Citizens' Campaign for Right to Information gives some idea to analyze the RTI act critically. "Media Addhyan 3 "by Martin Chautari with the article RTI information and its legal structure gives another clearer picture on how RTI develops and its history and some controversial issues. Annual Report of Federal of Nepali journalist 2012 also criticized about the classification of information with the intention to hide the information.

RTI Based Law Reviews

United Nation Declaration of Human Rights (UDHR) recognized right to information under in 1946 AD. Article 19 “Freedom of information is a fundamental human right the touchstone of all the freedoms to which the United Nations is consecrated.” Under the provision, right to seek, receive and impart information without interference and regardless of frontiers is protected.

Article 19 of International Convention Civil and Political Rights (ICCPR) has guaranteed right to information in Article 19. It states, "Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice"

Article 10 of the European Convention on Human Rights, Article 13 of the American Convention on Human Rights and Article 9 of African Charter on Human and Peoples Rights also recognize right to information as a part of freedom of expression.

The Constitution of the Kingdom of Nepal 1990

The Constitution of the Kingdom of Nepal, 1990 was the first constitution to recognize right to information as a fundamental right. It was fifth constitution in the constitutional history of Nepal. Article 16 of the constitution guaranteed this right to its citizens.

Interim Constitution of Nepal, 2007

The Interim Constitution of Nepal, 2007, the result of Peoples' Movement 2007 also recognized the right to information under fundamental rights (part 3). Article 27 of the Interim Constitution guarantees the right to information. It provides that every citizen has the right to seek and receive information of a personal nature or relating to matters of public importance, provided that no one shall be required to provide information confidentiality of which has to be maintained according to the law. This provision is identical with the Article 16 of the 1990 Constitution.

Article 27. Right to Information

Every citizen shall have the right to demand or obtain information on any matters of concern to himself or herself or to the public.

If nothing in this Article shall be deemed to compel any person to provide information on any matter about which confidentiality is to be maintained according to law.

Right to Information Act, 2007 is specific legal instrument to regulate Right to Information in Nepal. The Act was enacted by the parliament on July 18, 2007 to give effect to the constitutional guarantee of right to information provided under Article 27 of the Interim Constitution, 2007. It empowers citizens to have access in the individual information and information of public importance held by public agencies.

Right to Information Regulation, 2009 is the tool to implement the Right to Information Act 2007 efficiently. It contains many positive provisions. Some of the key provisions under the regulation include:

- Provision relating to fees for obtaining Information;
- Registration of Appeal;
- Proceeding and Timeline for the Decision;
- Remuneration and benefits of Commissioners;
- Provisions relating to the Secretary;
- Function, Duties and Power of the Secretary;
- Format to submit Appeal before National Information Commission:

Right to Know:

- Article 27, the Interim Constitution of Nepal, 2063 BS
- Right to Information Act, 2064 BS
- Right to Information Regulation, 2065 BS
- Rules Regarding Right to information, 2065 BS
- Article 27, the Constitution of Nepal, 2072 BS

The right to freedom of information is important because it enables individuals to acquire knowledge necessary for decision making. As quoted by James Madison, the fourth President of the United States of America and one of the framers of the American Constitution in 1776.

A popular government without popular information or the means of acquiring it is but a prologue to a farce or a tragedy; or perhaps both. Knowledge will forever govern ignorance. And a people who mean to be their own governors must arm themselves with the power which knowledge gives. (Madison 1776)

Research Methodology

The methodology for this study was primarily qualitative. The major advantage of the qualitative approach is the richness and depth to which explanations are conducted and descriptions written which usually result into sufficient details. The aim of the qualitative research is to offer a perspective of a situation and provide well written research reports that illustrate the researcher ability to describe the corresponding phenomenon.

Document analysis is the major techniques of this research. The researcher chose these techniques to gain in depth information with new perspectives. For purposes of consistency in analysing the exercise of RTI, the researcher read all the law and act related to RTI, and document related to them.

Discussion

The findings from the analytical study of the exercise of RTI.

Quotes *"Freedom of Information is a fundamental Human Right and is the touchstone of all the freedoms..."* UN General Assembly Resolution 59(1), 1946

To ensure the concept of self-governance is realised people must be well informed to make decisions regarding their lives and the community. The information flow must be accurate, timely and comprehensive. It is important to note that issues covered by the media plays a great role in shaping political commitments on policy matters.

Some Journalists argued that media practitioners tend to be reluctant to join access to information campaigns out of fear that they will lose their privileged role of information providers and that they will suffer from delays in obtaining information caused by the Access to Information.

An example of **Successful RTI Appeal** in a Nepal: - Ananta Raj Luitel, a journalist for the Himalayan Times, sought information from the Judicial Council– the sole body for the appointment and dismissal of judges regarding the inquiry committees constituted after 1990. In 2012, Luitel demanded information as per Article 27 of the Interim Constitution and Section. 3 of the RTI Act of 2007. The Judicial Council refused to provide the information requested, so Luitel took his request to the National Information Commission (NIC). After a 6-month battle, the NIC fined the Judicial Council Secretary and the information requested was finally provided. This was the first time that the Judicial Council had provided information to the public, setting a precedent for Nepali journalists' future requests of this sort. (CCRI Nepal)

Who Accesses Information?

According to Interim Constitution 2063, Part III, Article: 27 Right to Information:

Every citizen shall have the right to demand or obtain information on any matters of concern to himself or herself or to the public.

But, if nothing in this Article shall be deemed to compel any person to provide information on any matter about which confidentiality is to be maintained according to law.

According to Constitution of Nepal 2072, Part III, Article: 27 Right to Information: Every citizen shall have the right to demand and receive information on any matter of his or her interest or of public interest. Provided that no one shall be compelled to provide information on any matter of which confidentiality must be maintained in accordance with law.

Conclusions

The right of access to information is a strong foundation for all the other human rights; hence government has the moral obligation to grant access to public files. However, it was found out that access to government information is not an absolute right. At times due to compelling reasons such as national security; trade and commercial secrets; classified law enforcement matters and other classified information, access to government information can be denied.

Good governance, anti-corruption and other public interest issues such as right to information do not seem to have media attention even though some media persons have actively lobbied and advocated for enactment of the Right to Information Act.

The analysis revealed that this law is one of the least known in Nepal regardless of the social standing of individuals in society. It was found out that the law has not been implemented despite becoming effective in 2007.

Study shows that the right of access to information is a fundamental basic human right, which is critical to good governance and economic development. Indeed, the Constitutional guarantees on freedom of speech and freedom of the press have formed the backbone for the Access to Information which is expected to promote accountability, openness and transparency at all levels of government.

Right to information act 2007 allows journalists to obtain facts as opposed to misleading or selective information and to investigate the obtained documents to identify issues of public concern. The use of official government documents obtained through the RTI process allows the journalist to defend their research based on the use of public records.

The media has played a significant role in exposing big corruption and scams since democracy was restored in 1990 and become a powerful watchdog of government activities and state affairs.

The media can perform a crucial job of raising the people's awareness about keeping a close watch on RTI implementation. This inalienable relationship between the media and RTI provides reciprocal advantages.

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Socio-Economic and Demographic Factors Determining Infant Mortality Rate in Nepal

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ABSTRACT

The infant mortality rate is an excellent summary index of the level of living and socio-economic development for any country. This study is based on the analytical research which has to use available facts and information. The researchers have relied upon the secondary data which have been collected from the Nepal Demographic and Health Survey, 2016.Infant mortality rate is lower in well facilitated areas of Ne[1]pal. Similarly, education, income, mother's age at birth, birth order and previous birth interval are the most important determinants to reduce infant mortality rate. Socio-economic and demographic factors also determine to reduce infant mortality rate in Nepal.

Key words : Infant Mortality Rate, Socio-Economic, Demographic, Determinants

Introduction

Background of the Study

One of the most important indicators/indexes of socio-economic development of a country or region is infant mortality rate. It is generally observed that in a backward country infant mortality rate is too high in comparison to that of a developed country. Especially infant mortality rate serves as an excellent index of development as well as healthiness of a community. The issue of infant mortality is getting too much importance as most of social scientists view that infant mortality rate is an excellent

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indicator of socio-economic development and hence the international and national government has intensified their efforts to reduce the IMR and to enhance the level of child survival. The infant mortality rate is affected by a large number of socio-demography and economic factors (Barman, 2014).

Infant mortality rate is known to be a good and sensitive indicator of the development of a nation, has been a focus of study in Nepal recently. This sensitive indicator is influenced directly and indirectly by a number of factors. In difficult situations, adults and the elderly may be able to survive better than infants, whose immune systems may be less able to cope with the environment. For this reason, infants are affected the most by the availability of health facilities, life style of the family, affordability of good food, sanitation, etc. (Suwal, 2001).

In developing countries, infant mortality accounts for a relatively higher proportion of all deaths, whereas in the developed countries, it represents an increasingly small segment of total mortality. Furthermore, lower infant mortality means that fewer children need to be born to achieve a certain number of survivals. Thus, infant mortality has a significant role to play in the demographic transition of a nation (Suwal, 2001).

Infant mortality rate is especially important in the analysis of mortality because infant deaths account for a substantial number of all deaths, especially in those countries where health conditions are poor. The study of infant mortality gains importance, especially because mortality during the first year of life is invariably high for all countries, irrespective of whether the overall levels of mortality are high or low (Barman, 2014).

Infant mortality is known to be one of the most sensitive and commonly used indicators of the socio- economic development of a country since infants, more than any other age- group of a population; depend heavily on the socio-economic conditions of their environment for survival. Thus, the level of infant mortality would present a measure of how well a society meets the needs of its people. The determinants of infant mortality are not static, they vary with geographical location. Reductions of infant mortality in less developed countries are much less than reductions in the more developed countries (Kamilius, 2010).

Objectives

- To find out the trend and pattern of infant mortality rate in Nepal.
- To analyze the socio-economic determinants of infant mortality rate in Nepal.
- To analyze the demographic determinants of infant mortality rate in Nepal.

Delimitations

- Infant mortality rate is only taken as the main indicator of mortality.
- Nepal Demographic and Health Survey is one and only source of data in this study.
- Socio-economic and demographic factors are only studied.

Literature Review

Dev (2016) analyzed infant mortality rate (IMR), the number of deaths of infants under one year of age per 1,000 live births, is an indicator of the quality of health in a country. In 2012, almost 5 million deaths worldwide occurred within the first year of life. A study which shows premature birth, lower respiratory tract infection, and diarrhea as the major causes of infant mortality in Nepal. However, infant mortality may also be associated with poor public health services and lack of access to health care facilities. The IMR in Nepal is directly and indirectly influenced by a number of factors including socio-economic, cultural, demographic and maternal characteristics which demonstrated that for each 10 kilometer increase in distance to the nearest health care facility in Nepal there was 6 percent higher hazard of infant death.

Chowdhury (2010) concluded in his study socio-economic variables (e.g., place of residence, religion, marital status, education, occupation, family income, household income etc.) reflect the socio-economic status of a community that have a high influence on morbidity and mortality level. Parent's occupation determines the economic status, nutrition and housing condition, access to health care and clothing of a family. Infant and child mortality reflect a country's level of socio-economic development and quality of life. It is also important for monitoring the progress of the United Nations Millennium Development Goal to reduce child mortality. From our study, we observe that mother's education and occupation, type of latrine and electricity are the influential factors of neonatal, post neonatal, infant and child mortality. Hence, the following recommendations may suggest that, based on the present study, could help planners and policy makers to take appropriate decision to reduce infant and child mortality of not only the study area but also whole country:

- Both male and female education participation needs to increase because it consequently brings an improvement in infant and child mortality situation.
- Sanitation facilities of the family should improve.
- IEC programs directed to enlighten mothers on the health services of children available in their communities should improve through effective participation of government, NGOs as well as mass media.

Barman (2014) analyzed in his paper a variety of factors affecting infant mortality are customarily classified as biological and socio-economic or environmental factors, though these two categories should not be treated as water tight compartments, for there is a great deal of interaction between the two. The reduction in mortality was considerably greater in the younger age groups than in the older age groups. In general, it may be said the low level of infant mortality appears to be associated with the low level of general mortality.

Methodology

Research Design

This study is based on the analytical research which has to use available facts and information. The researcher has relied upon the secondary data which have been collected from Nepal Demographic and Health Survey, 2016. Literature review is collected from different research works, journals, magazines and internet sources.

Sources of Data

In this research, value of infant mortality rate per 1000 is taken as main indicators of mortality with special reference to Nepal based on the data from Nepal Demographic and Health Survey, 2016.

Data Analysis

This study is based on secondary data which is collected from the Nepal Demographic and Health Survey, 2016.

Table 1 : Trend of Infant Mortality Rate in Nepal

Survey Year	Infant Mortality Rate/1000
NFHS, 1996	78
NDHS, 2001	64
NDHS, 2006	48
NDHS, 2011	46
NDHS, 2016	32

Source : Nepal Demographic and Health Survey, 2016.

Nepal Demographic and Health Survey, 2016 shows the decreasing trend of infant mortality during the 20 years since 1996, based on results from the 1996, 2001, 2006, 2011, and 2016 NDHS surveys. Infant mortality decreased from 78 infant deaths per 1000 live births to 32 infant deaths per 1000 live births over the periods.

Table 2 : Pattern of Infant Mortality Rate in Nepal

Background Characteristics	Infant Mortality Rate/1000
Residence	
Urban	28
Rural	38
Ecological Zone	
Mountain	57
Hill	32
Tarai	41
Development Region	
Eastern	33
Central	38
Western	36
Mid-western	42
Far western	58
Province	
Province 1	31
Province 2	43
Province 3	29
Province 4	23
Province 5	42
Province 6	47
Province 7	58

Source : Nepal Demographic and Health Survey, 2016.

Nepal Demographic and Health Survey, 2016 shows the higher rate of infant mortality in rural areas in comparison to urban areas. Infant mortality rate is substantially higher in the mountain zone of Nepal compared to those in the hill and tarai zones and far western development region of Nepal compared to those in the eastern, central, western and mid-western development regions. Similarly, Infant mortality rate is higher in the province 7 of Nepal compared to those in the other province. All these facts show the infant mortality rate to be lower in well facilitated areas like urban, hill, tarai, eastern, central, province 3 and 4. To reduce the infant mortality rate in the different parts of Nepal, standard of living must be enhanced by providing housing facilities, pure drinking water, medical facilities, educational facilities and so on, particularly in the remote and rural areas of the Nepal. Apart from these attentions should be given in the technological advancement for enhancing the standard of living of the people.

Table 3 : Socio-Economic Determinants

Background Characteristics	Infant Mortality Rate/1000
Mother's Education	
No education	50
Primary	39
Some Secondary	33
SLC and above	18
Wealth Quintile	
Lowest	50
Second	45
Middle	42
Fourth	31
Highest	20

Source : Nepal Demographic and Health Survey, 2016.

Nepal Demographic and Health Survey, 2016 shows the higher the mother's education and wealth quintile lower the infant mortality rate. Similarly, lower the mother's education (no education) and wealth quintile higher the infant mortality rate. These facts prove that education and income are the most proximate determinants to reduce infant mortality in Nepal. Education should be spreaded, especially among the women in the different part of Nepal to reduce the infant mortality rate. Percentage of infant mortality rate among the illiterate mother is much higher than that of the literate mother. The level of income of the family must be increased to reduce the infant mortality rate in the society. As one of the major causes of high infant mortality rate is poverty or low level of income of the family.

Table 4 : Demographic Determinants

Demographic Characteristics	Infant Mortality Rate/1000
Mother's Age At Birth	
<20	54
20-29	33
30-39	42
Birth Order	
1	43
2-3	29
4-6	44
7+	116

Previous Birth Interval	
<2 years	68
2 years	35
3 years	27
4+ years	18

Source : Nepal Demographic and Health Survey, 2016.

Nepal Demographic and Health Survey, 2016 shows lower the mother's age at birth and birth interval, higher the infant mortality rate. Infant mortality rate is high in first, 4-6 and 7+ birth orders whereas infant mortality rate is low in 2-3 birth order. These facts prove that mother's age at birth, birth order and previous birth interval are the most important determinants to reduce infant mortality rate in Nepal.

Conclusion

Infant mortality rate is lower in well facilitated areas like urban, hill, tarai, eastern and central region of Nepal and higher in less facilitated areas. Education and income are the most proximate determinants to reduce infant mortality. Similarly, Mother's age at birth, birth order and previous birth interval are the most important determinants to determine infant mortality rate. The status of women in our society is found to be too low and it is generally considered that low status of women in the society is an important cause of high infant mortality rate. So, by lifting the status of women upward in the society, the rate of infant mortality can be reduced to a certain extent. In conclusion, we can say that socio-economic and demographic factors determine to reduce infant mortality rate in Nepal.

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‘अभिशप्त घर’ कवितामा ध्वनि

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सार

प्रस्तुत लेखमा कवि भूपि शेरचनको ‘अभिशप्त घर’ कविताको ध्वनि सिद्धान्तका आधारमा विश्लेषण गरिएको छ । यस लेखमा विवेच्य कविताभित्रका शीर्षक, पद, पदावली आदिका माध्यमबाट ध्वनित हुन आउने विषय तथा क्षेत्रसँग सम्बन्धित विविध अर्थहरूको विश्लेषण गरिएको छ । प्रस्तुत कवितामा तत्कालीन विश्व परिस्थिति, नेपालको आन्तरिक एवम् बाह्य परिस्थिति र मानव जीवन कसरी ध्वनित भएको छ भन्ने देखाउनु यस लेखको उद्देश्य रहेको छ । उक्त उद्देश्य प्राप्तिका लागि विवेच्य कविताको शीर्षक, पद, पदावली आदिलाई आधार बनाई सिङ्गो कविताबाट ध्वनित हुन आउने अर्थहरूको निरूपण गरिएको छ र यसै आधारमा प्रस्तुत कविता ध्वनि सिद्धान्तका दृष्टिबाट उत्कृष्ट कविता हो भन्ने निष्कर्ष निकालिएको छ ।

शब्दकुञ्जि : अभिशप्त, जीवनबोध, युगबोध, सामरिक, महाशक्ति, विचारधारा, प्रतिपादन, व्यञ्जित, ध्वनित ।

१. विषय प्रवेश

आधुनिक नेपाली कविताको स्वच्छन्दतावादी प्रगतिवादी धारामा देखा परेका कवि भूपि शेरचन (१९९२-२०४६) वि.सं. २०१० देखि नै कविता सिर्जनातर्फ सक्रिय रहेको पाइन्छ । उनका ‘नयाँ झ्याउरे’ (२०१०), ‘निर्झर’ (२०१५), ‘घुम्ने मेचमाथि अन्धो मान्छे’ (२०२६), ‘भूपि शेरचनका कविताहरू’ आदि कविता सङ्ग्रहहरू प्रकाशित भएका छन् । आफ्नो लेखन यात्राका क्रममा साहित्यका क्षेत्रमा महत्त्वपूर्ण योगदान दिएबापत उनी साझा पुरस्कार (२०२६), गोरखा दक्षिणबाहु दोस्रो (२०४२) आदि पुरस्कारहरूबाट सम्मानित भएका छन् । उनका सिर्जनामा समाजका विसङ्गति, विभेद, दमन, शोषण आदिको विरोध गर्दै अत्यन्त सुन्दर विम्ब र प्रतीकहरूका माध्यमबाट तार्किक अनि प्रौढ चिन्तन अभिव्यक्त भएको पाइन्छ ।

उनले स्वतन्त्रता, समानता र विश्वबन्धुत्वको भावनालाई सरल, सरस र मर्मस्पर्शी ढङ्गले प्रस्तुत गरेका छन् । मानवतावादी चिन्तन र राष्ट्रियताको भावले ओतप्रोत भएका उनका कवितामा प्राकृतिक चित्रणका साथै प्रकृति र मानव जीवनका बिचको सुन्दर संयोजन समेत पाइन्छ । युगबोधका माध्यमबाट आर्जित गहिरो ज्ञानको प्रस्तुति अनि विषयवस्तुसँग सघन रूपमा जोडिएको व्यङ्ग्यले उनका कविताहरू पठनीय र स्मरणीय हुन पुगेका छन् । यिनै कारणहरूले उनका कविता विद्यालयदेखि विश्वविद्यालय तहसम्मका पाठ्यक्रमहरूमा समेटिनुका साथै अनुसन्धानका विषय बन्दै आएका छन् ।

कवि भूपि शेरचनका कवितामा त्यस समयको स्पष्ट युगबोध पाइन्छ । 'अभिशप्त घर' कविता पनि यस्तै युगबोध भएको कविता हो । यस कवितामा उनले पढेको, देखेको र भोगेको युगको बहुआयामिक प्रस्तुति रहेको छ । ध्वनि अध्ययनका विभिन्न कोण (शीर्षक, पद, पदावली, समय, परिस्थिति आदि) बाट यस कविताको अध्ययन हुन सक्ने भए तापनि हालसम्म यी कोणहरूबाट अध्ययन, विश्लेषण नभएको हुनाले यो अध्ययन औचित्यपूर्ण रहेको छ । प्रस्तुत लेखमा पूर्वीय साहित्य सिद्धान्तको बहुचर्चित ध्वनि सिद्धान्तलाई विश्लेषणको प्रमुख आधार बनाइएको छ ।

२. उद्देश्य

'अभिशप्त घर' तत्कालीन राष्ट्रिय, अन्तर्राष्ट्रिय परिस्थिति र मानव जीवनलाई ध्वन्यात्मक रूपमा उजागर गर्ने कविता हो । त्यस कारण यस लेखमा यी सबै पक्षको विश्लेषण गर्ने उद्देश्य राखिएको छ । यस उद्देश्यलाई तलका बुँदाहरूमा अझ विशिष्टीकरण गर्न सकिन्छ :

- 'अभिशप्त घर' कवितामा ध्वनित अन्तर्राष्ट्रिय परिस्थिति निरूपण गर्नु,
- 'अभिशप्त घर' कवितामा ध्वनित राष्ट्रिय परिस्थिति निरूपण गर्नु,
- 'अभिशप्त घर' कवितामा ध्वनित मानव जीवन निरूपण गर्नु ।

३. कविता विश्लेषणको सैद्धान्तिक प्रतिमान

३.१ ध्वनिको अर्थ र परम्परा

सामान्यतः ध्वनि शब्दले आवाज भन्ने अर्थ दिन्छ भने सिद्धान्त शब्दले विचार र तर्कद्वारा निश्चित गरिएको मत, कुनै विद्वान्द्वारा स्थापना गरिएको मत, ऋषिमुनिहरूको मान्य उपदेश, सार भएको कुरा, तत्त्वको कुरा आदिलाई जनाउँछ । संस्कृत काव्य शास्त्रीय परम्परामा ध्वनि सिद्धान्त भन्नाले नवौं शताब्दीका आचार्य आनन्दवर्द्धनद्वारा प्रतिपादित साहित्यको सौन्दर्यसँग सम्बन्धित एक विशेष सिद्धान्त भन्ने बुझिन्छ । "सर्वसाधारणले ध्वनि शब्दको अर्थ आवाज भन्ने लगाउँछन् तर संस्कृत काव्यशास्त्रमा उक्त साधारण अर्थका अतिरिक्त एउटा विशेष प्राविधिक वा पारिभाषिक अर्थ लिएको पाइन्छ" (बराल र अन्य २०५५: ३३२)। संस्कृत काव्यशास्त्रमा ध्वनि शब्दले दिने अर्थ सामान्य व्यवहारमा प्रयोग हुने अर्थभन्दा भिन्न रहेको तथ्यतर्फ यस भनाइले दृष्टिगत गरेको छ । "ध्वनिको बीज तत्त्व काव्य-कवितामा पाइने त्यस किसिमको एउटा प्रतीयमान अर्थ हो, जसले काव्यलाई साधारण लौकिक वाक्यहरूभन्दा भिन्नै बनाएर त्यसमा विलक्षण चमत्कार उत्पन्न गराउँछ" (पोखरेल २०५९: २२)। यस अभिव्यक्तिबाट ध्वनिले दिने अर्थलाई चामत्कारिक तथा प्रतीयमान अर्थका रूपमा स्वीकार गरी सामान्य वा लौकिक अर्थबाट ध्वनिलाई पृथक गरिएको छ ।

"जुन अर्थका लागि शब्द वा अर्थले आफ्नो आफ्नो अर्थ वा अभिप्रायलाई त्यागिदिन्छन् र कुनै विशिष्ट भावलाई व्यक्त गर्छन्, त्यस्तो व्यङ्ग्य भएर आउने काव्यको वस्तु विशेषलाई विद्वान्हरूले ध्वनि भनेका छन्" (उपाध्याय २०४४: २४१)। यस परिभाषाअनुसार शब्द वा अर्थले आफ्नो सामान्य अर्थलाई त्यागेर अर्कै विशिष्ट अर्थ ग्रहण गरेको कलात्मक अभिव्यक्ति ध्वनि हो भन्ने स्पष्ट हुन्छ । "केवल शब्द र अर्थको गुम्फनले काव्य हुन सक्दैन । शब्द र अर्थको समुचित योगबाट केही न केही चमत्कारपूर्ण भित्री भावसमेत काव्यमा बुझिने हुनुपर्छ । ती सुसम्बद्ध शब्दार्थबाट भित्री विशेष भाव अभिव्यक्त हुने भए मात्र त्यो कवित्व सजीव हुन्छ" (शर्मा २०२८: ५४)। काव्यमा ध्वनि प्रधानताको चर्चा गर्ने क्रममा आएको शर्माको यस भनाइले शब्दार्थको योगबाट सिर्जित हुने चामत्कारिक अभिव्यक्तिले काव्यलाई सुन्दर बनाउँछ र त्यही सौन्दर्य दिने तत्त्व नै ध्वनि हो भन्ने अर्थ स्पष्ट पारेको छ । "ध्वनिवादका संस्थापक आनन्दवर्द्धनले 'काव्यको आत्मा ध्वनि हो भनी विद्वान्हरूले भनेका छन्' भन्दै ध्वनिसिद्धान्तको प्रचलन पहिलेदेखि नै थियो भन्ने कुरो देखाएका छन्" (अधिकारी २०५९: २८)। यस अभिव्यक्तिमा आनन्दवर्द्धनभन्दा पनि अघिदेखि प्रचलनमा रहेको ध्वनि नै काव्यको आत्मा हो भन्ने भाव समाहित भएको पाइन्छ । समग्र रूपमा हेर्दा काव्यमा प्रयुक्त शब्द र अर्थले वाच्यार्थलाई परित्याग गरी आपसी समन्वयमा अर्कै चामत्कारिक, प्रतीयमान, भित्री, विशेष सौन्दर्ययुक्त अर्थ प्रतिपादन गर्दा ध्वनिको सिर्जना हुन्छ भन्ने स्पष्ट हुन्छ । पूर्वीय साहित्यशास्त्रमा ध्वनि शब्दको प्रयोग व्यञ्जक शब्द, व्यङ्ग्य अर्थ, व्यञ्जना वृत्ति र ध्वनि काव्य गरी जम्मा पाँच अर्थहरूमा गरिने भए पनि काव्य समीक्षाका क्षेत्रमा व्यङ्ग्यार्थलाई नै मूल रूपमा ध्वनि मानिन्छ ।

संस्कृत काव्य शास्त्रका क्षेत्रमा इसापूर्व तेस्रो शताब्दीका आचार्य भरतदेखि इसाको सत्रौँ शताब्दीका आचार्य जगन्नाथसम्मको लगभग दुई हजार वर्षसम्मको सुदीर्घ परम्परा रहेको छ । यस परम्परामा ध्वनि सिद्धान्तभन्दा अघि र पछि पनि अन्य विभिन्न प्रकारका सिद्धान्तहरू स्थापित भएका छन् । यस्तै सिद्धान्तहरूमध्ये एक सिद्धान्तका रूपमा ध्वनि सिद्धान्त स्थापित छ । यस सम्बन्धमा विष्णुप्रसाद पौडेल अनि मोहनराज शर्मा र खगेन्द्रप्रसाद लुइटेलका भनाइहरू सान्दर्भिक छन् :

> ध्वनि-सिद्धान्तको स्थापनापूर्व रस, अलङ्कार, रीति, गुण-सिद्धान्तहरूको स्थापना भइसकेको थियो तर तिनमा स्पष्ट रूपमा ध्वनिको उल्लेख थिएन तापनि ध्वनि-सिद्धान्तले प्रतिपादन गरेको प्रतीयमान अर्थलाई प्रत्यक्ष वा अप्रत्यक्ष रूपमा तिनले चर्चा गरेका थिए । भरतले रसादि तात्पर्यमा ध्वनिकै प्रतिपादन गरेको कुरा आनन्दवर्द्धनले नै भनेका छन् । यस्तै अलङ्कारवादीहरूले समासोक्ति, व्याजस्तुति, अप्रस्तुत प्रशंसा आदि अलङ्कारमा ध्वनि-सिद्धान्तले औँल्याएका गुणीभूत व्यङ्ग्यको सन्दर्भ र पर्यायोक्ति अलङ्कारमा अन्य व्यङ्ग्यका सन्दर्भ समावेश गर्न चाहेको कुरा जगन्नाथले पनि जनाएका छन् । यस बाहेक आनन्दवर्द्धनपूर्व ध्वनिलाई काव्यको आत्मभूत तत्त्वका रूपमा सकारी विस्तारपूर्वक चर्चा गर्ने अन्य आचार्यहरू पनि रहेको जानकारी आनन्दवर्द्धनले नै 'बुधैः' 'मनिषी' जस्ता शब्द प्रयोग गरेर दिएका छन् । यी सन्दर्भबाट ध्वनि सिद्धान्तको स्थापनापूर्व देखिएका काव्यशास्त्रीय चिन्तन परम्पराबाट यो सिद्धान्त प्रशस्त प्रभावित र प्रेरित मान्न सकिन्छ । पूर्ववर्ती रस, अलङ्कार र रीति-सिद्धान्तको समन्वय नै वास्तवमा यस सिद्धान्तको मूलभूत उद्देश्य पनि हो । तसर्थ उक्त काव्यशास्त्रीय चिन्तन परम्परा यस सिद्धान्तको निर्माणका लागि धेरै महत्त्वपूर्ण स्रोत हो (पौडेल, २०५७: १४४)।

> आनन्दवर्द्धनले ध्वनिको स्वरूप, भेदोपभेद तथा काव्यमा यसको स्थान आदिबारे गहन व्याख्या गरी ध्वनिलाई सैद्धान्तिक रूप दिएका छन् र ध्वनिवादका रूपमा यसको विकास गरेका छन् । एउटा काव्य सिद्धान्त वा वादका रूपमा प्रथम चर्चा र व्याख्या गर्ने सर्वप्रथम व्यक्ति आनन्दवर्द्धन भएकाले उनलाई नै ध्वनि सम्प्रदायका प्रवर्तक र ध्वनि सिद्धान्तका प्रथम संस्थापक मानिन्छ (शर्मा र लुइटेल, २०६१: ८४)।

यसरी पौडेल अनि शर्मा र लुइटेलले पूर्वीय काव्यशास्त्रको परम्परामा रस, अलङ्कार, रीति, गुण, ध्वनि, वक्रोक्ति, औचित्य आदि धेरै सिद्धान्तहरू स्थापित थिए भनी उल्लेख गरेका छन् । यसरी स्थापित भएका सिद्धान्तमध्ये रस तथा ध्वनि आत्मवादी र अन्य देहवादी सिद्धान्तका रूपमा परिचित छन् । "आचार्य आनन्दवर्द्धनभन्दा अघि नै रसवादका प्रणेता आचार्य भरतले रसका सन्दर्भमा र भामह, उद्भट आदि अलङ्कारवादी आचार्यहरूले अलङ्कारको एक भेदकै रूपमा ध्वनिको चर्चा गरेका थिए भन्ने ध्वनिकार स्वयम्ले स्वीकारेका छन्" (पौडेल २०५७: १४४)। आनन्दवर्द्धनभन्दा अघि ध्वनिका विषयमा यथेष्ट चर्चा परिचर्चा भएको भए पनि त्यसले शास्त्रीय आधार पाउन सकेको थिएन । उनले अभाववाद, अनिर्वचनीयतावाद, लक्षणावाद, अन्तर्भाववाद आदि एक दर्जन जति ध्वनिका सम्भाव्य विरोधी मतहरूको खण्डन गर्दै शास्त्रीय आधारसहित काव्यात्माकै रूपमा यस सिद्धान्तको स्थापना गरेका हुन् । त्यसपछिका आचार्यहरू मम्मट, विश्वनाथ, जगन्नाथ आदिले यस सिद्धान्तलाई थप उचाइ प्रदान गरेका छन् ।

३.२ ध्वनिको स्वरूप र वर्गीकरण

आनन्दवर्द्धनले ध्वनिका स्वरूप र प्रकारका विषयमा प्रकाश पारेका छन् । उनका अनुसार जहाँ (वाचक) शब्द र (वाच्य) अर्थले आफ्नोआफ्नो अस्तित्वलाई गौण बनाएर जुन (विशिष्ट) अर्थको प्रतिपादन गर्छन्, त्यही अर्थलाई ध्वनि भनिन्छ (चौधरी, सन् २००३: ४९)। यसै भनाइलाई नेपाली साहित्य कोशमा ध्वनिकारलाई उद्धृत गर्दै यसरी भनिएको छ : "काव्यमा जहाँ शब्द वा अर्थले आफ्नो मुख्य (सङ्केतित) अर्थलाई उपसर्जन (उपेक्षा) गरेर विशेष (काव्योपयुक्त रमणीय) अर्थको अभिव्यञ्जना गर्छ त्यहाँ ध्वनि हुन्छ, त्यसै अर्थलाई ध्वनि भनिन्छ" (बराल र अन्य, २०५५: ३३२)। ध्वनिलाई चिनाउने सन्दर्भमा डा. सत्यदेव चौधरीका भनाइलाई निम्न बुँदाहरूमा प्रस्तुत गर्न सकिन्छ :

- प्रतीयमान अर्थ नै ध्वनि हो ।
- प्रतीयमान अर्थ शब्दगत र अर्थगत यी दुबैभन्दा भिन्न हुन्छ ।
- सुन्दरी नारीका सबै अङ्गहरूको समष्टिगततामा छुट्टै लावण्य भएजस्तै महाकविका वाणीमा प्रतीयमान अर्थ हुन्छ ।
- ध्वनि लज्जा वा लावण्य समान काव्यको आन्तरिक तत्त्व हो ।
- वाच्यार्थ विधि रूप (सकारात्मक) भए ध्वन्यार्थ निषेध रूप (नकारात्मक) हुन्छ र वाच्यार्थ निषेध रूप भए ध्वन्यार्थ विधि रूप हुन्छ वा वाच्यार्थ र ध्वन्यार्थको सम्बन्ध विपरीत धर्मी हुन्छ (चौधरी, सन् २००३: ४९-५०)।

काव्यको आङ्गिक समष्टिबाट व्यक्त हुने शब्दगत र अर्थगतभन्दा भिन्न प्रतीयमान अर्थ, जुन नारीको लज्जासमान हुन्छ र वाच्यार्थभन्दा विपरीत अर्थमा काव्यबाट अभिव्यक्त हुन्छ त्यो नै ध्वनि हो भन्ने निष्कर्ष चौधरी र बराल आदिको रहेको छ ।

ध्वनि सिद्धान्तमा अविवक्षित वाच्य र विवक्षितान्यपर वाच्य भन्ने मूल दुई भागमा वर्गीकरण गरी तिनलाई पुनः दुई दुई भागमा वर्गीकरण गरिएको छ । यो वर्गीकरण अनुसार अविवक्षित वाच्यका अर्थान्तरसङ्क्रमित वाच्य र अत्यन्त तिरष्कृत वाच्य दुई भेद छन् भने विवक्षितान्यपर वाच्यका असंलक्ष्यक्रम र संलक्ष्यक्रम दुई भेद गरिएको पाइन्छ । यीमध्ये रस ध्वनिलाई असंलक्ष्यक्रममा र वस्तु ध्वनि अनि अलङ्कार ध्वनिलाई संलक्ष्यक्रममा राखिएको पाइन्छ । अध्ययन अध्यापनका सन्दर्भमा मूल रूपमा ध्वनिलाई वस्तु ध्वनि, रस ध्वनि र अलङ्कार ध्वनि भनी तीन भागमा वर्गीकरण गर्ने परम्परा छ । त्यसमा पनि रस ध्वनिलाई सबैभन्दा उत्तम मानिएको छ । संस्कृत काव्यशास्त्रका परम्परामा ध्वनिका जम्मा १०,४५५ भेदहरू रहेको कुरा *हिन्दी साहित्य कोश*मा उल्लेख गरिएको छ ।

ध्वनि पूर्वीय काव्यशास्त्रका क्षेत्रमा आफैँमा विशिष्ट सिद्धान्त हो । ध्वनिलाई विशिष्ट रूपमा चिनाउने सन्दर्भमा आचार्य विश्वनाथले ध्वन्यार्थ अन्य अर्थभन्दा स्वरूप, सङ्ख्या, अर्थबोध, निमित्त, कार्य, प्रतीतिकाल, आश्रय, विषय, अर्थ निश्चितता, सम्बन्ध, भाषा, अन्वय आदिका आधारमा भिन्न भएको बताएका छन् । यस प्रकार साहित्यशास्त्रीय चिन्तनमा ध्वनि आफ्नै अस्तित्व, स्वरूप तथा गाम्भीर्य भएको सिद्धान्तका रूपमा देखा पर्छ । यसका भेद देखाउने क्रममा विद्वान्हरूले उक्ति, शक्ति, अर्थक्रम आदि पक्षलाई आधार बनाएका छन् भने साहित्यिक पाठका पद, पदावली, वाक्य र प्रबन्धजस्ता पक्षको स्तरका आधारमा पनि ध्वनिको भेद हुने देखाएका छन् ।

समग्रमा भन्दा संस्कृत काव्यशास्त्रीय परम्परामा ध्वनि एक विशिष्ट साहित्यशास्त्रीय सिद्धान्तका रूपमा स्थापित भएको छ । आचार्य भरतदेखि नै ध्वनिका सम्बन्धमा चर्चाहरू प्रारम्भ भएर अघि बढेको भए पनि सैद्धान्तिक अवधारणासहित काव्यात्माकै रूपमा चर्चा गरी ध्वनिवादको संस्थापन गर्ने आचार्य आनन्दवर्द्धन हुन् । यो सिद्धान्त वाच्यार्थ र लक्ष्यार्थभन्दा भिन्न छ । व्यङ्ग्यार्थ वा प्रतीयमान अर्थ नै ध्वनि हो र ध्वनि नै काव्यात्मा हो भन्ने ध्वनिवादी आचार्यहरूको तर्क रहेको पाइन्छ । उनीहरूले ध्वनिलाई विभिन्न भेदोपभेदहरूमा वर्गीकरण गरेका छन् र ध्वनिकै आधारमा काव्यको स्तर निर्धारण पनि गरेका छन् । यस लेखमा विवेच्य कविताको शीर्षक, पद, पदावली, लेखनकाल आदिका आधारमा ध्वनित हुन आएका अर्थहरूको विश्लेषण गरी निष्कर्ष निकालिएको छ ।

४. 'अभिशप्त घर' कविताको वाच्यार्थ

कवि भूपि शेरचनद्वारा लिखित र 'घुम्ने मेचमाथि अन्धो मान्छे' (२०२६) कविता सङ्ग्रहमा सङ्गृहीत 'अभिशप्त घर' कवितामा दुई ठुला घरका बिचको एउटा कमजोर घरलाई प्रमुख विषय बनाइएको छ । समाजमा भएको एउटा कमजोर घर छिमेकका दुई शक्तिशाली घरहरूको झगडामा पिसिएर कसरी दयनीय अवस्थाबाट गुज्रिन पुग्छ भन्ने तथ्यलाई यस कविताको प्रमुख विषय बनाइएको छ । जब जब छिमेकका ठुला घरहरू दायाँ र बायाँबाट एकअर्काका छानामाथि ढुङ्गा बर्साउन थाल्छन्, त्यसबेला कमजोर घरमा घाम ताप्न बसेकी बृद्ध महिलाको चस्मा फुट्छ अनि रमिता हेरेर बसिरहेकी दुलहीका चुराहरू पनि फुट्छन् । जब आधा रातमा दुईतिरका छिमेकी जेले पायो त्यसैले कुटाकुट गर्छन् त्यस बेला बिचको सानो घरको रोगी बूढाको टेक्ने लौरो भाँचिन्छ र ऊ हिँड्न नसक्ने हुन्छ । यसरी विनाकारण बूढीको चस्मा फुटेर देख्न नसक्ने हुँदा र दुलहीको चुरा फुटेर घाइते हुँदा अनि बूढाको टेक्ने लौरो भाँचिएर हिँड्न नसक्ने हुँदासमेत गरिब तथा शक्तिपरास्त घरले सहेर बाँच्नुपर्ने बाध्यता छ । यस्तो घरलाई कविले डढेलोको बिचमा उम्रिएको खरसँग तुलना गरी अभिशप्त घरका विषयमा काव्यात्मक सौन्दर्य सिर्जना गरेका छन् ।

५. 'अभिशप्त घर' कविताको ध्वन्यार्थ

कवि भूपि शेरचन राजनीतिक रूपमा पनि अत्यन्त सचेत सर्जक हुन् । उनको अध्ययन र राजनीतिक सक्रियताका कारण पनि उनका कवितामा तत्कालीन युगबोध तथा जीवनबोध पाइन्छ । युगबोध र जीवनबोधको अभिव्यक्तिकै सेरोफेरोमा यस कविताको शीर्षकबाट अनेक अर्थहरू व्यञ्जित भएका छन् । यस कवितामा कवि भूपि शेरचनले पढेका, भोगेका वा देखेका राष्ट्रिय, अन्तर्राष्ट्रिय परिस्थितिहरू र जीवनबोध ध्वनित भएर आएका छन् । प्रस्तुत लेखमा ध्वनिका यी सबै अवस्थाहरू बारे अलग अलग चर्चा गरी ध्वनित हुन पुगेका अर्थहरूको निरूपण गर्ने प्रयास गरिएको छ ।

५.१ 'अभिशप्त घर' कवितामा ध्वनित अन्तर्राष्ट्रिय परिस्थिति

'अभिशप्त घर' शीर्षक रहेको यस कवितामा वाच्यार्थका स्तरमा अभिशप्त शब्दले श्रापित वा श्राप पाएको भन्ने र घर शब्दले मान्छेको आवास भन्ने दिन्छन् । त्यस कारण मान्छेको घर वा आवास श्रापित भएका कारण बस्न योग्य छैन भन्ने अर्थ शीर्षकबाटै ध्वनित हुन आउँछ । त्यसो भए अभिशप्त घर के हो ? यस प्रश्नको उत्तर खोज्दा शीर्षकमा प्रयोग भएको यस पदावलीले सङ्केत गर्ने ध्वनिका अनेक तरङ्गहरू कविताभित्र समेटिन आउँछन् । यस क्रममा अभिशप्त घर पदावलीसँग जोडिन आउने महत्त्वपूर्ण एउटा अर्थ 'संसार' हो । अर्थात् कविका अनुसार संसार नै अभिशप्त घर हो । यस संसारमा कमजोरहरू बाँच्न सक्ने आधार अत्यन्त दुर्बल थियो वा छ । यो कविता सिर्जना गर्दासम्मको समयमा मानव सभ्यताले अनेक प्रकारका नरसंहारहरू भोगिसकेको थियो र त्यसको चक्र रोकिएको थिएन । संसारभरि नै शक्ति राष्ट्रहरू आफ्ना उपनिवेश फैलाउने क्रममा कमजोर राष्ट्रमाथि शक्तिको प्रयोग गरिरहेका थिए । राष्ट्रहरूको एकीकरणका नाममा, धर्मयुद्धका नाममा, उपनिवेशका नाममा अनि दुबै विश्वयुद्धका नाममा पनि शक्ति सम्पन्नहरूले कमजोरहरूको संसारलाई अभिशप्त बनाएकै हुन् । संसारले भोगेको धर्मयुद्धका दुबै पक्षले बिचका कमजोरहरूलाई नै देख्न, बोल्न र हिँड्न नसक्ने बनाएको साक्षी इतिहास छ । त्यस्तै विश्वयुद्धका दुबै सैन्य शक्तिहरू ट्रिपल एलाइन्स र ट्रिपल इन्टेन्टीले पनि बिचका कमजोरहरूलाई नै दमन गरेकै हुन् । यसरी दिन, रात, साँझ, बिहान केही नभनी र जस्तो सकिन्छ त्यस्तै हतियारसहित युद्धमा होमिएकाहरूका कारण सिर्जित कमजोरहरूका समस्यातर्फ सङ्केत गर्दै कविले लेखेका छन् :

आधा रातमा जब छिमेकीहरूले आपस्तमा
जहाँबाट जे पायो त्यसैले कुटाकुट गर्छन्
भोलिपल्ट बिउँझेर यस घरको बातको रोगी बुढाले
आफ्नो लौरी भाँचिएको पाउँछ ।

घुम्ने मेचमाथि अन्धो मान्छे : पृ. ७०

प्रस्तुत कवितांशमा संसारका शक्तिशालीहरूका बिच रातारात भएको युद्धबाट आहत बन्न विवश शक्ति परास्तहरूको अवस्था ज्यादै मर्मस्पर्शी रूपमा यहाँ प्रस्तुत भएको छ । यहाँ बूढाको टेक्ने लौरो भाँचिनु कमजोरहरूको सहारा समाप्त हुनु हो । शक्ति सम्पन्नहरूको मात्र राज चल्ने यस संसारमा कमजोर भएर जीवन बाँच्न बाध्य हुनु नै वास्तवमा अभिशप्त घरको यथार्थ हो भन्ने अर्थलाई अझ स्पष्ट पार्दै कविले लेखेका छन् :

यस्तो छ अभिशप्त घर

डढेलोको बिचमा उम्रेको खरजस्तो छ यो घर

घुम्ने मेचमाथि अन्धो मान्छे : पृ. ७०

यहाँ पदावलीका रूपमा प्रयोग भएको बिम्ब (डढेलोका बिचमा उम्रेको खरजस्तो छ यो घर) ले संसार युद्धका कारण ध्वस्त भएर खरानीमा परिणत हुने निश्चिततातर्फ सङ्केत गरेको छ । जसरी डढेलोले घेरिएको खर आफैँ, ठाडै अनि चाँडै सुकेर हुरहुर बल्न बाध्य हुन्छ, त्यसरी नै यस संसारमा कमजोरहरू अरूकै युद्धबाट घेरिएर मर्न वा मारिन विवश छन् भन्ने ध्वन्यार्थ उपर्युक्त काव्यांशबाट व्यक्त भएको मान्न सकिन्छ ।

विश्वयुद्धपछिको भिन्न प्रकारको त्रासले युक्त समयमा संसारका महाशक्ति राष्ट्रहरू दुई भिन्न विचारधारामा आबद्ध थिए भने केही कमजोर राष्ट्रहरू ती दुबै समूहभन्दा बाहिर थिए । यस्ता कमजोर राष्ट्रहरूको भाग्य भविष्य तिनै महाशक्ति राष्ट्रहरूको निगाहमा अडेको थियो । अमेरिकी नेतृत्वको नेटो सैनिक सङ्गठन र रुसको नेतृत्वको वार्सा सैनिक सङ्गठनबाट त्रसितहरूले असंलग्न नामको अर्को समूह निर्माण गरेर आफूलाई बचाउने आधार खोजिरहेका थिए । विधिको बन्धनलाई सजिलै चुँडाउन सक्ने यी सैन्य शक्तिहरूको निरन्तर बढ्दै गइरहेको सामरिक सामर्थ्य र निरन्तर नजिकिँदै गएको भयानक भिडन्तको अवश्यम्भावी सम्भावनाका कारण कमजोर राष्ट्रहरू एकपछि अर्को गर्दै आक्रमणको निसानामा परिरहेका थिए । विश्वमा विकसित यस प्रकारको विषम अवस्थाबारे कवि भूपि जानकार थिए । त्यसैले उपर्युक्त विश्व परिस्थितिलाई सहज ढङ्गले सङ्केत गर्दै कविले लेखेका छन् :

जब जब बायाँ र दायाँपट्टिका छिमेकीहरूले

एकअर्काको छानामाथि ढुङ्गा बर्साउँछन्

यस घरको छानामा घाम ताप्न बसेकी बूढीको चस्मा र

कौसीमा रमिता हेरिरहेकी दुलहीका चुराहरू फुट्छन् ।

घुम्ने मेचमाथि अन्धो मान्छे : पृ. ७०

प्रस्तुत कवितांशमा प्रयोग भएको 'बायाँ' शब्दले रुस नेतृत्वको सैन्य समूह वार्सा र 'दायाँ' शब्दले अमेरिका नेतृत्वको सैनिक समूह नेटोलाई सङ्केत गरेको पाइन्छ । जब जब यी समूहहरूका बिचको भिडन्तको अवस्था आयो तब तब कमजोर राष्ट्रका नागरिकहरू विना कारण मारिन पुगेका थिए अनि तिनीहरूको सुनुवाइ कतै हुँदैनथ्यो । त्यसकारण पल पलको डर, त्रास, पीडा र मृत्यु बोकेर बाँच्न विवश तिनै कमजोर राष्ट्रहरू नै अभिशप्त घर हुन् भन्ने ध्वन्यात्मक अर्थ यस कविताबाट प्रतीत हुन्छ । शक्ति समूहहरूको चेपुवामा परेका यस्ता सबै राष्ट्रहरूको अवस्था डढेलोको बिचमा भएको खरको जस्तै अनिश्चित छ वा थियो भन्ने अर्थ यहाँ ध्वनित भएको छ ।

५.२ 'अभिशप्त घर' कवितामा ध्वनित राष्ट्रिय परिस्थिति

प्रस्तुत कविता प्रकाशन गर्दाको समय (२०२६) लाई आधार मानेर नेपालको भौगोलिक, राजनीतिक विशिष्टतातर्फ मनन गर्दा पनि यस कवितामा विशेष प्रकारको राष्ट्रिय परिस्थिति ध्वनित हुन आउँछ । नेपाल एकीकरणका संवाहक पृथ्वीनारायण शाहले नै यो देश दुई ढुङ्गाबिचको तरुल हो भनेका थिए । यस

कुराबाट वा नेपालको भौगोलिक विशिष्टता र भारत अनि चीनको सामर्थ्यका साथै यस बिचको सामरिक महत्त्वको कुराबाट कवि भूपि पनि अनभिज्ञ थिएनन् । भारत र चीनजस्ता दुई विशाल र शक्ति सम्पन्न राष्ट्रहरूका बिचमा छुट्टै अस्तित्वका साथ चेपिएर रहनुपर्ने नेपालको भौगोलिक अवस्थिति छर्लङ्ग छ । भारत र चीन उदियमान शक्ति मात्र होइनन्, यी दुबै देशका बिचमा इतिहासमा धेरै पटक आमनेसामनेको अवस्था पनि भएकै छ । यदि यो अवस्था बढेर जाने र निर्णायक बिन्दुसम्मको यात्रा तय हुने हो भने नेपाललाई चारैतिरबाट घेरेर बसेका उपर्युक्त दुबै देशमा हुने युद्धको छिटाले मात्र पनि यो देश दयनीय अवस्थामा पुग्न सक्छ भन्ने ध्वन्यात्मक तात्पर्यतर्फ कविले सङ्केत गरेका छन् । जब यी दुई छिमेकी देशका बिचमा युद्धको अवस्था सिर्जना हुन्छ र एकअर्कामाथि हतियारको प्रहार हुन थाल्छ त्यस्तो अवस्थाको परिणामतर्फ सङ्केत गर्दै कविले व्यञ्जनाका भाषामा भनेका छन् :

यस घरको छानामा घाम ताप्न बसेकी बूढीको चस्मा र
कौसीमा रमिता हेरिरहेकी दुलहीका चुराहरू फुट्छन् ।

घुम्ने मेचमाथि अन्धो मान्छे : पृ. ७०

यस कवितांशमा प्रस्तुत 'यस घरको' पदावलीले स्पष्ट रूपमा नेपाललाई सङ्केत गर्छ । यसरी चारैतिर भारत र चीनबाट घेरिएर रहेको नेपाल ती दुई मुलुकका बिचको युद्धका अवस्थामा डढेलोले चारैतिरबाट घेरिएको खरजस्तै हुन पुग्छ भन्ने अर्थ यहाँ ध्वनित भएको छ ।

प्रस्तुत कविता प्रकाशनको समयमा नेपालको आफ्नै आन्तरिक राजनीति पनि अन्योलग्रस्त अवस्थाबाट विकसित हुँदै थियो । वि. सं. २००७ मा राणाविरोधी आन्दोलन गरी राजा र देश दुबैलाई निरङ्कुशताको गर्तबाट पार लाउन सफल भएका र २०१७ सालसम्म देशको शासनसत्तासमेत सञ्चालन गरिसकेका दलहरू २०१७ सालको राजा महेन्द्रको कदमबाट प्रतिबन्धित भएका थिए । देशको शासन व्यवस्था पञ्चायती ढाँचामा अन्योलग्रस्त हुँदै र धर्मराउँदै अघि बढ्दै थियो भने प्रतिबन्धित अवस्थामै भए पनि भूमिगत शैलीमा दलहरू पनि क्रियाशील नै थिए । त्यस कारण राजा र सत्ताको शक्ति अनि आशीर्वाद प्राप्त पञ्चायत र प्रतिबन्धित भूमिगत दलहरू दुबैका बिचमा प्रत्यक्ष, अप्रत्यक्ष सङ्घर्ष चलिरहेकै थियो । यो अवस्थाका भोक्ता कवि स्वयं पनि थिए । विभिन्न ठाउँहरूमा भिडन्त तथा हत्याका शृङ्खलाहरू पनि भइरहेकै थिए । दलकै नाममा कतिपय निर्दोष सर्वसाधारण जनताहरू पनि झूटा मुद्दा तथा बदलाको भावनाका सिकार भएका थिए । यस्तो अवस्थामा दल र पञ्चायतका समर्थकहरूका बिचको भिडन्तमा सर्वसाधारणलाई यो देश अभिशप्त घर बन्दै थियो भने अर्कातर्फ राज्यसत्ता र शक्तिका आडमा लगाइएका झूटा मुद्दा, जन्मकैद, सर्वस्वहरण आदिजस्ता ज्यादै अमानवीय सजायँका कारण पनि कतिलाई यो देश अभिशप्त घर बन्दै थियो । यी दुबै प्रकारका चपेटामा परेकाहरू वा पर्न लागेकाहरूको जीवन चारैतिरबाट घेरिएर निरूपाय अवस्थामा पुगेको यथार्थलाई कवितामा यसरी सङ्केत गरिएको छ -

यस्तो छ अभिशप्त घर
डढेलोको बिचमा उम्रेको खर जस्तो छ यो घर

घुम्ने मेचमाथि अन्धो मान्छे : पृ. ७०

यस कवितांशका माध्यमबाट कविले नेपालको आन्तरिक राजनीतिक किचलोले निम्त्याएको ज्यादै विषम परिस्थितिलाई अत्यन्त सटिक र मार्मिक ढङ्गले ध्वनित गरेका छन् ।

५.३ 'अभिशप्त घर' कवितामा ध्वनित मानव जीवन

प्रस्तुत 'अभिशप्त घर' कवितामा अत्यन्त मार्मिक तथा रोचक ढंगबाट समग्र मानव जीवन पनि ध्वनित हुन पुगेको छ। यस अर्थ अनुसार मान्छे आफैँमा अभिशप्त घर बन्दै छ। संसारका हरेक मान्छे आफ्ना चाहना र सामर्थ्यको सीमाका बिचमा सङ्घर्षरत छ। जीवन रहुन्जेल इच्छाहरूको बाढी आई नै रहन्छ। भौतिक, जैविक, आध्यात्मिक आदि इच्छा वा चाहनालाई रोक्ने वा निषेध गर्ने कुनै पनि अस्त्र मानिससँग छैन, तर प्रत्येक मानिसको सामर्थ्यको सीमा छ। इच्छा, चाहनाले मानिसलाई उराल्छ, उठाउँछ र आकाशमै उडाउँछ तर सामर्थ्यको सीमाले फेरि धकेल्दै निर्मम ढङ्गले जमिनमै ओराल्छ। त्यसकारण प्रत्येक व्यक्ति इच्छा र सामर्थ्यको सीमाको द्वन्द्वमा पिल्सिरहन्छ। यसरी पिल्सिँदै जीवन भोग्नु पनि मानिसको जीवनको यथार्थ हो। यस्तै इच्छा वा चाहनाको परितृप्ति गर्ने होडमा दौडँदा दौडँदै मानिसले जीवनको यात्रा बिसाउँछ। त्यसैले यिनै इच्छा वा चाहना र सामर्थ्यको सीमा दुबै जीवनरूपी अभिशप्त घरलाई दायाँ र बायाँबाट आक्रमण गरिरहने शक्ति हुन्। त्यस कारण जीवनमा कहिले चस्मा फुट्छ र हेर्नै पाइँदैन, कहिले चुरा फुटेर घाइते भइन्छ, कहिले लौरो भाँचिएर हिँड्ने सहारा गुम्छ अनि कहिले चारैतिरबाट अभाव, दुख, पीडा आदिका आगोमा पिल्सिन बाध्य हुनुपर्छ। यसरी मानिस इच्छा वा चाहना र सामर्थ्यको सीमाका बिचमा कहिले लड्दै अनि कहिले जल्दै बाँचेकै छ। त्यसै हुनाले यिनै शक्तिले हरेक मानिसको जीवनलाई डढेलोका बिचमा उम्रिएको खरजस्तै अभिशप्त बनाएका छन् भन्ने अर्थ पनि यहाँ ध्वनित भएको छ।

६. निष्कर्ष

'अभिशप्त घर' कविताबाट व्यञ्जित हुन पुगेका विविध ध्वन्यार्थहरूको विश्लेषणबाट यो कविता ध्वनि सिद्धान्तका दृष्टिबाट उत्कृष्ट कविता हो भन्ने निष्कर्षमा पुग्न सकिन्छ। यस कविताका माध्यमबाट कवि भूपि शेरचनले तत्कालीन विश्वमा शक्तिसम्पन्न राष्ट्रहरूले कमजोर राष्ट्र एवम् जनतामाथि गरेको ज्यादतीका कारण कमजोरहरूलाई विश्व नै अभिशप्त घर बनेको, नेटो र वार्साजस्ता सैन्य सङ्गठनको शक्ति मोह तथा शक्ति प्रयोगका कारण पनि धेरैलाई संसार अभिशप्त घर बनेको विचार ध्वनित भएको छ। त्यसैगरी भारत चीनका बिचमा चेपिएर रहेको अनि सामरिक रूपमा तुलनात्मक दृष्टिले कमजोर नेपाल देश पनि एकातिर यिनै परिस्थितिका कारण अभिशप्त घर बन्दै गएको अनि अर्कातर्फ आफ्नै राजनीतिक द्वन्द्व र शासकहरूको अमानवीय व्यवहारका कारण अभिशप्त घर बन्दै गएको अवस्था पनि ध्वनित गरिएको छ। त्यसै गरी प्रस्तुत कवितामा मानव जीवनलाई इच्छा तथा चाहना र सामर्थ्यको सीमाका बिचमा पिल्सिँदै बाँच्नुपर्ने र त्यसैको द्वन्द्वकै अवस्थामा मृत्युवरण गर्न विवश हुनुपर्ने अवस्थाको चित्रणका माध्यमबाट अभिशप्त घरका रूपमा व्यञ्जित गरिएको छ। समग्रमा तत्कालीन विश्व परिस्थिति, नेपालको आन्तरिक परिस्थिति र समग्र मानव जीवनलाई एउटै सानो कविताभित्रबाट सफल, सरस र मार्मिक ढङ्गले ध्वनित गरिएको हुनाले प्रस्तुत कविता ध्वन्यात्मक सौन्दर्यका दृष्टिले उत्कृष्ट कविता हो भन्ने निष्कर्षमा पुग्न सकिन्छ।

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