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RESEARCH ARTICLE

MIGRATION EXPECTANCY IN RURAL AREA OF NAINITAL DISTRICT IN UTTARAKHAND: A CASE STUDY OF OKHALKANDA BLOCK

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ABSTRACT

The field of demography provides a researcher with a lot of areas for research studies. Demography is the science of the study of population dynamics. The ever changing population patterns are affected by a multiplicity of factors - migration being one such factor. In the recent years, the problem of out-migration has been one of the major points of concern and deliberation for the state of Uttarakhand. The various demographic events can be studied through expectancy table procedure. The present paper is an attempt to find out the pattern and nature of out-migration expectancy characterized by age and gender. The study area is the Okhalkanda block of the Nainital district in Uttarakhand.

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INTRODUCTION

Migration expectancy may be determined whenever appropriate life table and migration data are accessible. Life tables are available for states; though for areas smaller than a state either additional life tables or assumptions about the applicability of the state tables would be required. Migration expectancy tables for each of the states constructed as of a census date would permit area comparisons. Migration expectancy may be calculated for each state with controls for sex, occupation, employment status, income, education, and other variables for which data may be available. In the absence of appropriate life tables, it might be unwise to assume that national or state life table values can be applied to populations within a state or subarea. The field of demography provides a researcher with a lot of areas for research studies. There are lots of works done in the field of migration research yet much information still lacks in our knowledge. One of this information is the idea on the moves a person might be expected. The oldest type of expectancy table is life table. It shows the probability of dying and surviving at a given age as well as the average number of years of life remaining at the beginning of a specific age. An expectancy table may be handle with two kinds of events. First, there are events which can occur but once and are non-reversible. Death happens only once in a life time of a person and we can calculate the probability of person dying. The life table yield expectancies for the first kind of event. Secondly, there are some events which may occur more than once in a life time of a person and therefore may be reversible and recurrent. Migration, morbidity, marriage, unemployment, etc., are such kind of events. For example, morbidity may be completely reversible if a person makes a complete recovery and recurrent if illness strikes again. Initially Jaffe (1960) explained the expectancy table procedure to find out the expectancy of various demographic events such as to determine the probable life time earnings of a person in a given industry or in a given occupation. Many studies have been done in past to explain the expectancy tables such as the expectancy of a person being marrying or remaining single (Grabill, 1945), the expectancy of a person being admitted to a mental hospital (Ogburn and Winston, 1928-29), the expectancy table for school going population with dropout rates (Stockwell and Nam, 1963). Long (1970) had measured the volume of geographical mobility of the United States Census. Welfbein (1949) has constructed the average number of years a person can expect to be part of the work force with the help of working force life tables. In recent past migration had attracted the attention of policy makers, planners, social scientists and researchers as having special significance in the context of rural development. Expectancy tables of migration gives information on the expected number of moves a person may make during his remaining life time. One important example of an expectancy table is net reproduction rates, which shows the probability of a birth occurring to a female of a given age and the average number of births to be expected during the life time of a female cohort. Thus, the average number of occurrences of some event to be experienced by a cohort during its life time can be shown by expectancy table. Wilber

(1963) and Long (1973) have constructed the migration expectancy tables for the united states using the census data for the year 1958 under the assumption that (1) a maximum of one move per person per time period and (2) non-migration for persons reporting the same address at both the beginning and end of the period involved. Both assumptions include some degree of error since undoubtedly some move more than once and others have returned to their original place at the time of interview. Expectancy tables are able to give the answers to the questions:

(i) What are the possible chances of a person moving during his remaining lifetime?
(ii) How many times will he move during his remaining lifetime?

Expected future mobility behavior data may be useful in projecting migration trends as well as gaining additional insights into policy measures that might control population movement. If the population redistribution is assessed in relation to different levels of socio-economic and demographic developments, Migration as a tool in the development process will be better achieved. In the present study, we have tried to find out the nature and pattern of migration expectancy characterized by age and gender.

Calculation of migration expectancy

Procedure for calculation of migration expectancy is a straightforward operation involving a few simple steps. It may be calculated by following the same routine from Jaffe's illustration (1960, p.50) of calculating the average number of admissions to a mental hospital for the survivors of a cohort during the course of their life time. For completeness, the procedure of migration expectancy is given below:

1 In the table the age interval has been given in column 1. (According to Abridged Life Table)
2 Migration rates in column 4 are established by dividing the number of migrants by corresponding population in each age group. Since migration is a rare event and it is difficult to obtain one year migration rate. Fortunately, the data for the number of migrants during (2010-16) are available. Dividing it by 6, we get the number of migrants for one year and hence one year migration rate.
3 In the table on columns 5 and 6 were taken directly from an abridged life table for the rural area of the Uttarakhand state as per the abridged life table (2012-16). Column 5, the l_x column from the life table shows survivors, the number of persons alive at the beginning of an age interval out of 100,000 born alive. Column 6 is the usual set of L_x values from the life table, the stationary population.
4 The expected number of moves in a given age period in column 7 are obtained by multiplying the migration rate in column 4 by the stationary population in column 6 for the appropriate age interval.
5 The expected number of moves in the given age period and all later ages in column 8 are directly comparable to the T_x column of an ordinary life table.
6 To determine the expected number of moves per person in an age group and for all later ages. Thus in column 9 the average number of moves at birth and all older ages are find by the cumulative moves in column 8 are divided by the survivors given in column 5.

The computation of migration expectancy may be symbolized as

$$ {}_xM_{x+n} = \sum_{L=x}^{L=x+n} \frac{(P_x)({}_xL_{x+n})}{l_x} $$

Where ${}_xM_{x+n}$ is the average number of moves during the remaining life time of a person at age x or the moves between age x and x+n years.

P_x is the migration rate for the population at age x.

${}_xL_{x+n}$ is the stationary population at age x to x + n years.

l_x is the number of survivors at age x.

$\sum_{L=x}^{L=x+n}$ refers to the summation of the product of P_x and ${}_xL_{x+n}$ from age x to x + n years.

It is well known that in India rural to urban migration is mainly male dominant. Male migration is mainly motivated by better job opportunities at destination to improve and maintain economic condition. Better education and health facilities at urban areas may be another important pull factors to motivate rural to urban migration.

Table 1. Migration Expectancy for male in the Study Region

Migration Expectancy in Okhalkanda Block (Male)								
Age interval	Male Migrants during 2010-16	Male Population 2016	One Year Migration Rate	lx	Lx	Expected number of moves in the age interval	Expected number of moves in the interval and all older ages	Average number of moves at birth and all older ages
0-1	11	17	0.1078	100000	97645	10530	201636	2.02
1-5	39	110	0.0591	97326	387965	22925	191105	1.96
5-10	31	160	0.0323	96775	483004	15597	168180	1.74
10-15	24	199	0.0201	96427	481556	9680	152583	1.58
15-20	137	239	0.0955	96196	479953	45853	142904	1.49
20-25	221	238	0.1548	95749	477317	73870	97050	1.01
25-30	42	196	0.0357	95138	473409	16907	23180	0.24
30-35	8	149	0.0089	94177	468220	4190	6273	0.07
35-40	1	92	0.0018	93063	461610	836	2083	0.02
40-45	0	75	0.0000	91461	451062	0	1246	0.01
45-50	0	104	0.0000	88732	433105	0	1246	0.01
50-55	0	60	0.0000	84315	410303	0	1246	0.01
55-60	0	47	0.0000	79645	382456	0	1246	0.02
60-65	0	50	0.0000	73029	345794	0	1246	0.02
65-70	0	48	0.0000	64847	294443	0	1246	0.02
70-75	1	31	0.0054	52516	231826	1246	1246	0.02
75-80	0	17	0.0000	40046	464451	0	0	0.00
80-85	0	10	0.0000	26180	107340	0	0	0.00
85-110	0	4	0.0000	17055	141136	0	0	0.00

Source: based on field survey

Table 2. Migration Expectancy for female in the Study Region

Migration Expectancy in Okhalkanda Block (Female)								
Age interval	Female Migrants during 2010-16	Female Population 2016	One Year Migration Rate	lx	Lx	Expected number of moves		Average number of moves at birth and all older ages
						in the age interval	in the interval and all older ages	
0-1	8	12	0.1111	100000	97538	10838	201933	2.02
1-5	43	100	0.0717	97152	387153	27746	191096	1.97
5-10	20	161	0.0207	96575	482333	9986	163350	1.69
10-15	12	170	0.0118	96358	481152	5661	153363	1.59
15-20	163	219	0.1240	96103	479733	59510	147703	1.54
20-25	242	338	0.1193	95762	477171	56941	88193	0.92
25-30	52	250	0.0347	95085	474196	16439	31252	0.33
30-35	14	134	0.0174	94587	471044	8202	14813	0.16
35-40	4	87	0.0077	93796	466960	3578	6611	0.07
40-45	1	102	0.0016	92946	461236	754	3033	0.03
45-50	0	83	0.0000	91497	454360	0	2279	0.02
50-55	0	64	0.0000	90193	445638	0	2279	0.03
55-60	0	46	0.0000	87845	430009	0	2279	0.03
60-65	0	43	0.0000	83902	407547	0	2279	0.03
65-70	0	33	0.0000	78754	372519	0	2279	0.03
70-75	0	30	0.0000	69725	323483	0	2279	0.03
75-80	1	19	0.0088	59215	259817	2279	2279	0.04
80-85	0	10	0.0000	44579	192375	0	0	0.00
85-110	0	6	0.0000	32334	300354	0	0	0.00

Source: based on field survey

Table 3. Migration Expectancy for total (Male + Female) in the Study Region

Migration Expectancy in Okhalkanda Block (Total)								
Age interval	Total Migrants during 2010-16	Total Population 2016	One Year Migration Rate	lx	Lx	Expected number of moves		Average number of moves at birth and all older ages
						in the age interval	in the interval and all older ages	
0-1	19	29	0.1092	100000	97580	10655	199864	2.00
1-5	82	210	0.0651	97244	387612	25226	189209	1.95
5-10	51	321	0.0265	96682	482700	12782	163983	1.70
10-15	36	369	0.0163	96398	481386	7827	151202	1.57
15-20	300	458	0.1092	96157	479881	52389	143374	1.49
20-25	463	576	0.1340	95763	477289	63942	90985	0.95
25-30	94	446	0.0351	95119	473830	16644	27043	0.28
30-35	22	283	0.0130	94389	469665	6085	10399	0.11
35-40	5	179	0.0047	93436	464333	2162	4314	0.05
40-45	1	177	0.0009	92215	456108	429	2152	0.02
45-50	0	187	0.0000	90076	443463	0	1722	0.02
50-55	0	124	0.0000	87193	427704	0	1722	0.02
55-60	0	93	0.0000	83711	406085	0	1722	0.02
60-65	0	93	0.0000	78436	376497	0	1722	0.02
65-70	0	81	0.0000	71750	332920	0	1722	0.02
70-75	1	61	0.0027	60923	276074	754	1722	0.03
75-80	1	36	0.0046	49179	209104	968	968	0.02
80-85	0	20	0.0000	34646	146072	0	0	0.00
85-110	0	10	0.0000	23951	214134	0	0	0.00

Source: based on field survey

Recently, females are also accompanying their partners. Generally, migrated females are more likely to affect the socio-cultural activities of the household in comparison to other females. Therefore, it is desirable to calculate the migration expectancy for female migrants. Persons are migrating from the particular village. To know the overall migration expectancy from that village. We are giving, here, the overall migration expectancy (male + female). Table 1, 2 and 3 are shows the migration expectancy tables for males, females and total population (male + female) respectively in rural area of Okhalkanda block in Nainital district.

Conclusion

Since a migration expectancy table gives the average number of moves per person during his remaining lifetime, we can do comparisons between the expected moves of persons at a given age at different point in time, and between persons at the same point in time who have different characteristics (Wilber, 1963). In addition to comparisons by age and gender in Okhalkanda block of Uttarakhand, we may find out the expectancy by rough distance, categories, employment status, marital status and occupation status too. Wherever we have an appropriate life table and accessible migration data, we can make an expectancy table. All 1, 2 and 3 tables are shows the average number of moves at birth and at older ages. The lack of adequate demands for jobs and other facilities in remote villages may be one of the responsible factors for the higher averages. The findings also indicate that the migration expectancy in the study area is gender selective. In each type of village, the expected numbers of moves for males are greater than those for females at birth and all later ages. Secondly, the migration of females is mainly due to her marriages. Generally, males migrate to urban places for their livelihood, leaving their wives and children at home and visit the households at some interval. The results reveal that with the increase in age, migration expectancy decreases. Thus, the migration expectancy is seen high at birth and gradually decreases to 20 years old. After age of 25 years it becomes least.

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