

Investigation of birth rate and crude death rate especially

the cause of death of aborigines of Taiwan since 1946

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(1) Introduction

Aborigines are the original people in Formosa. Although the aboriginal population at present totalled only 3% of all the population in Taiwan but they occupies almost 45% of all the area of Taiwan covering 12 pre-fectures and 3 cities, of Tai-pei Hsin-Chu, Chia-Yi, Tau-eng, Miao-Li, Tai-chung, Nan-tou, and Tai-tung, Kao shung I-lan, mainly in the central range of Formosa. As for the origin of these people, many theories has been debated untill today, but the theory of aborigines being a branch of Yeh-tribe in the mainland near the Fukien province has been accepted nowadays. History call from the discovery of Sung dynasty coil at Pej-Kang we can suggest that there were Chinese came to Formosa in the Sung dynasty. A general picture of the aboriginal population in the ancient time could be, constructed through carious books and literature. During the period of Dutch and Spanish control over Formosa from 1624 to 1661 aboriginal population was estimated as 63861 in 1648 and 39223 in 1655.

The aboriginal population during the period of Koxing a rule over Formosa were 20,000-30,000 reported.

During the period of Ching rule over the island, we had the government report in 1886 that neutralized aborigines numbered 148479 people. During the year of 1886 to 1946, the period of Japanese control, rather accurate statistics of aboriginal population was available for cur study.

In 1899 there were 99332 people reported.

In 1942 were 162031 people, The figure for 1953 were 128812. In 1957 were 187934. The most recent data in 1958 totalled the aborigines as 204652 people.

The number of aborigines living on the plains in muni cipalities in May 1952 numbered 74892. In 1958 and 1959 there were 90337 and 94403 people reported.

As for the cause of death, birth rate and death rate we have no accurate data of ancient time on this problem. Even the date during the period of Japanise control was not significant, because thesec cause of death were not classified strictly according to the international classification.

Any way, the death rate of aborigines in the ancient time might be very high as the health status of aborigines in these days was in a state of rather precarious condition.

The real cause of dropping of aborigines at the past time was regarded to be due to two things, poverty and disease. The changeable weather plus lack of sufficient nutrition and hygienic knowlege were the main cause of high death rate.

During these 16 years since Formosa has been resumed to Mainland, many aborigines were benefitted by the application of medical soience which made the special progress of health status of aborigines. The birth rate was increasing and the crude death rate reducing year by year.

The cause of death changed greatly from its original figure. For instance, malaria had been one of the most common cause of death at the ancient time or even

until a few years ago, but this has been effectively controlled through the malaria control program. The incidence of clinical cases of malaria which was over 1,200,000 cases in this island had dropped to 486 cases in 1956 and never to be seen at present or very few even in the mountainous district, They are no more the main cause of death of aborigines now. Other infectious disease or some epidemic disease such as T.B. cholera small pox which had ever swept all over the vast area of mountain are now controlled effectively also.

A great stride in the advancement of health program was made since these 10 years causing rapid improvement of health status of aborigines. But as the matter's fact the death rate of aborigines is still higher than that of ours and the figure of cause of death are slightly different from that those who are living on the plain.

(2) To investigate the problem.

Because of our having no accurate data on this problem from ancient time and the period of Japanese control over Formosa. We planned to investigate the cause of death of aborigines with their birth and death rate only since 1945. (The year, Chinese government resumed her administration.) Here all of aborigines living on the mountainous district were investigated and those who are living on the plains in municipalities or countries were not included here because of their having the similar environmental condition and habitual life with us.

(3) Materials

The field of investigation covered twelve prefectures including all of aborigines

living on the mountainous district.

Tai-pei Hsien	---	Wu-lai Hsiang
Tao-yuan Hsien	---	Fu-shing Hsiang
Hsin-chu Hsien	---	Chian-shu Hsiang
		Wu-heng Hsiang
Miao-li Hsien	---	Tai-an Hsiang
Tai-chung Hsien	---	Ho-ping Hsiang
Nan-tou Hsien	---	Hsin-i Hsiang
		Jen-ai Hsiang
Chia-i Hsien	---	Wu-fen Hsiang
Kao-hsiung Hsien	---	Tao-yuan Hsiang
		San-Ming Hsiang
		Mau-lin Hsiang
Ping-tung Hsien	---	San-ti Hsiang
		Wu-tai Hsiang
		Ma-cha Hsiang
		Tai-wu Hsiang
		Lai-i Hsiang
		Chun-Zu Hsiang
		Shih-Tzu Hsiang
		Mu-tan Hsiang
Tai-tung Hsien	---	Hai-tan Hsiang
		Yen-ping Hsiang
		Chin-heng Hsiang
		Ta-jen Hsiang
Hua-lien Hsien	---	Shiu-lin Hsiang
		Wan-yung Hsiang
		Tzuo-chi Hsiang
I-lan Hsien	---	Ta-tung Hsiang
		Nan-qi Hsiang

(Note) Lan-Hsu in Tai-tung Hsien is not included here.

(4) Basic data of aboriginal population with birth rate and crude death rate are shown as following.

Here Lan-hsu in Tai-tung Hsien is included.

Table 1

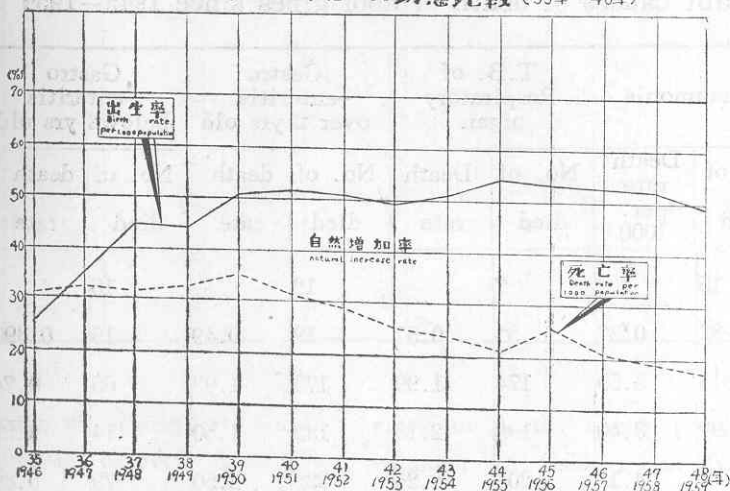
Basic data of aboriginal population on mountain with birth rate and crude death rate since 1946—1949

Year	1946 (35)	1947 (36)	1948 (37)	1949 (38)	1950 (39)	1951 (40)	1952 (41)	1953 (42)	1954 (43)	1955 (44)	1956 (45)	1957 (46)	1958 (47)	1959 (48)
Population	86765	88557	83401	90116	91433	13131	64356	95869	97756	100156	103212	105476	107773	110249
No. of born	2276	3153	3962	3839	4624	4925	4826	4735	5015	5475	5525	5641	5654	5463
No. of died	2661	2900	2749	3006	3273	2883	2746	2559	2392	2087	2764	2133	2109	1954
Birth rate per 1000	26.23	35.60	44.32	44.27	50.57	51.81	51.15	49.50	51.30	54.66	53.53	53.48	52.46	49.56
Crude death rate per 1000	30.67	32.75	30.75	33.36	35.80	30.96	29.10	36.70	24.47	20.84	26.78	20.22	19.57	17.72

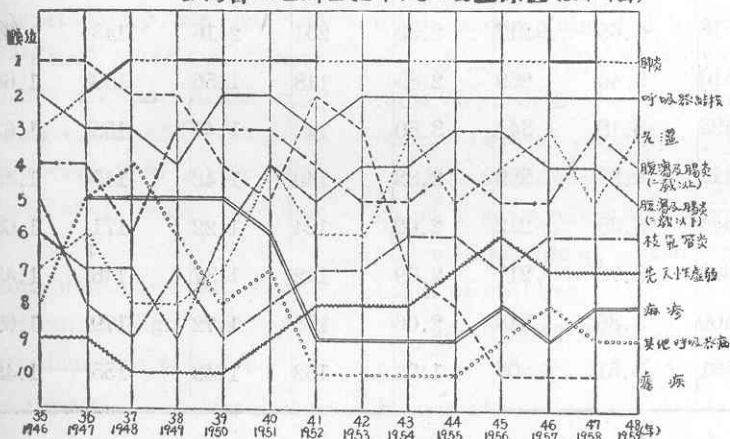
Table 2 Comparison

Population	6497734	6807601	7396931	7554399	7869247	3128374	8434609	8749151	9077643	9473511	9574700	99864,846	10235388
Birth rate per 1000	37.09	38.75	40.67	42.84	48.97	45.88	44.40	43.83	44.57	44.17	40.81	41.65	41.18
Crude death rate per 1000	17.57	14.00	12.62	11.35	11.34	9.72	9.25	8.02	8.46	7.90	8.34	7.58	7.23

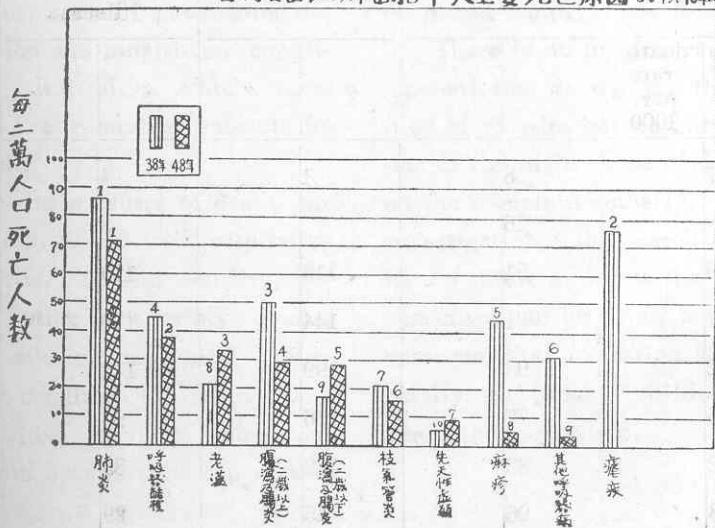
台灣省山地同胞人口動態比較 (35年~48年)



台灣省山地鄉山胞十大主要死亡原因 (35年~48年)



台灣省山地鄉山胞十大主要死亡原因 38年與48年比較



Ten main causes of death of aborigines since 1945-1959

Dis- ease	Pneumonia		T.B. of Respiratory organ		Gastro -enteritis over 2 yrs old		Gastro -enteritis below 2 yrs old		malaria	
	No. of died	Death rate per. 1000	No. of died	Death rate	No. of died	death rate	No. of died	death rate	No. of died	death rate
year										
34年	15		7		12		15		30	
35年	33	0.37	51	0.57	19	0.49	15	0.390	76	1.98
36年	313	3.59	174	1.99	173	1.98	65	0.74	425	4.87
37年	299	3.40	192	2.18	132	1.50	114	1.29	270	3.06
38年	371	4.18	201	2.26	222	2.50	79	0.89	338	3.81
39年	527	5.84	263	2.92	208	3.31	136	1.51	241	2.68
40年	598	6.52	341	3.72	227	2.47	152	1.66	148	1.61
41年	618	6.65	217	2.33	201	2.16	148	1.59	255	2.74
42年	510	5.40	269	2.85	148	1.56	159	1.68	163	1.73
43年	493	5.12	347	3.60	142	1.47	155	1.61	130	1.35
44年	417	4.23	229	2.32	140	1.42	141	1.43	41	0.42
45年	341	3.35	212	2.02	124	1.22	171	1.68	4	—
46年	393	3.78	217	2.09	142	1.37	146	1.43	2	—
47年	409	3.86	218	2.06	183	1.72	179	1.69	6	—
48年	381	3.51	208	1.92	162	1.49	155	1.43	0	—

Dis- ease	senility		Bronchitis		measles		other respiratory disease		congenital infirmity	
	No. of died	death rate per. 1000	"	"	"	"	"	"	"	"
year										
34年	7		8		1		4		2	
35年	9		16				3		2	
36年	89		51		110		110		13	
37年	167		81		144		179		18	
38年	92		93		199		142		22	
39年	105		77		176		96		20	
40年	152		83		122		85		44	
41年	123		96		45		29		54	

42年	142	137	45	12	70
43年	156	135	39	9	43
44年	131	97	26	12	43
45年	130	53	16	9	61
46年	154	95	15	24	58
47年	164	109	20	16	75
48年	202	89	25	19	53

The health status of aborigines before the world war II (1946) or even during a few years after the world war II was in a state of rather precarious condition. Many diseases were so spread over the mountainous district but unfortunately we had no accurate on the problem. After the Chinese government resumed her administration, many effort are being exercised by the government for the improvement of health status of aborigines but still many problem remains.

The mountainous district is not highly populated and with rather high birth rate and high death rate than that of ours.

From our investigation, we noticed one interesting fact the main causes of death of aborigines still kept its original figure of the cause of death of primitive medicine. The main problems are still gastroenteritis, respiratory infection and nutritional condition (congenital infirmity) which these problems may be the interesting subjects for public health field.

Here, the ten main causes of death are given as pneumonia, T. B. of respiratory organ gastroenteritis, malaria, senility, Bronchitis measles other respiratory disease such as common cold and congenital infirmity (nutritional condition of infant).

Pneumonia which includes lobar and broncho pneumonia occupies the top rank of

cause of death. These pneumonia are most common at Hsin-I, Tao-Yuan, San-Ming, Chian-Shu, Lai-I Shiu-Lin, and Tzuo-Chi Hsiang etc.

T.B. is no more the main cause of death in our plain, but here T.B. still the second cause of death of aborigines. It is most common in the following Hsiang; Ta-tung, Tzuo-ehi, Fu-shing, Mu-tan etc.

Diarrhea and enteritis over 2 years and below 2 years old with congenital infirmity and measles occupies the main causes of death of children.

These disease can be seem most commonly at Hsin-I, Tai-an and Shiu-Lin Hsiang etc.

Malaria once had been the most common cause of death of aborigines is now controlled effectively and its number of death decreased rapidly since 1959.

There is no malaria reported at present. The children living on the plain seldom died of measles but unfortunately this is one of the main cause of aboriginal children on the mountain actually. Concluding our investigation, the emphasis to be stressed in the future as far as the health project are concerned can be given as improvement of environmental sanitation Medical care especially for young children nutrition and health education etc.