09

Study on Support for Persons with Disabilities

Project Director — *Professor Pantyp Ramasoota*

Research Members — *Assist. Prof. Boonyong Keiwkarnka*

Ms. Somjai Pramanpol

Mr. Somsak Wongsawass

Ms. Doungsamorn Chinchotikasem

Ms. Bang-on Thepthien

ASEAN Institute for Health Development

Mahidol University

March 2000

Japan International Cooperation Agency Thailand

Study on Support for Persons with Disabilities

Project Director — *Professor Pantyp Ramasoota*

Research Members — *Assist. Prof. Boonyong Keiwkarnka*

Ms. Somjai Pramanpol

Mr. Somsak Wongsawass

Ms. Doungsamorn Chinchotikasem

Ms. Bang-on Thepthien

ASEAN Institute for Health Development

Mahidol University

March 2000

Japan International Cooperation Agency Thailand

Study on Support for Persons with Disabilities

By Pantyp Ramasoota,
Boonyong Keiwkarnka,
Somjai Pramanpol,
Somsak Wongsawass,
Doungsamorn Chinchotikasem,
Bang-on Thepthien

ISBN: 974-663-795-9

First Edition 2000
Printed by: Printing Division
ASEAN Institute for Health Development
Mahidol University, Salaya
Nakompathom 73170,Thailand

Pantyp Ramasoota
Study on Support for Persons with Disabilities / Pantyp ... [et al.]

1. Disability Evaluation I. Title

WB320 P19s 2000
ISBN: 974-663-795-9

Acknowledgement

The research team would like to express their acknowledgements to the following persons and organizations for their kind cooperation, valuable guidance, and technical, emotional and financial support provided throughout the study.

First and foremost, thanks are due to Ms. Naoko ITO, Mr. Mitsuhiko KAZOE and JICA for the opportunity offered to conduct this study, along with the supplement of information, advise and references to facilitate the study.

Appreciation also goes to Prof.Dr.Somarch Wongkhomthong, director of AIHD, for his generosity in administrative and motivational support of the study.

We are especially grateful to Dr. Kriangsak Akepongse, director of SBR Hospital, and his staff for unconditional assistance and hearty support during the field operation and beyond.

Last but not least, we are indebted to PWDs and their families, guardeans of PWDs and key informants in the community for providing us valuable data for the study.

Pantyp Ramasoota
and
Research Team

Executive Summary

The comparative descriptive study for the support of PWDs in Nong Bua Lumpoo (NBL) Province was conducted from 8 February – 23 March 2000. Sriboonruang (SBR) District, where the CBR Program had been used for ten years, was the study site, and Naklang District was the control area. The objectives of the study were to compare the characteristics of the PWDs in both districts in terms of socio-demographic, epidemiologic, problem needs, assistance received, quality of life as a measure of the impact and contribution of the CBR Program, and lastly, to investigate feasible and effective projects to support PWDs.

The study methods included qualitative and quantitative approaches; i.e., documentation review, focus group discussions, indepth interviews, observation of activities, and surveys using structured questionnaires. The study subjects included guardeans of PWDs, key informants in the communities PWDs and their relatives. The results of the study showed that :

1. From the quantitative study, the findings revealed that NBL Province was ranked 14th for the prevalence rate of disabled, of the whole kingdom. There were more male PWDs than females. The working age group was suffering more than other age groups; SBR District had the highest number of PWDs. Other characteristics were similar in both district. Physical and mobility impairment was the most common, the second was intellectual and learning ability impairment, and the least was mental and behavioral impairment. The main cause of disability was illness.

The majority of PWD were single, however almost all of them were living with their families. They were generally unemployed, low education, and poor. Most of them did not have special equipments or received any assistance. Their main source of assistance was their family. The assistance needs were for work to earn money and medical care.

For the quality of life, PWDs, in general, perceived their health status and living conditions as tolerable. They were satisfied with public health services, and assistance received, except for welfare for equipment.

2. From the qualitative study, the findings showed that there were several activities organized for PWDs in SBR District but none in Naklang, District. The projects were generally initiated and supported by government organizations with involvement and participation of local people to a certain degree. Activities and contributions of the project were found to be active at the district level and had little effect in the peripheral areas.

3. Although the government was strongly committed and supported CBR action, the implementation made only a small achievement, due to several factors. They were :

- Knowledge and technology for the CBR Program were imported and not appropriate for local and rural application. Research and Development should be encouraged to systematically collect the local body of knowledge and indigenous technology and adapt it to suit the needs and ways of life of PWDs in the Thai cultural context.

- Shortage of personnel to work in the CBR Program both in quantity and quality. Personnel development was recommended to provide and up-grade skills and knowledge of the CBR Program for personnel who are now working as well as those newly recruited.

- Family and community were lacking capability to deal with their PWDs. They had little concerned for PWDs. The priority of PWDs was ranked below other health problems since the impact of the disabilities to society is not visibly obvious. The poor and disadvantaged rural people were more concerned with their living conditions than health problems. The family, society as well as PWDs themselves possessed fatalistic attitudes and prejudices toward disabilities. The comprehensive approach integrating all aspects of the CBR Program for the disabled (medical, educational, vocational and social) was recommended at the family and community levels.

4. The coordination problems between involved organizations for the CBR Program, such as; referral system management, classification criteria for registration and inadequate medical specialists, were suggested to be solved by the appointment of working group and liaison officers to work on the problematic issues and to facilitate the coordination.

5. The lack of intersectoral coordination among those involved in the Rehabilitation Action resulted in the problems of practical management. In coping with the problem, it was recommended to develop an informal networking to build a good sense of understanding among collaborating sectors through a liaison officers in each organization.

6. In NBL Province, the lack of decentralized authority and responsibility resulted in limiting the contributions of CBR activities, which were active only at the district level. There was no evidence of any spill-over effect to PWDs at peripheral rural areas. In addition to centralization, the reactive nature of services, as well as the lack of public relations and public education, were also limiting factors. The proactive strategies of the CBR Program in the villages were recommended including, developing a mobile team to mobilize the activities in the community; setting-up the CBR unit in the community with regular supervision from mobile team; providing public education to correct negative social attitudes and improve knowledge and understanding in regard to PWDs; and mobilize community participation through TOA and people organization.

7. The feasible and effective projects to support PWDs through the technical cooperation of JICA was proposed under the JICA assistance scheme of "experts dispatch, "JOCV", trainee acceptance" and "community empowerment program". The projects included: Training of Leaders of PWDs; Vocational Training for PWDs; Capacity Strengthening for Personnel Working with PWDs; Disability Resource Team; and Community Empowerment through PAR.

List of Abbreviations

ARI	=	Acute Respiratory Infection
BM	=	Bangkok Metropolitan
BMA	=	Bangkok Metropolitan Administration
CPHCC	=	Community Primary Health Care Center
CBR	=	Community Based Rehabilitation
FGD	=	Focus Group Discussion
GO	=	Government Organization
MOE	=	Ministry of Education
MOPH	=	Ministry of Public Health
NSO	=	National Statistics Office
NGO	=	Non-government Organization
NK	=	Naklang District
NBL	=	Nong Bua Lamphu Province
OSS	=	Office of Social Security
PAR	=	Participatory Action Research
PWD	=	Person with disabilities
SBR	=	Sriboonruang District
TAO	=	Tambon Administrative Organization
VHV	=	Village Health Volunteer

Table of Contents

List of Tables

List of Figures

List of Chart

CHAPTER I
Methodology

This descriptive study compares the situation of Persons with Disabilities (PWDs) in Sriboonruang District of Nong Bua Lamphu Province, where the Community-Based Rehabilitation (CBR) Program has been launched since 1990, with Naklang District of the same province.

1.1 The specific objectives include:

1. to study the disability statistics in the two districts.
2. to study the social and epidemiological characteristics of the disabilities in the two districts.
3. to study the activities of governmental organizations, international organizations and non-government organizations (NGOs) including community self-help organizations for PWDs in the two districts.
4. to identify the problems and needs of PWDs and their families in terms of medical, educational, financial, legal and social welfare.
5. to determine the quality of life of the PWDs in terms of their life satisfaction, welfare and aid received.
6. to compare the situation of PWDs in the two districts as a measure of the impact and contributions to the CBR Program.
7. to investigate feasible and effective projects to support PWDs based on their problems, needs and availability of governmental and social structures.

1.2 Approach

The approach used three research channels:

1. A documentation review of relevant data on the PWDs in Thailand and the North-Eastern region in general, with an emphasis on Nong Bua Lamphu Province in particular.

2. In-depth interviews and focus group discussions on the information of disabilities with the authorities and key informants at local, provincial and national levels.

3. A survey using structured questionnaires to identify the individual problems, needs and life satisfaction of PWDs with individual PWDs in the two districts.

4. Observation of activities provided for PWDs by existing organizations (government, non-government, private, community and family) in the two districts.

1.3 Methodology

Design : descriptive

Population : 1. PWDs in Nong Bua Lamphu Province (NBL)

2. Authorities for PWDs

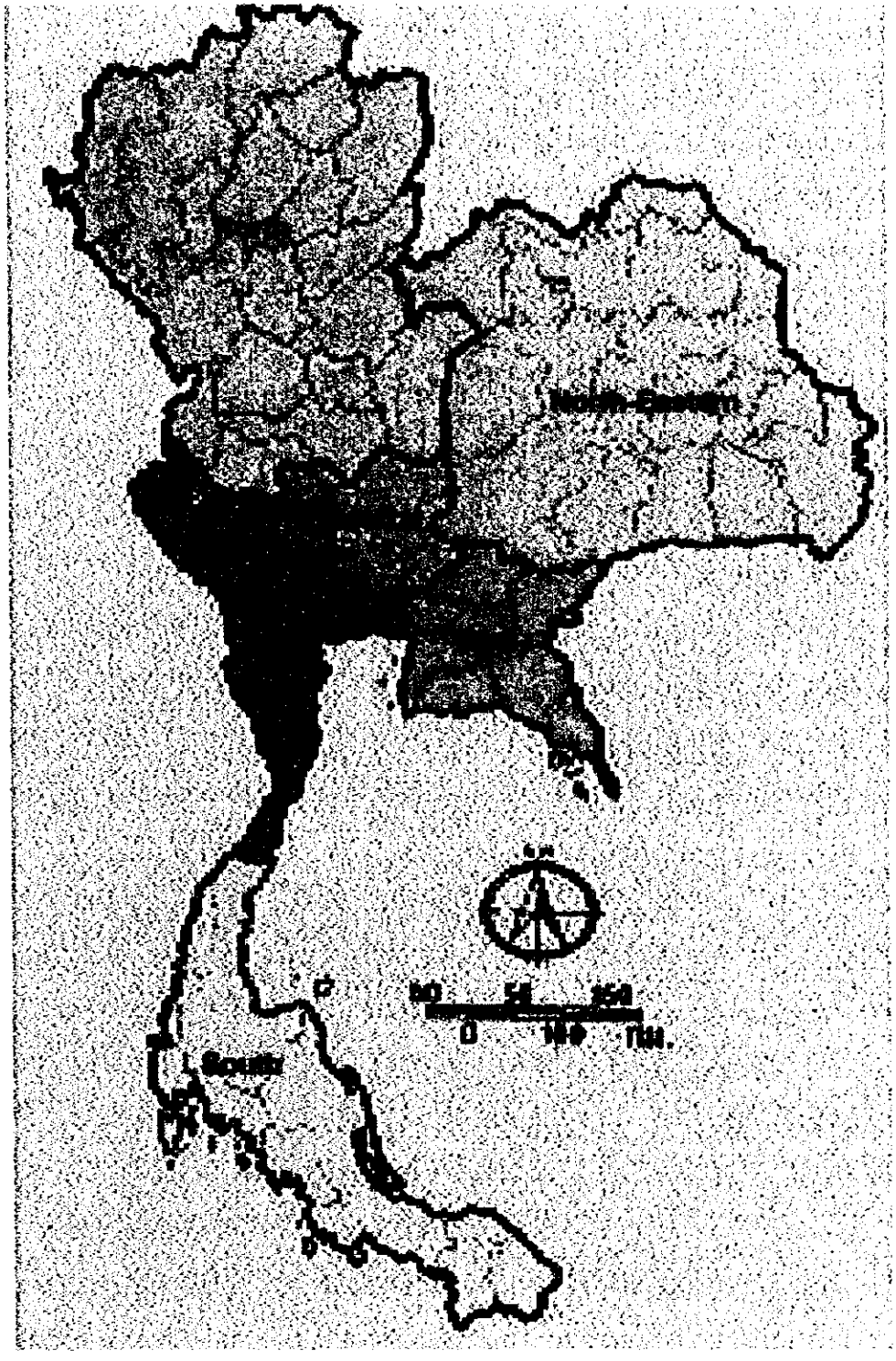
1.4 Study population :

The PWDs in NBL Province, aged 20 years and over were included. Sriboonruang District (SBR), where the CBR Program has been operating for 10 years was purposely selected as a study area; Naklang District was chosen to be a comparison study site, based on the comparable prevalence rate of disabilities. Trained interviewers made a survey using a structured questionnaire with every PWD in two randomly sampled tambons of each district. In case PWDs were not able to communicate, the relatives were interviewed instead.

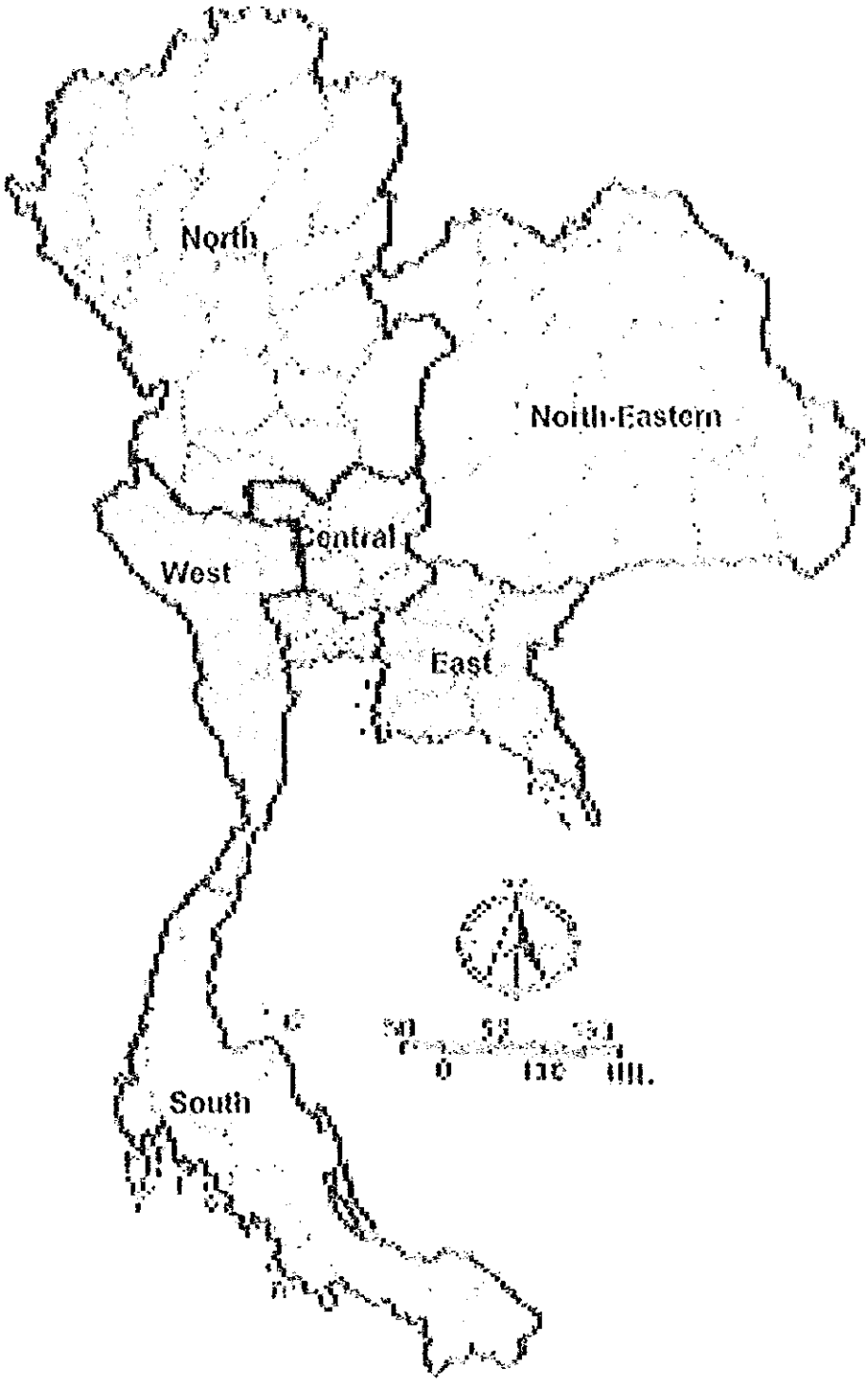
Table 1 Number and percentage of samples in study and comparison areas

Study Area	Number	Percentage
Sriboonruang District	**181**	**64.4**
- Tambon Nakorg	116	64.1
- Tambon Muangmai	65	35.9
Naklang District	**100**	**35.6**
- Tambon Noen Muang	38	38.0
- Tambon Naklang	62	62.0

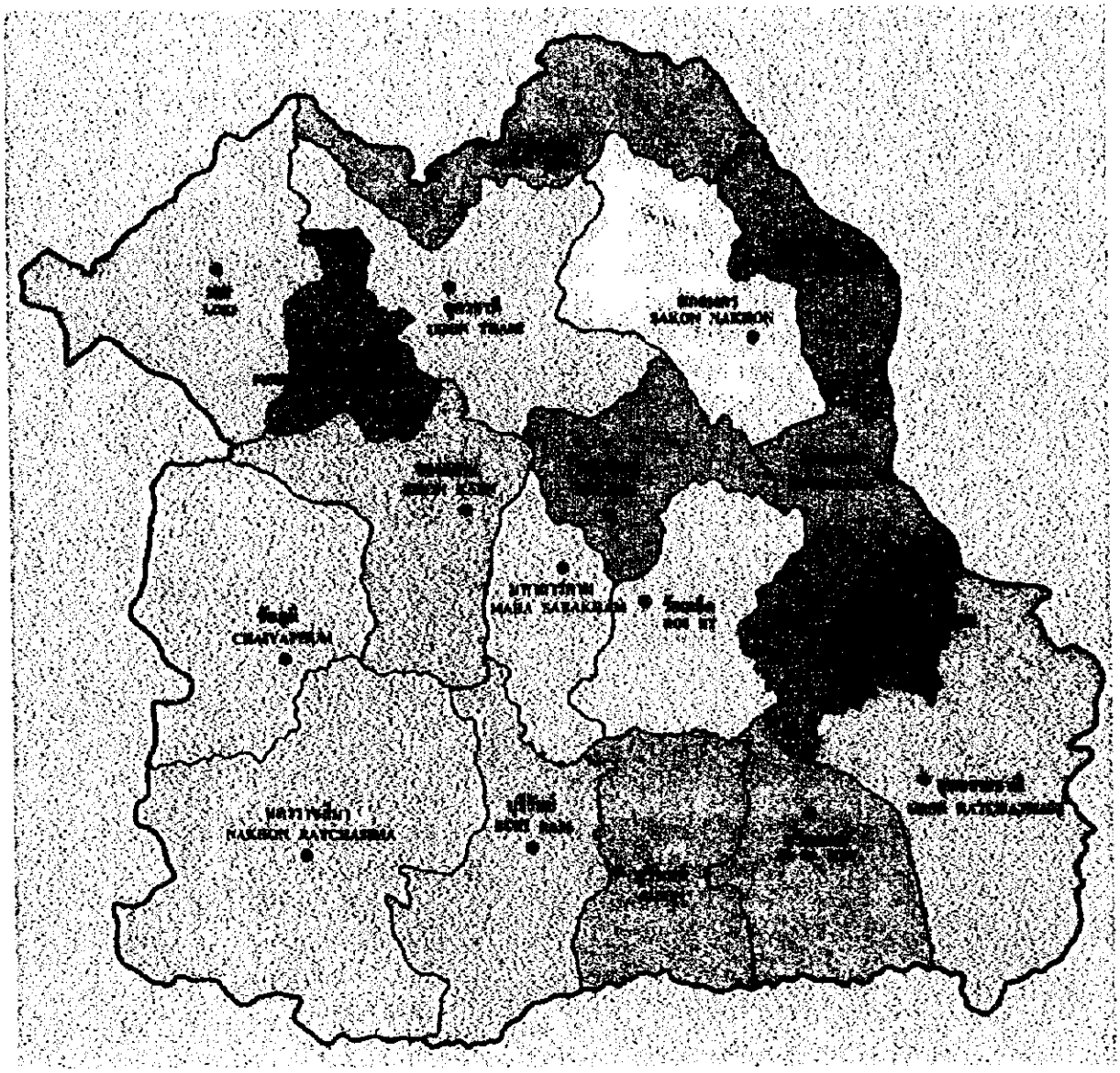
Map of Thalland



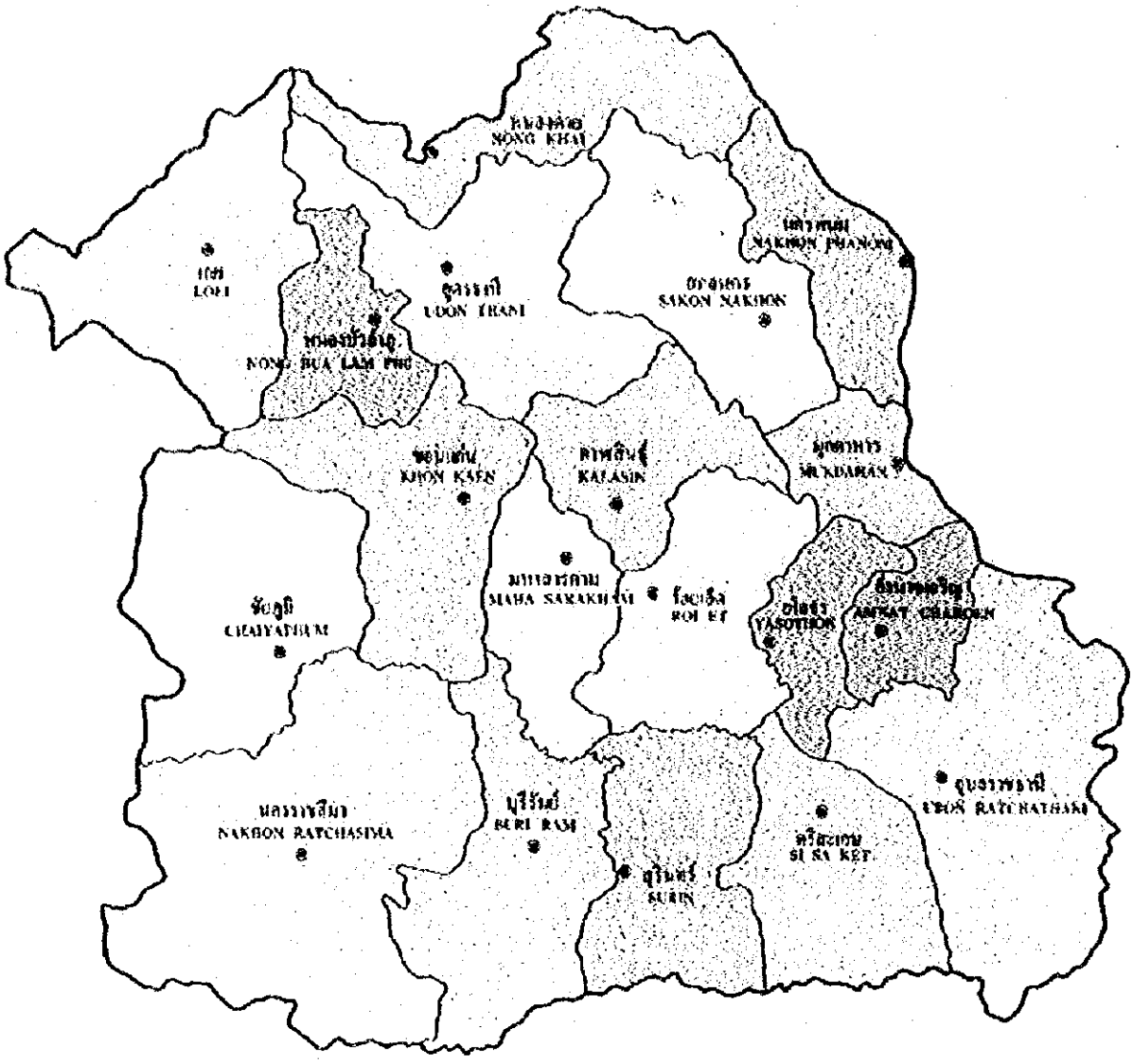
Map of Thailand



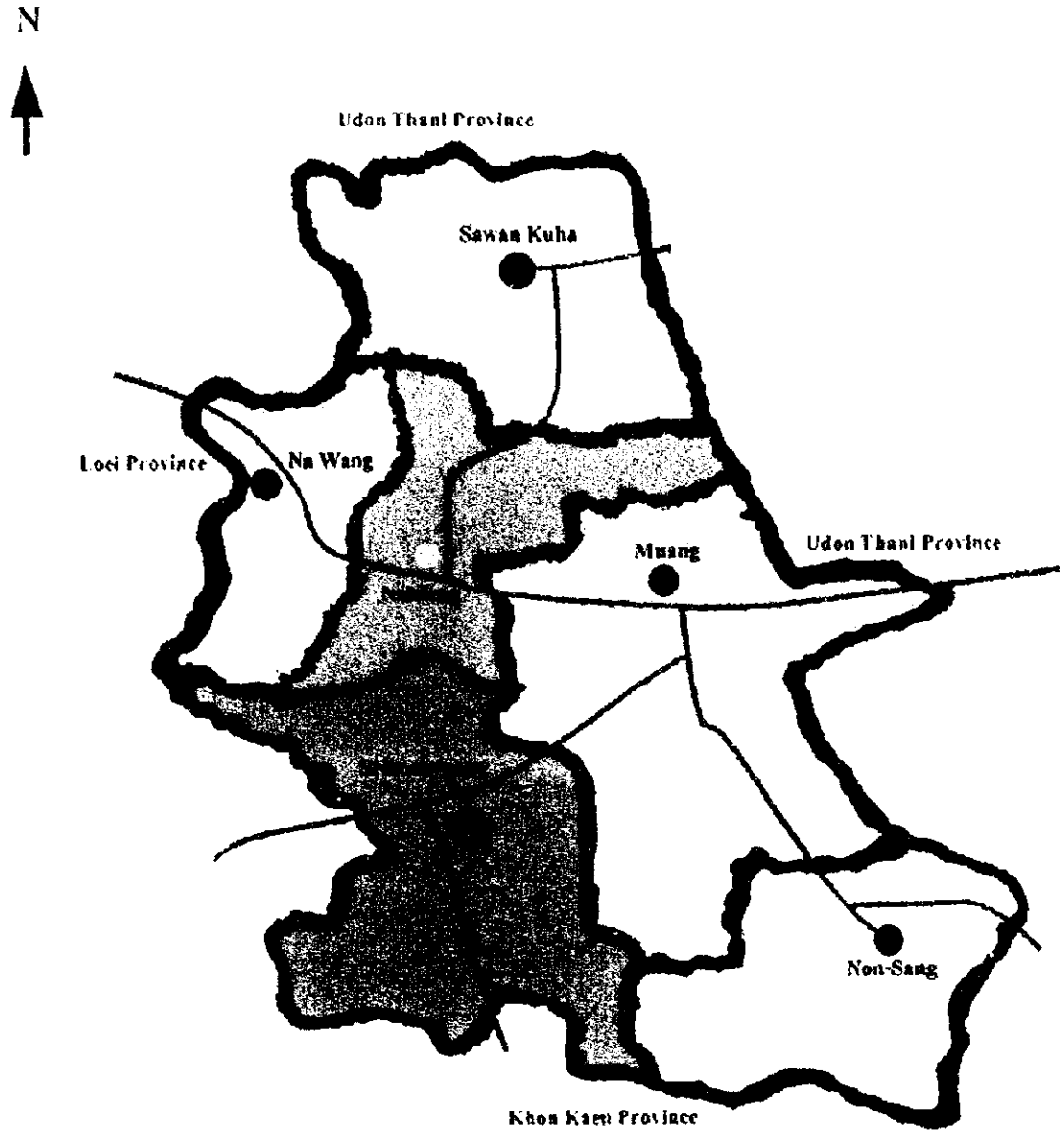
Map of Northeastern Region Showing Provincial Boundaries



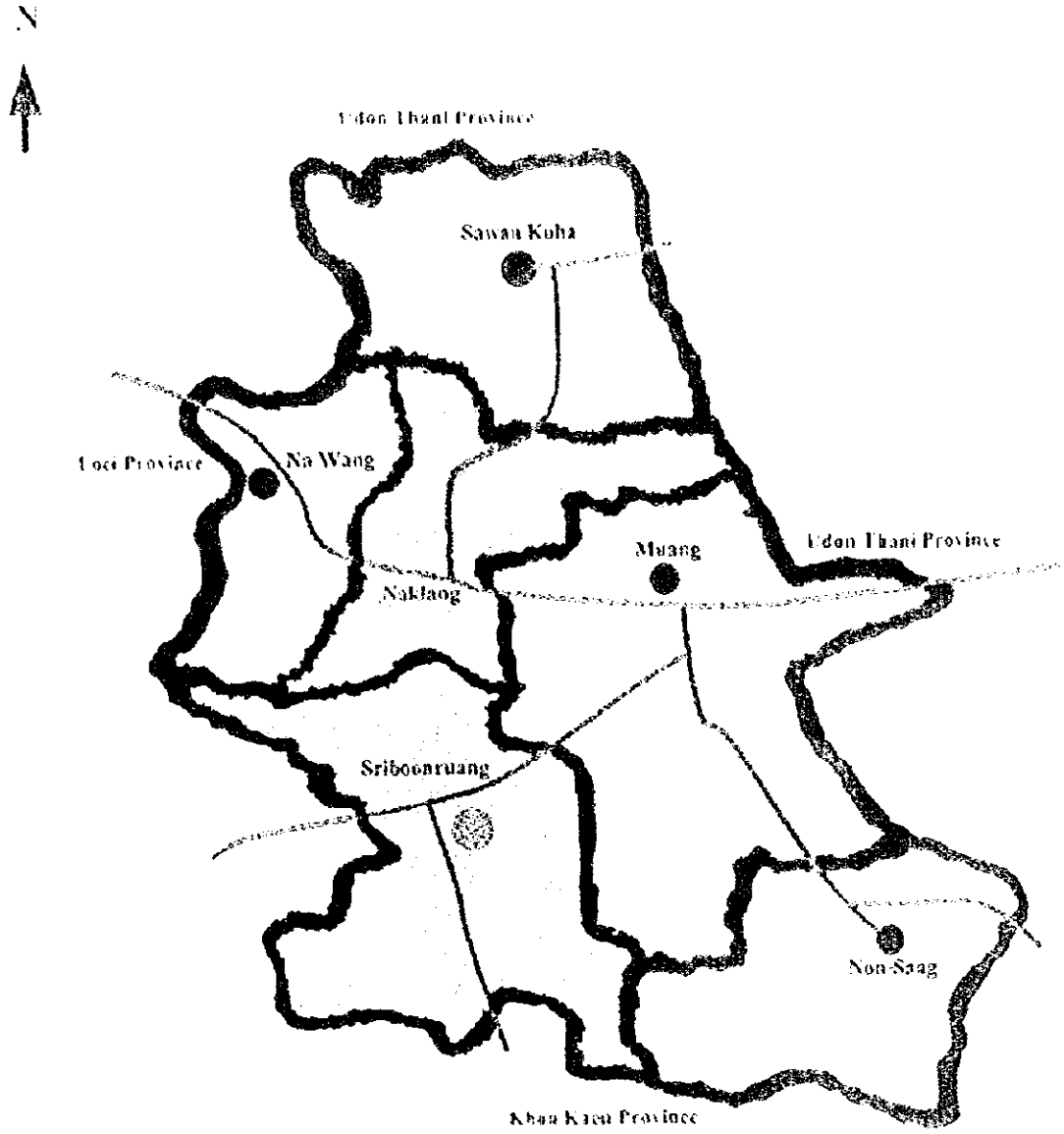
Map of Northeastern Region Showing Provincial Boundaries



Nong Bua Lumphu Map



Nong Bua Lumphu Map



1.5 Research Instruments

Research instruments for the project included:

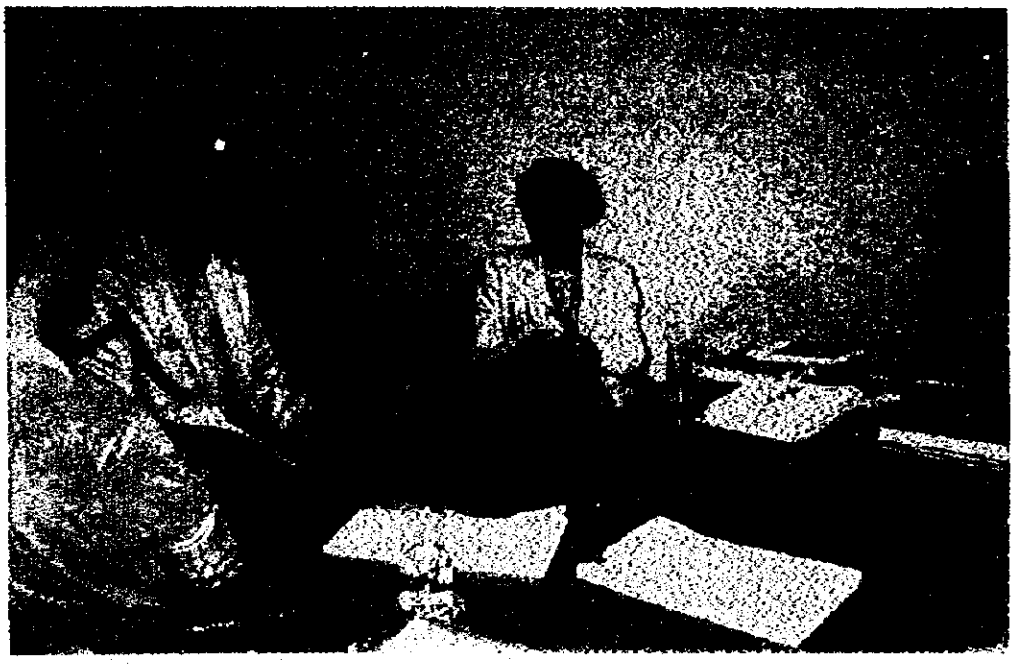
1. A precoded structured survey with closed and opened questions regarding socio-demographic characteristics of PWDs
    - Epidemiological characteristics of PWDs
    - Problems and needs of PWDs
    - Quality of life of PWDs, including life satisfaction, welfare and assistance received.
2. Check lists for observation of activities provided for PWDs
3. Unstructured questions for in-depth interviews and focus group discussions.

1.6 Data collection

The data collection comprised four methods including:

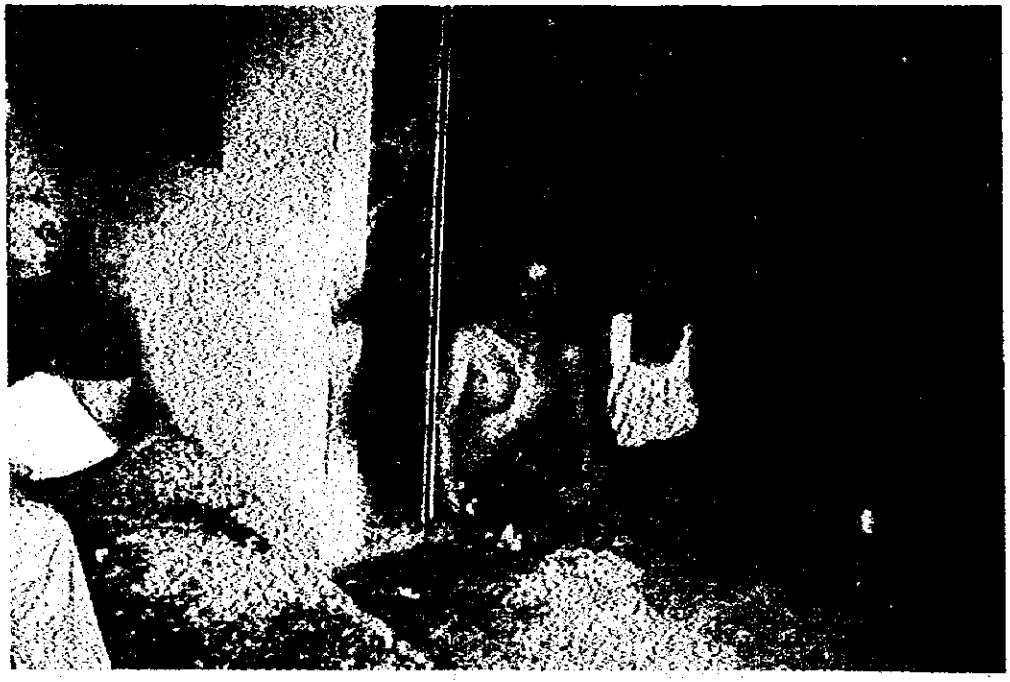
1. In-depth interviews with 13 authorities for PWDs at national and local levels concerning topics of policy plans, budget and constraints related to health services and programs on education, welfare, as well as social, political and legal issues of PWDs.
2. Focus group discussions on the awareness and management of PWDs with four groups of 10-12 key informants in each of at the villages in four tambons.
3. Surveys by trained interviewers using structured questionnaires.
4. Observations of activities in the Center for PWDs, the SBR Hospital, Muangmai Vitaya School, the Disabled Club, and Sirindhorn Rehabilitation Center for PWDs.

Focus Group Discussion



In-depth Interview

Household survey of PWD and Relatives



CHAPTER II
Background Information

2.1. Disability Statistics at the National Level

2.1.1. Epidemiology of Disabilities

The Thailand Institute for Health System Research, MOPH, has made a survey of the health status of the Thai population aged five years and over, by means of physical examination. The study revealed that the total number of PWDs was approximately 4,825,681 or 8.1 percent of the total population (57.1 million). They were classified as follows:

Seeing impairment	955,485	or	19.8%
Hearing and communication impairment	299,192	or	6.2%
Physical and mobility impairment	2,745,813	or	56.9%
Mental or behavioral impairment	226,807	or	4.7%
Intellectual or learning ability impairment	477,742	or	9.9%
Others	120,642	or	2.5%

Epidemiological data showed an apparent increasing trend of the numbers of PWDs. A survey by The National Statistical Office (NSO) reported that between 1986 and 1991 the prevalence of disabilities increased 2.5 times and remained stable until 1996. The distribution was higher among males, the elderly and working age groups. The highest number was physical and locomotive impairment, followed by seeing and hearing impairment, and mental and intellectual impairment was the lowest group. Data from the Office of Social Security (OSS) revealed that although the rate of occupational hazards was increasing every year, the disability rate was decreasing.

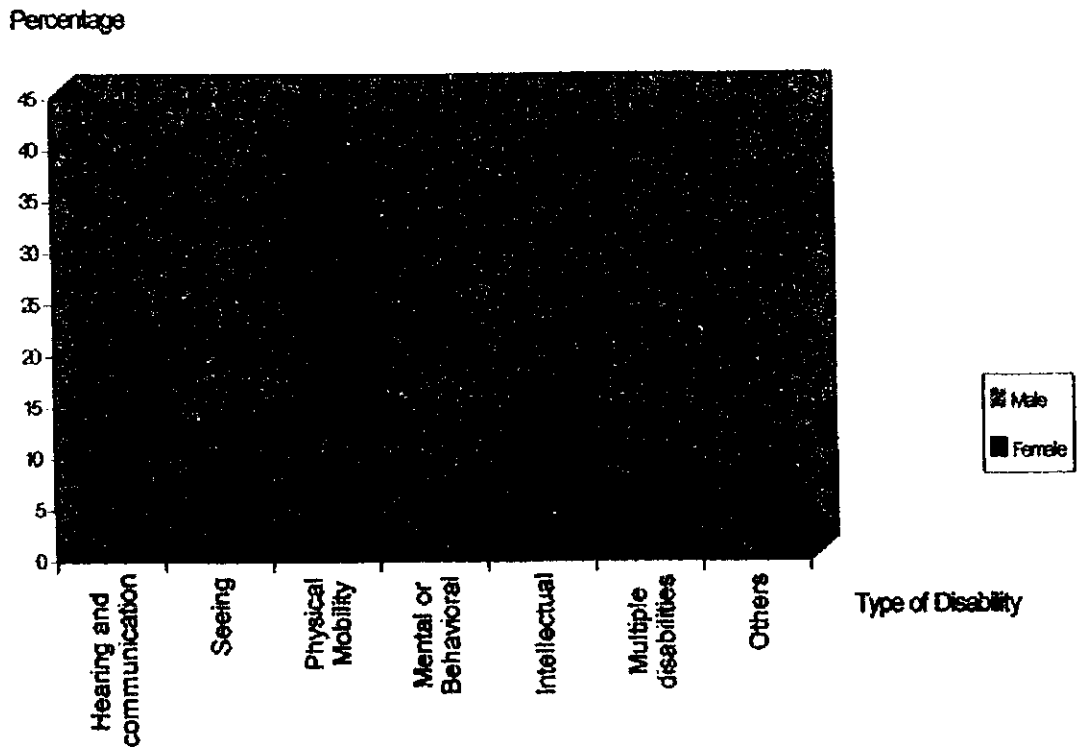
2.1.2. Registration Status

Recent records on the registration status of PWDs by the Department of Social Welfare, Ministry of Labor and Social Welfare revealed that in 1996, only

231,206 PWDs were registered under the Rehabilitation of Disabled Persons Act BE 2534, distributed by region as:

Bangkok Metropolitan (BM)	10,663
Central Region (excluding BM)	49,849
Northern Region	57,910
Northeastern Region	85,864
Southern Region	26,920

Figure 1 Percentage of type of disability by sex for the whole kingdom

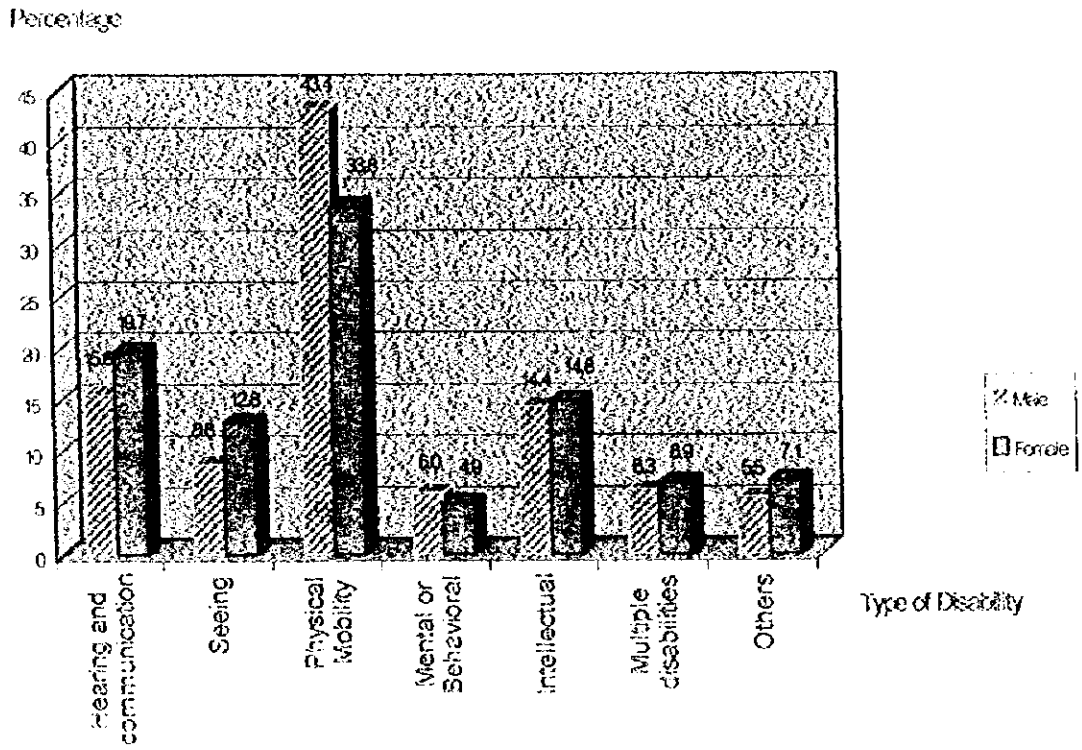


Source : National Survey on Health and Welfare: 1996, NSO, Office of the Prime Minister

231,206 PWDs were registered under the Rehabilitation of Disabled Persons Act BE 2534, distributed by region as:

Bangkok Metropolitan (BM)	10,663
Central Region (excluding BM)	49,849
Northern Region	57,910
Northeastern Region	85,864
Southern Region	26,920

Figure 1 Percentage of type of disability by sex for the whole kingdom

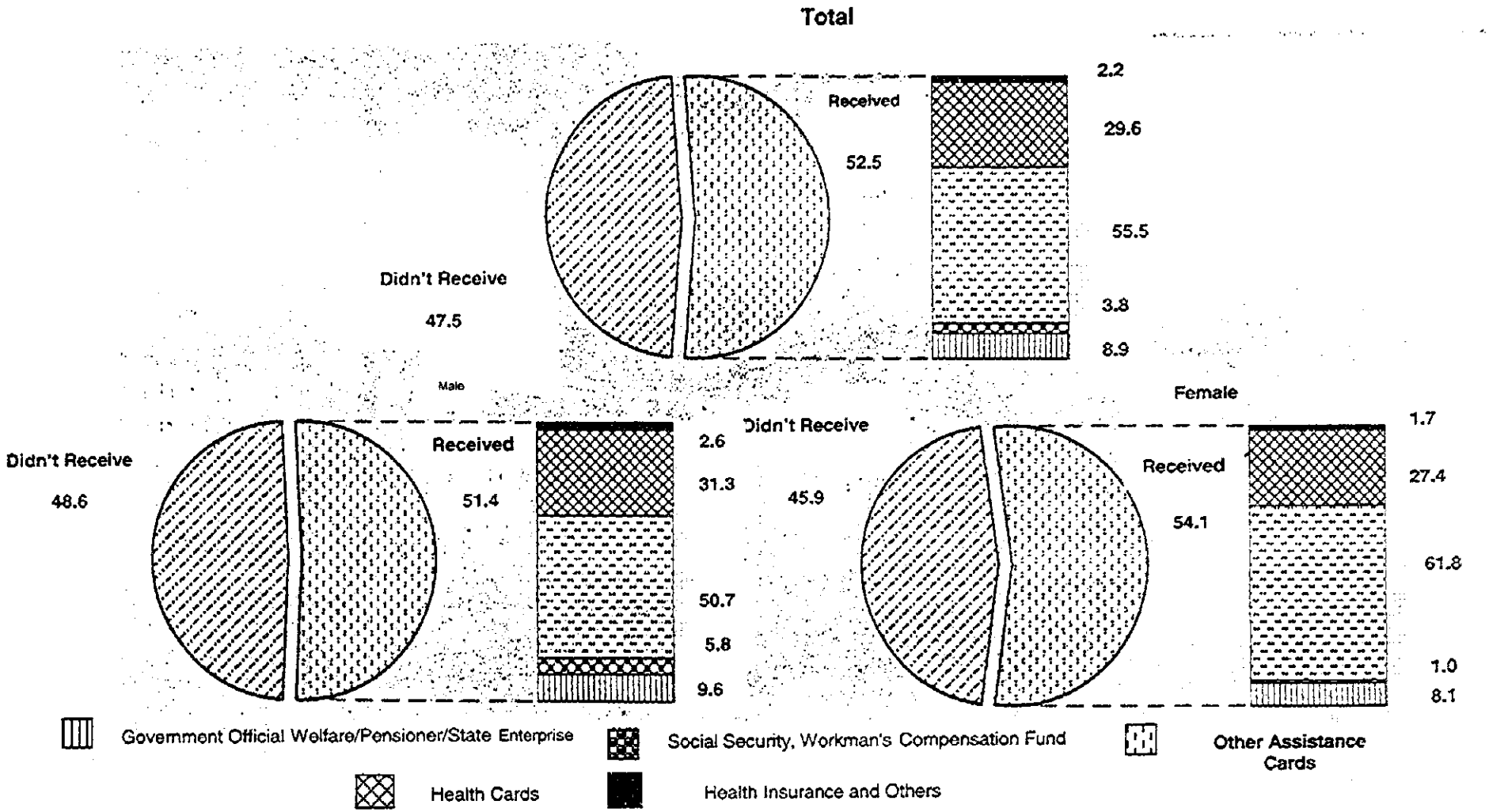


Source : National Survey on Health and Welfare: 1996, NSO, Office of the Prime Minister

2.1.3.Government Health and Welfare

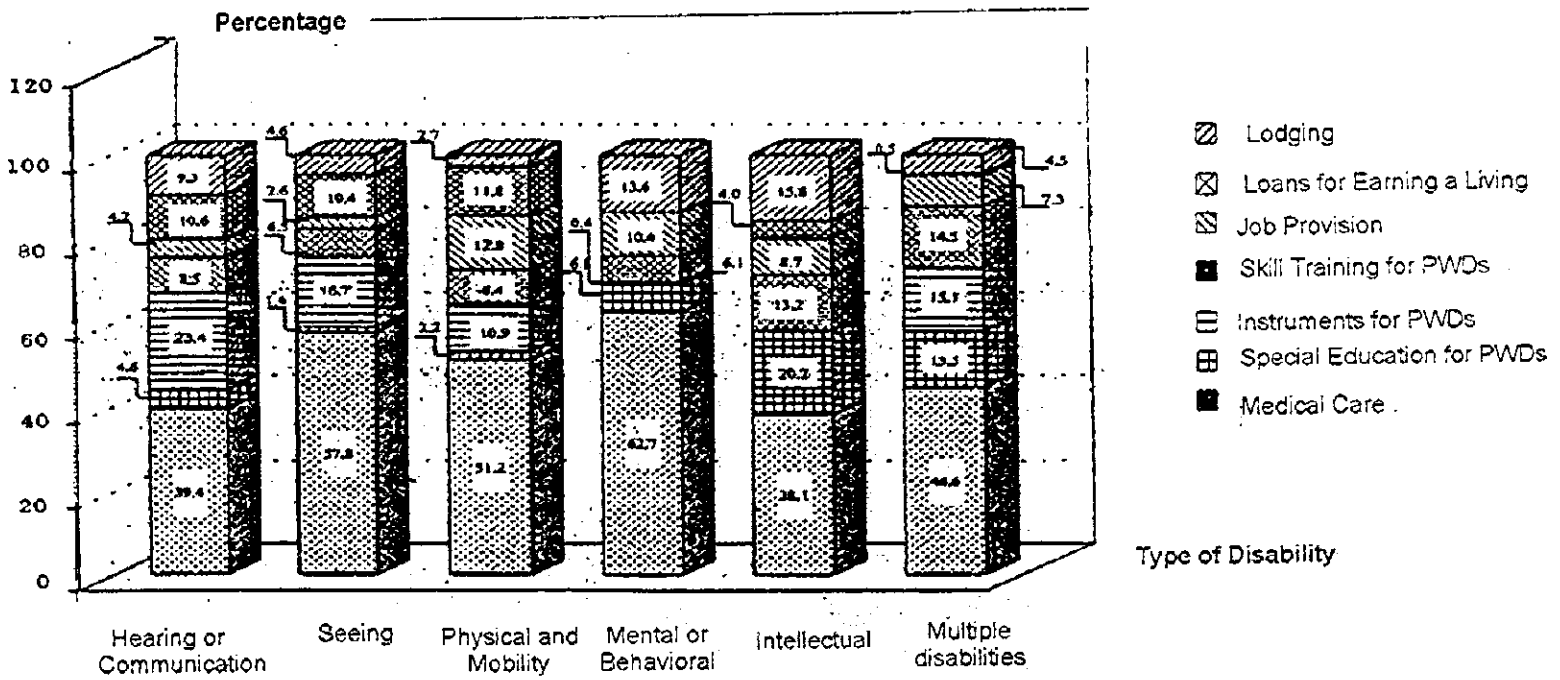
More than half of PWDs, 52.5 percent, receive welfare and health services from the government through some kind of insurance. PWDs who hold assistance cards of all kinds, including a low income welfare card, elderly card and veteran card, are the major recipients of welfare and health services from the government, 55.5 percent, 29.6 percent receive services through health cards, and 8.9 percent comprised the group of government official welfare/pensioners and state enterprises. A small proportion receive assistance from social security, Workman's Compensation Fund, 3.8 percent, and personal private health insurance accounts for 2.2 percent.

Figure 2 Percentage of PWDs receiving health insurance by sex for the whole kingdom



Source : Nation Survey on Health and Welfare: 1996, National Statistical Office, Office of the Prime Minister

Figure 3 Percentage of PWDs by type of disability and kind of government assistance need for the whole kingdom



Source : National Survey on Health and Welfare: 1996, National Statistical Office, Office of the Prime Minister

2.1.4. Assistance Need from the Government

A survey by the NSO 1996, revealed that 66 percent of PWDs for the whole kingdom expressed needs for assistance from the government.

The assistance needs were specified as follow:

medical care, surgery and physiotherapy	30.2%
instruments for disabilities	7.4%
skill training	5.8%
jobs	5.7%
loans for earning and living	5.4%
lodging	4.3%
special education	4.0%
others	3.3%

Male and female PWDs varied in assistance needs from the government according to the type of disability. Both sexes needed medical services, surgery and physiotherapy as well as equipment for disabilities. Among PWDs with physical and mobility impairments, for males, the assistance needs were in providing jobs and opportunity to work, while for females, the assistance needs were providing loans for earning and living. Males with mental or behavioral impairments and intellectual and learning disabilities needed assistance for lodging, but females of the same disability type needed assistance for special education.

For the multiple disabilities group, females needed assistance for skill training but males needed special education.

Government policy for PWDs incorporates the concept that "PWDs are socially disadvantaged and are entitled to receive medical services and health free security" and emphasizes " the rehabilitation of patients receiving medical services rather than the rehabilitation of the disabled after treatment".

Chart 1 Rights and Benefits for PWDs by Program and Legislative Act.

Programs/ Act	Responsible Organization	Financial Sources	Rights & Benefits For Disability	Service Unit
1. Rehabilitation Act. BE 2534	Ministry of Labor and Social Welfare, Ministry of Public Health	Government budget	Rehabilitation services	Public and Private Health Facilities
2. Compensation Act. BE 2517	Ministry of Labor And Social Welfare	- Employer - Government	- Compensation - 60% of salary, 10 yrs for loss of body parts 15 yrs. for disabled	Public and Private Health Facilities
3. Social Security Act. BE 2537	Ministry of Labor And Social Welfare	- Employer - Employee - Government	- Medical fees not over 2000 Baht/month - 50% of salary compensation for life	Public and Private Health Facilities
4. Car-accident Insurance Act. BE 2535	Ministry of Commerce	- Car owners	- Medical care - Compensation for death	Public and Private Health Facilities
5. Welfare for government officials, pensioners, and state enterprises	Ministry of Finance	- Government budget	Fees for - rehabilitation - special equipment - prosthesis/orthesis	- OPD Patient (public facilities) - IPD & OPD Patients (private & public facilities)
6. Private Health Insurance	Insurance company	- Insured persons	- compensation for prosthesis/orthesis - compensation for loss of income	- Public & Private Health facilities
7. Medical Welfare for the helpless and needy	Ministry of Public Health	- Government budget	- Free rehabilitation - Medical equipment	- Public Health facilities

The new paradigm that views "PWDs as a national resource and rehabilitation of the disabled as an investment in human resources to enable them to live productively with dignity in the society" has been recently adopted after the democratic movement for the rights of PWDs.

There were several acts and programs developed for PWDs of which the rights and benefits are summarized in Chart 1.

2.1.5. Organizations Involved in Rehabilitation for PWDs

There are governmental organizations distributed among the six ministries and 68 non-governmental organizations involved in rehabilitation activities for PWDs as presented in the followings:

Ministry of Labor and Social Welfare

1. Department of Social Welfare Office of Rehabilitation for PWDs
2. Department of Labor Protection
3. Rehabilitation Center for Workers, Bangpoon
4. Department of Labor Skill Development
5. Office of Social Security (OSS)

Ministry of Defense

1. Pra Mongkut Klao Medical College
2. Department of Military Medicine, Army, Navy, Armed Force, Bhumipol Hospital, Pra Pin Klao Hospital, Military Hospital in several provinces
3. Veteran Organization
4. Sai Jai Thai Foundation

Ministry of Interior

1. Police Hospital

Bangkok Metropolitan Administration

1. Office of Medical Service
2. Office of Health Service
3. Vachira Hospital, Taksin Hospital, Klang Hospital

Ministry of Public Health

1. Office of Permanent Secretary
   - Hospitals under the Office
2. Department of Medical Service
   - Sirindhorn National Medical Rehabilitation Center
   - Four Hospitals under the Department

3. Department of Mental Health
   - Two Hospitals under the Department
4. Department of Health
   - Occupational Health Division

Ministry of University Affairs

- Faculties of Medicine under the Ministry
- Office of Policy and Planning

Non-Government Organizations

- Services for seeing impairment	4
- Services for hearing impairment	7
- Services for physical impairment	24
- Services for intellectual impairment	5
- Services for multiple impairments	5

Ministry of Education

School with Integration (Mainstreaming) Programs

- **Bangkok Areas**

- Preschool	2
- Primary school	10
- Secondary school	5

- ***Outside Bangkok Area***

- Northern Region	4
- Northeastern Region	12
- Southeastern Region	3
- Central Region	2

Bangkok Metropolitan Administration

- Primary School for Slow Learners	13
- Private School for Autistic	2

2.2 Disability Statistics of the Northeastern Region

The prevalence rate of PWDs is the highest in the northeastern region of Thailand, the rate is 386.8 per 1,000 population. There were more males than females in all age groups except in the old age group (age 60 years and over) where females outnumbered males (49:33). However, the highest rate is found among the older age group, 60 years and over, (82.1 per 1,000 population). Most of them were scattered throughout non-municipal areas which was 20 times more than municipal areas (368.5 and 18.3 per 1,000 population). Of all the types of disability, physical and mobility impairment (128.2 per 1,000 population) has the highest prevalence followed by hearing impairment, mental retardation and seeing impairment, 74.5, 67.0 and 46.9 per 1,000 population, respectively (Tables 2 and 3)

Table 2 Reported disabled population by age group, sex and area, in the northeastern region

In Thousands

Age Group (Years)	Total			Municipal Area			Non-Municipal Area		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	**386.8**	**210.9**	**175.8**	**18.3**	**12.0**	**6.2**	**368.5**	**198.9**	**169.6**
0-6	11.0	5.8	5.2	1.5	1.1	0.4	9.5	4.7	4.8
7-10	15.7	9.3	6.4	0.6	0.3	0.4	15.1	9.0	6.0
11-14	15.9	8.5	7.4	0.8	0.5	0.3	15.1	8.0	7.1
15-19	38.6	21.1	17.6	1.8	1.6	0.2	36.8	19.5	17.3
20-24	62.0	42.9	19.0	1.7	1.3	0.5	60.2	41.7	18.5
25-29	30.4	18.8	11.5	0.6	0.3	0.3	29.8	18.5	11.3
30-34	33.1	15.4	17.8	1.4	0.9	0.5	31.7	14.5	17.2
35-39	13.1	9.1	4.0	0.8	0.6	0.2	12.3	8.5	3.9
40-49	41.1	22.2	18.9	2.3	1.7	0.6	38.8	20.5	18.3
50-59	43.7	24.7	19.0	2.0	0.7	1.3	41.7	24.0	17.8
60 and Over	82.1	33.1	49.0	4.7	3.0	1.6	77.4	30.1	47.4

Source : National Survey on Health and Welfare, 1996 NSO

Table 3 Reported disabled population by age group and type of disability, in the northeastern region

In Thousands

Type of Disability	Age Group (Years)											
	Total	0-6	7-10	11-14	15-19	20-24	25-29	30-34	35-39	40-49	50-59	60 and Over
Amputation, part of arm	3.7	*	0.8	*	*	*	*	*	*	1.1	0.9	0.8
Amputation, part of leg	7.4	*	0.8	*	*	*	1.04	2.4	0.1	1.9	*	0.8
Amputation, part of finger	14.0	1.5	*	0.9	*	*	1.3	0.3	1.1	0.2	6.6	2.0
Amputation, part of toe	5.9	0.5	*	1.0	*	*	*	0.2	*	1.1	2.9	0.1
One-eyed blindness	23.2	*	1.2	1.4	1.8	2.2	1.3	0.7	0.4	4.6	3.6	6.0
Two-eyed blindness	23.7	0.9	0.9	*	1.2	3.9	2.7	*	1.1	5.1	1.7	6.2
Dumbness	15.4	1.4	0.7	0.8	2.2	2.7	1.4	1.6	1.3	1.2	*	2.1
Hearing impairment	53.1	0.4	0.6	1.1	*	*	3.0	2.3	1.5	8.6	7.1	28.5
Total deafness	21.4	*	0.9	0.8	1.0	4.1	*	1.6	0.9	2.0	6.2	3.9
Paralysis or paresis	31.9	*	*	1.8	*	*	2.1	3.1	*	1.5	6.7	16.6
Cleft lip or palate	9.2	0.9	0.9	0.3	1.4	3.7	0.5	*	0.3	1.2	*	*
Disability of limbs	65.3	2.2	5.7	2.1	9.8	14.2	8.3	4.7	3.7	5.9	2.9	5.8
Psychosis	33.8	1.1	*	0.8	2.5	8.4	2.1	6.7	1.5	5.0	3.1	2.7
Mental retardation	67.0	2.2	2.9	6.4	13.5	26.3	5.6	5.7	2.1	0.9	*	1.3
Scoliosis or kyphosis	11.2	1.9	1.0	*	2.9	1.0	*	1.0	*	*	*	3.5
Others	23.1	*	*	*	5.4	*	1.8	4.5	0.3	4.1	4.0	3.1

Source : National Survey on Health and Welfare, 1996 NSO

2.3. Nong Bua Lamphu Provincial Information

Nong Bua Lamphu (NBL) Province is the 73rd province of Thailand, situated in the northeastern region. It has been separated from neighboring Udornthani Province since 1993. The province is 608 km from Bangkok. It is adjacent to Udornthani Province in the north and east, to Khonkaen Province on the south, and to Loei Province in the west. The total area is 3,859,626 square km, covering six districts, 58 subdistricts (tambons) and 623 villages. The administrative areas consist of 1 municipality, 29 communities and 11 sanitation units. There are 102,082 households and the total population is 507,130, most of them, 55 percent, belong to the working age group and elderly people constitute 6.6 percent.

Geographical and geological characteristics

The landscape of NBL Province is a plain plateau area of fields and forests. A majority of the land is dry, mountainous and the soil structure is sandy and rocky. The climate is hot and humid in summer and cold in winter. The economic status is ranked 9th among the 16 provinces of the northeastern region with a per capita income of 19,186 baht/year.

Health statistics

Public health facilities consist of one Provincial Hospital (120 beds), four District Hospitals (two 60 beds and two 30 beds), and 81 Health Centers.

The health statistics are as follows:

- Crude Birth Rate 13.70 / 1,000 population
- Crude Death Rate 4.76 / 1,000 population
- Infant Mortality Rate 2.59 / 1,000 population
- National Growth Rate 0.89 / 1,000 population

Morbidity and mortality data reflect the life styles and living standards of the people. The statistics demonstrate that heart disease of all kinds is the first leading cause of death (102.4 / 100,000 population) followed by cancer of

all kinds (85.38 / 100,000 population) accident, injuries, suicide, and homicide is ranked eighth (9.66 / 100,000 population.) and the 10th leading cause of death is from AIDS (7.88 / 100,000 population)

Human Health Resources of Nong Bua Lamphu Province

Data on 30 September 1990 revealed that there were 13 physicians, 4 dentists, 46 professional nurses, 66 technical nurses, 5 pharmacists, and 38 paramedics, working in public health facilities of Nong Bua Lamphu Province .

The leading cause of morbidity, from OPD records of all hospitals in NBL District, is ARI with a total number of 42,904.97 patients per 100,000 population. The second order is gastrointestinal diseases with a morbidity rate of 28,425.65 per 100,000 pop. The distribution of morbidity of in-patients follows the same pattern.

Epidemiology of Disabilities in Nong Bua Lamphu Province

The number of PWDs of NBL Province as determined by registration status, which is at the rate of 34 per/100,000 population, was ranked at the 14th order of the whole kingdom. There were more male disabled persons than female. The working-age group population is suffering more than other age groups. (Table 4) Sriboonruang (SBR) District had the highest number of PWDs probably due to the positive impact of the CBR Program in the area which increased awareness of the PWDs and their families and alerted them to come for registration. (Table 5)

Physical and mobility impairments is the most common among the PWDs in NBL Province, the second is intellectual and learning ability impairment, which is less than half of the first and the least is mentality and behavioral impairment. (Table 6)

Table 4 Registered PWDs in NBL by sex, age group and type of impairment

Age (year)	Seeing Impairment		Hearing Impairment		Physical/mobility Impairment		Mental/behavioral Impairment		Intellectual/Learning Impairment		Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
• < 6 yr.	6	9	20	9	37	23	3	1	55	56	219
• 7-20	17	7	33	23	124	69	6	2	106	58	445
• 21-25	20	17	44	29	233	124	10	7	42	47	573
• 36-45	25	22	15	16	124	48	5	2	13	7	277
• 46-49	48	28	11	10	89	37	1	-	6	2	232
• 60+	49	62	16	8	69	32	6	4	1	5	252
Total	165	145	139	95	676	333	31	16	223	175	1,998

Source: Provincial Health Office of Nong Bua Lamphu Province, 1999 MOPH

Table 5 Number of registered PWDs in Nong Bua Lamphu by district

District	Male	Female	Total
Muang	252	158	410
Naklang (NK)	241	119	360
Sriboonruang (SBR)	287	167	454
Non-Sang	175	139	314
Sawan Kuha	206	129	335
Na Wang	75	50	125
Total	**1,234**	**761**	**1,998**

Source: Provincial Health Office of Nong Bua Lamphu Province, 1999 MOPH

Table 6 Registered PWDs in NBL by district and type of impairment

Types of impairment	Muang	Sri Boon Ruang	Na Klang	Non Sang	Sawan Kuha	Na Wang	Total
• Seeing	66	74	54	50	53	13	310
• Hearing	55	50	51	38	28	12	234
• Physical/mobility	209	215	192	148	169	76	1,009
• Mental/Behavioral	12	7	4	9	12	3	47
• Intellectual/Learning	68	108	59	69	73	21	398
Total	410	454	360	314	335	125	1,998

Source: Provincial Health Office of Nong Bua Lamphu Province, 1999 MOPH

CHAPTER III
Research Findings

3.1. Quantitative study

3.1.1 Socio-demographic characteristics

Study subjects comprised 281 PWDs; two-third of them were from Sriboonruang District. Respondents were 66 percent PWDs and 34 percent relatives. The proportion of PWD/relative distribution showed the same trends in both districts. (Table 1)

The majority (78 percent) of relative respondents were females of a high age group (45 and above). Most of them were parents and siblings of PWDs (67 percent). Only nine percent were spouses. The PWD families were generally poor, 78 percent of them had a monthly income of less than 2000 baht. Families averaged five members. Their main occupations were farmers (70 percent) and laborers (20 percent). They were permanent members of the village with an average of 38 years tenancy. The characteristics were comparable in the study in almost every aspect. Only the economic status and duration of tenancy were slightly greater in the comparison area than in the study area. (Table 7)

The majority of PWDs, 45 percent were single and 17 percent were divorced or separated. However, almost all of them were living with their families including parents (42 percent) spouse 33 percent children 52 percent and siblings 31 percent. There were only 2.5 percent that were living alone. Only 23 percent of PWDs had jobs and earned on their own. Such work included: rice farming, weaving, basket-making, and common labor. Half of them were unemployed, while 25 percent worked for their families with no pay. Two-third of the PWDs had schooling and a majority had completed primary education. Only 13 percent attained a higher education than primary level. PWDs in SBR District were generally less educated than those in NK District. Almost all in-school PWDs attended regular school, only 2.1 percent were educated in schools with special education programs for the disabled. For the blind and deaf, 32 percent never had schooling, the main obstacle was due to their disabilities. (Table 8)

During the daytime, nearly 90 percent of PWDs stayed at home, of which two-thirds lived unproductive lives. They did nothing or watched TV most of the time. Only 10 percent worked at home to earn money, and 21 percent helped with household chores without wages.

Relationships between PWDs and their neighbors were positive. The neighbors were helpful and friendly to PWDs. When PWDs were in need they received help from their families, friends and neighbors. The most resourceful people for PWDs were their parents (40 percent) followed by spouse, children and siblings 30 percent, 22 percent and 20 percent, respectively.

Table 7 Socio-demographic characteristics of relative respondents

Characteristics	Sriboonruang		Naklang		Total	
	N (48)	%	N (48)	%	N (96)	%
Interviewees						
- Family/relative	48	26.5	48	48.0	96	34.2
- Disabled	133	73.5	52	52.0	185	65.8
Sex						
- Male	12	25.0	9	18.8	21	21.9
- Female	36	75.0	39	81.2	75	78.1
Age (years)						
- 14-24	3	6.3	1	2.1	4	4.2
- 25-44	10	20.8	14	29.2	24	25.0
- 45-59	14	29.2	18	37.5	32	33.3
- 60 and over	21	43.8	15	31.3	36	37.5
Education						
- Illiterate	5	10.4	5	10.4	10	10.4
- Primary	41	85.4	36	75.0	77	80.2
- Secondary	1	2.1	6	12.5	7	7.3
- Vocational and higher	1	2.1	1	2.1	2	2.1
Marital Status						
- Married	30	62.5	30	62.5	60	62.5
- Single	2	4.2	4	8.3	6	6.3
- Divorced/separated/widowed	16	33.3	14	29.2	30	31.2
Occupation						
- Unemployed	7	14.6	9	18.8	16	16.7
- Agriculture	34	70.8	32	67.7	66	68.7
- Labor	6	12.5	6	12.5	12	12.5
- Government sector	1	2.1	1	2.1	2	2.1
Relationship with PWDs						
- Spouse	2	4.2	7	14.6	9	9.4
- Parent	27	56.3	18	37.5	45	46.9
- Grandparent	1	2.1	1	2.1	2	2.6
- Child/grandchild	5	10.4	11	22.9	16	16.7
- Brother/sister	10	20.8	9	18.8	19	19.8
- Relative	3	6.3	2	4.2	5	5.2

Table 8 Socio-demographic characteristics of PWDs

Characteristics	Sriboonruang		Naklang		Total	
	N (181)	%	N (100)	%	N (281)	%
Marital status of PWDs						
- Married	76	42.0	51	51.0	127	45.2
- Single	73	40.3	33	33.0	106	37.7
- Widowed/divorced/ separated	32	17.7	16	16.0	48	17.1
Living with *(multiple response)*						
- Parent	77	42.5	41	41.0	118	42.0
- Spouse	61	33.7	32	32.0	93	33.1
- Child/grandchild	101	55.8	45	45.0	146	52.0
- Brother/sister	58	32.0	28	28.0	86	30.6
- Friend	1	0.6	-	-	1	0.4
- Grandparent	6	3.3	4	4.0	10	3.6
- Relative	3	1.7	6	6.0	9	3.2
- Living by oneself	4	2.2	3	3.0	7	2.5
Occupation						
- Unemployed	89	49.2	58	58.0	147	52.3
- Self-employed	43	23.8	21	21.0	64	22.8
- Work without pay	49	27.1	21	21.0	70	24.9
Education						
- Current enrolment	2	1.1	1	1.0	3	1.1
- Past enrolment	122	67.4	67	67.0	189	67.3
- Never	57	31.5	32	32.0	89	31.7
Daily activity *(multiple response)*						
- Resting/ do nothing	70	38.7	39	39.0	109	38.8
- Assisting housework	70	38.7	26	26.0	96	34.2
- Watching TV, reading,etc.	42	23.2	23	23.0	65	23.1
- Working with pay	41	22.7	19	19.0	60	21.4
- Handicraft, gem cutting	20	11.0	8	8.0	28	10.0
- Playing with friends	3	1.7	7	7.0	10	3.6
Relationship with neighbors *(multiple response)*						
- Greeting	137	75.7	66	66.0	203	72.2
- Talking/Chatting	128	70.8	61	61.0	189	67.3
- Playing together	50	27.6	17	17.0	67	23.8
- Eating together	85	47.0	23	23.0	108	38.4
- Participation Social Activity	59	32.6	22	22.0	81	28.8
- Being helped/take care by neighbors	42	23.2	16	16.0	58	20.6
- Helping disabled when they need taking care	37	20.4	8	8.0	45	16.0

3.1.2. Epidemiology of the disabilities

There were more number of PWD males than females. The age group of 60 and above comprised 27 percent, followed by age group 20-29 and 30-39 at similar proportions, 24 percent. Nearly half of them, 45 percent became disabled after 20 years of age. One-fourth were born disabled. Those with disabilities developed during preschool age, 1-5 years old, comprised 15 percent.

Only one-third of PWDs had registered for diagnosis of impairment status and were issued the official document confirming their impairment condition. Non-registration was mainly due to a lack of knowledge and information about the Rehabilitation for Disabled Persons Act, BE. 2543.

Regarding the type of disability, physical or mobility impairment comprised the majority, 43 percent. Impairment in terms of seeing, hearing or communicating, and intellectual or learning ability followed, 26 percent, 18 percent and 12 percent, respectively. Multiple impairments comprised 12 percent. The least impaired among study subjects were in terms of mentality or behavior 10 percent.

The characteristics of impairments among studied PWDs included stammering, dumbness, blindness in one or two eyes, hearing impairment or total deafness, amputated legs, arms, fingers and toes and disabilities of the limbs, harelips and cleft palate, paralysis, paresis, kyphosis (humpback), psychosis and mental retardation.

The etiology of disabilities among PWDs, based on respondents' perceptions, revealed that illness accounted for 39 percent, whereas 3 percent claimed that medical malpractice was the responsible factor, accident and congenital defects were of equal proportion, 22 percent and unknown cause was 8 percent.

Most of the disabilities caused by accidents occurred outside the home. Road and working accidents were of the same proportion, 24 percent. Others included drowning, falls and injuries.

A majority of PWDs, 74 percent in both districts did not have facilities and equipment needed for their disabilities, such as, prosthesis, orthosis, hearing aids, canes and crutches. Nevertheless, two-third of them

were able to go out by themselves. Difficulties and inconveniences encountered by PWDs when going out were from their own physical handicaps as well as deficiencies in infrastructure such as ramp ways, street footpaths, and public transportation, and inadequacies of facilitating equipment. In addition, feelings of shamefulness and inferiority were reasons mentioned.

Of the PWDs, 21 percent had other family members who were also disabled. Most of the disabilities were first noticed by family members, 41 percent, 36 percent were recognized by health personnel, physicians, nurses and public health workers and 29 percent were identified by PWDs themselves. The immediate management of the family for PWDs was seeking treatment. The rest, 31 percent, took no action. There were several choices of treatment sought for PWDs, varying from modern treatment from public hospitals and health center, 84 percent, folk magic treatment, 22 percent, folk medicine, 15 percent, traditional medicine, 10 percent, to self-treatment, 4 percent. However, at present, only 15 percent of PWDs were under treatment. The reasons given for not being treated included: 67 percent not necessary because impairments were not treatable, 27 percent not able to afford the cost of their treatment and time factor 6.3 percent.

The present conditions of impairment compared to its initial stages were 41 percent stable, 31 percent deteriorating, and 27 percent improved. PWDs were generally healthy, half of them never reported being sick, 31 percent had minor ailments and received treatment at the hospital and/or health center. Their health behaviors were considered fair, as one-fourth of them smoked and drank.

Of the PWDs 60 percent perceived that their impairments were irreversible. Although two-thirds of them had attended training courses for rehabilitation, they rarely practiced it. (table 9)

Table 9 Epidemiology, etiology and management of the disabilities

Characteristics	Sriboonruang		Naklang		Total	
	N (181)	%	N (100)	%	N (281)	%
Sex of PWDs						
- Male	90	49.7	61	61.0	151	53.7
- Female	91	50.3	39	39.0	130	46.3
Age of PWDs (years)						
- 20 -29	44	24.3	26	26.0	70	24.9
- 30 -39	41	22.7	27	27.0	68	24.2
- 40 - 49	22	12.2	13	13.0	35	12.5
- 50 -59	20	11.0	12	12.0	32	11.4
- more than 59	54	29.8	22	22.0	76	27.0
Age that disability developed						
- At birth	41	22.7	30	30.0	71	25.3
- 1 - 5 years	32	17.7	11	11.0	43	15.3
- 6 - 10 years	12	6.6	6	6.0	18	6.4
- 11 - 20 years	14	7.7	10	10.0	24	8.5
- more than 20 years	82	45.3	43	43.0	125	44.5
Registration status						
- Yes	72	39.8	34	34.0	106	37.7
- No	107	59.1	65	65.0	172	61.2
- Unsure	2	1.1	1	1.0	3	1.1
Type of impairments						
(Multiple response)						
- Hearing	29	16.0	21	21.0	50	17.8
- Seeing	51	28.2	22	22.0	73	26.0
- Locomotion	80	44.2	42	42.0	122	43.4
- Mental/behavioral	15	8.3	12	12.0	27	9.6
- Intellectual	28	15.5	18	18.0	46	16.4
- Multiple impairment	20	11.0	13	13.0	33	11.7

Characteristics	Sriboonruang		Naklang		Total	
	N (181)	%	N (100)	%	N (281)	%
Cause of disability						
- Genetics	4	2.2	4	4.0	8	2.9
- Accident	46	25.4	16	16.0	62	22.1
- Illness	64	35.4	45	45.0	109	38.8
- Congenital	38	21.0	25	25.0	63	22.4
- Drug addiction	1	0.6	1	1.0	2	0.7
- Malpractice	6	3.3	3	3.0	9	3.2
- Stress	4	2.2	1	1.0	5	1.8
- Unknown	18	9.9	5	5.0	23	8.2
Type of accident						
- In house setting	11	23.9	1	6.3	12	19.4
- Occupational	12	26.1	3	18.8	15	24.2
- Traffic	10	21.7	5	31.3	15	24.2
- Others	13	28.3	7	43.8	20	32.3
Special equipment received						
- Yes	42	23.2	26	26.0	68	24.2
- No	135	74.6	74	74.0	209	74.4
- None needed	4	2.2	-	-	4	1.4
Self-help ability						
- Yes	121	66.9	63	63.0	184	65.5
- No	60	33.1	37	37.0	97	34.5
Difficulties/ Inconveniences						
(Multiple response)						
Own physical handicaps	134	74.0	71	71.0	205	73.0
Deficiency of infrastructure	58	32.0	25	25.0	83	29.5
Feeling shamefulness	34	18.8	22	22.0	56	19.9
Having relatives who were disabled	44	65.9	16	16.0	60	21.4
Initial detection by						
(Multiple response)						
- Doctors/Nurses/PH Officer	59	32.6	42	42.0	101	35.9
- Family	70	38.7	45	45.0	115	40.9
- Oneself	62	34.3	19	19.0	81	28.8
- Friends/neighbors	6	3.3	1	1.0	7	2.5
- Others	1	0.6	-	-	1	0.4

Characteristics	Sriboonruang		Naklang		Total	
	N (181)	%	N (100)	%	N (281)	%
Immediate Management						
- None	63	34.8	23	23.0	86	30.6
- Unsure	1	0.6	-	-	1	0.4
- Treated	117	64.6	77	77.0	194	69.0
Treatment received						
(multiple response)						
- Modern medicine	100	85.5	62	80.5	162	83.5
- Magic /folk medicine	17	14.5	12	15.6	29	14.9
- Traditional medicine	11	9.4	9	9.0	20	10.3
- Self-treatment	4	3.1	3	7.0	7	3.6
Current treatment	**32**	**17.7**	**9**	**9.0**	**41**	**14.6**
(Multiple response)						
- Modern medicine	30	93.8	7	77.8	37	90.2
- Magic/ Folk treatment	1	3.1	1	11.1	2	4.9
- Traditional/herbal medicine	3	9.3	1	11.1	4	4.9
Not treating currently	**149**	**82.3**	**91**	**91.0**	**240**	**85.4**
Reason for not treating						
- Improvement/self-care	28	18.8	14	15.2	42	17.5
- Not treatable	95	63.8	59	64.8	154	64.2
- Costly treatment	41	27.5	23	25.3	64	26.7
- Time constraints	36	24.2	15	16.5	51	21.3
Disability status compared to initial stage						
- Improved	49	27.1	28	28.0	77	27.4
- Deteriorating	62	34.3	26	26.0	88	31.3
- Stable	70	38.7	46	46.0	116	41.3
Rehabilitation training						
Hospital staff	16	66.7	5	83.3	21	70.0
Foundation staff	6	25.0	-	-	6	20.0
VHVs and others	2	8.3	1	16.7	3	10.0

3.1.3 Needs and resources for PWDs

Family members are the main source of assistance for PWDs. Of the PWDs 43 percent were assisted by their children, 39 percent by parents, 26 percent by siblings and only 16 percent by spouses. The greatest needs of PWDs from their families were care and assistance in time of sickness, in daily living activities as well as financial support for necessary equipment.

Most PWDs, 88 percent, had varieties of assistance needs such as the need to work and earn money, 69 percent, to receive medical care, 65 percent, to receive education, 10 percent, and to have legal assistance, only 2 percent.

Among the people and groups in the community, the most important persons that PWDs perceived as having significant roles in providing help were the Tambon Chief, Village Headman and VHVs, 47 percent, neighbors and the Tambon Administrative Organization (TAO) were also seen as important, 33 percent and 14 percent, respectively. (Table 10)

Table 10 Assistance needs and Resource for PWD

Assistance need	Sriboonruang		Naklang		Total	
	n	%	n	%	n	%
Helping persons (multiple response)						
- Spouse	14	15.1	10	16.7	24	15.7
- Child/grandchild	45	48.4	1	35.0	66	43.1
- Parents	32	34.4	7	45.0	59	38.6
- Brothers/sisters	27	29.0	13	21.7	40	26.1
- Grandparent	1	1.1	2	3.3	3	2.0
- Relatives	9	9.7	3	5.0	12	7.8
- Friends/neighborhood	9	9.7	3	5.0	12	7.8
- No one	2	2.2	1	1.7	3	2.0
Assistance needs from Government (multiple response)						
- Medical services	103	65.2	59	65.5	162	65.3
- Work and income	116	73.4	56	62.2	172	69.4
- Education	15	9.5	9	10.0	24	9.7
- Legal assistance	3	1.9	1	1.1	4	1.6
Assistance needs from family (multiple response)						
- No need	57	31.5	29	29.0	86	30.6
- Medical care/treatment	20	11.0	4	4.0	24	8.5
- Providing aid/equipment	17	9.4	2	2.0	19	6.8
- Home care	42	23.2	27	27.0	69	24.6
- Financial support	50	27.6	36	36.0	86	30.6
- Moral support	8	4.4	11	11.0	19	6.8
- Income generation	10	5.5	2	2.0	12	4.3
Help from individual/ group in community (multiple response)						
- Village headman	39	21.5	28	28.0	67	23.8
- Friend/neighbor	65	35.9	28	28.0	93	33.1
- Village Health Volunteer	43	23.8	22	22.0	65	23.1
- TAO	21	11.6	18	18.0	39	13.9
- Teacher/monk	21	11.6	7	7.0	28	10.0
- Club or group	6	0.6	5	5.0	11	3.9

3.1.4. Knowledge about the Rehabilitation of Disabled Persons Act

Only 18 percent of PWDs knew about the Rehabilitation of Disabled Persons Act, (BE 2534). Half of them learned from mass-media including TV, radio and newspaper. They also received information from hospital staff and from the Tambon Chief / Village Headman, 28 percent and 20 percent, respectively. Most, 86 percent, knew that once registered to be diagnosed and officially documented they were entitled to receive free medical care and 11 percent knew that they could receive monthly allowances. (Table 11)

Table 11 Knowledge and Information on The Rehabilitation of Disabled Persons Acts

Information	Sriboonruang		Naklang		Total	
	n	%	n	%	n	%
Source of Information about the Rehabilitation of Disabled Persons Acts	**33**	**18.2**	**17**	**17.0**	**17**	**17.0**
- Television, Radio	14	42.4	9	52.9	23	46.0
- Printed materials	2	6.1	-	-	2	4.0
- Neighbors	7	21.2	3	17.6	10	17.6
- Hospital staff	9	27.3	5	29.4	14	29.4
- Family member	1	3.0	-	-	1	2.0
Benefits of registration	**32**	**17.7**	**12**	**12.0**	**44**	**15.7**
- Free medical care	28	87.5	10	83.3	38	86.4
- Monthly allowances	4	12.5	1	8.3	5	11.4
- Other social welfare	4	12.5	2	16.7	6	13.7

3.1.5. Attitudes of the family and community toward PWDs and disability

Regarding altitudes toward PWDs, 88 percent of PWDs had positive perceptions on the attitudes of their families toward themselves. Generally, most of them perceived that their families cared for and treated them as a person who deserved consideration and understanding due to their unique need. Further, they were able to be someone that the family could be proud

of. However, there were some negative perceptions that humiliated PWDs such as being a burden and bringing shame to the family. Moreover, they felt fatalistic attitudes by family members toward their disabilities.

PWDs expressed similar perceptions on the attitudes of the community toward themselves as toward the family, but to a less positive degree. (Table 12)

Table 12 Perceptions of PWDs on the attitudes of family and community toward their disabilities

Perception	Family		Community	
	n	%	n	%
• Is a burden on the family	180	64.1	105	37.4
• Is shameful for the family	121	43.1	92	32.7
• Is a result of sin and bad conduct	225	80.1	182	64.8
• Is a person to be understood	244	86.8	220	78.3
• Is a useful person	213	75.8	170	60.5
• Is a person that needs to be cared for	241	85.8	201	71.5
• Is a person that the family can be proud of	176	62.6	151	53.7
• Is a person that needs special consideration	240	85.4	207	73.7
• Is a person with talents	173	61.6	151	53.7
• Is a person that should receive exceptional privilege	235	83.6	200	71.2
• Is a person that should be treat like any other	105	37.4	188	66.9

Regarding attitude toward disabilities, apparently the PWDs and the communities possessed fatalistic attitudes toward disabilities. Sin and bad conduct of PWDs themselves, as well as of their parents, in either a previous or the present life, were factors claimed to be responsible for their disabilities at the highest proportion, 68 percent. Consistently, 60 percent perceived that the disabilities were not preventable. Among the objective perceptions, 47

percent of PWDs perceived that their disabilities resulted from illness; 25 percent from accident and carelessness; 9 percent from medical malpractice of including health/medical personnel; 6 percent from work conditions and lastly 5 percent from heredity. (Table 13)

Table 13 Attitudes toward disabilities

Attitudes	Sriboonruang		Naklang		Total	
	n	%	n	%	n	%
Causes (multiple response)						
- Sin of PWD	94	51.9	54	54.0	148	52.7
- Sin of parents	23	12.7	13	13.0	36	12.8
- Bad conduct	6	3.3	2	2.0	7	2.5
- Illness	79	43.6	38	38.0	117	41.6
- Old age	3	1.7	0	0	3	1.1
- Trauma during pregnancy	9	5.0	2	2.0	11	3.9
- Accident	47	26.0	20	20.0	67	23.8
- Carelessness	1	0.6	0	0	1	0.4
- Work conditions	11	6.1	5	5.0	16	5.7
Prevention of disability						
- Preventable	68	37.6	45	45.0	113	40.2
- Unpreventable	98	54.1	52	52.0	150	53.4
- Unsure	15	8.3	3	3.0	18	6.4

3.1.6. Quality of Life of PWDs

The quality of life for PWDs, was assessed based upon their self estimation of their health status, life satisfaction in terms of availability of needed equipment and facilities, accessibility to services and information, and welfare and supports from public and private agencies. The findings revealed that although PWDs in SBR District seemed to enjoy the availability of a variety of services, from both public and private agencies, the satisfaction for their present health status and living conditions were noticeably lower than PWDs in Naklang District. Satisfaction of public services for education, occupation, and legal aspects, except for health, were recognized as better, in

SBR District as well as the availability of private services. However, PWDs in Naklang District were more satisfied with facilitating infrastructure, such as public transports, recreation areas, and public toilets, as well as personal equipment (wheel chairs, hearing aids) than PWDs in SBR District.

In general, half of PWDs perceived their health status and living conditions as tolerable. Two-third was satisfied with public health services, and more than half perceived that the existing road system was convenient. The least satisfaction, only 18 percent, was about welfare for equipment. Interesting enough, it was found that PWDs of Naklang District appreciated their health and living conditions more than in those of SBR District. (Table 14)

Table 14 Number and percentage of PWD satisfaction toward facilities and Quality of Life

Satisfaction about	Sriboonruang		Naklang		Total	
	n	%	n	%	n	%
Infrastructure for PWDs						
- Road	110	60.8	49	49.0	159	56.6
- Transportation	70	38.7	39	39.0	109	38.8
- Park/recreation	35	19.3	37	37.0	72	25.6
- Telephone	61	33.7	34	34.0	95	33.8
- Toilet	70	38.7	49	49.0	119	42.3
Supportive aids or equipment	28	15.5	24	24.0	52	18.5
Health status	89	49.2	62	62.0	151	53.7
Living condition	94	51.9	55	55.0	149	53.0
Government services						
- Medical	124	68.5	74	74.0	198	70.5
- Educational	66	36.5	31	31.0	97	34.5
- Social	46	25.4	15	15.0	61	21.7
- Consultation/ legal rights	36	19.9	13	13.0	49	17.4
Non-Government services						
- Foundations	10	5.5	3	3.0	13	4.6
- Funds	6	3.3	2	2.0	8	2.8
- Social Welfare Groups	15	8.3	4	4.0	19	6.8

3.2 Qualitative Study

In-depth interviews with authorities for PWDs and focus group discussions with four groups of local key informants in SBR and Naklang Districts revealed that disability is prioritized at the fourth or fifth rank among public health problems of SBR District, since problems such as communicable diseases and drug addiction have a greater impact on society. Besides, the magnitude of disabilities that appears to be a major problem in SBR District, compared to other places, may not represent the true picture. Since SBR District had conducted a survey of PWDs and other places had not; therefore, the rate of disabilities in SBR District is higher, but actually, would be approximately the same as other places.

Community Activities for PWDs

The activities of the community organized for PWDs were concentrated mostly in SBR District. The project was generally initiated and supported by government organizations with involvement and participation of local people to a certain degree. Activities and contributions of the project were found to be active at central levels and had little effect at the peripheral areas; e.g., the majority of PWDs in the village never heard about any organization for PWDs. The following are the projects for PWDs in SBR District.

3.2.1. Sriboonruang : a Model District Project

A project for PWDs was established under the initiation of the director of Sriboonruang District Hospital. The project was chaired by the District Chief Officer, and a committee consisting of the chief of every government sector, the temple abbot, merchants, local politicians and well-to-do people in SBR District. The secretary of the project was the Sriboonruang Hospital Director, who was very enthusiastic towards problems of PWDs. The hospital staff were also active committee members. The project is famous because it was developed by the government sector. The people, as well as local authorities, such as the Village Headman, TAO, VHVs and school teachers were all involved in the project. The Village Headman, Village Health Volunteers and

school teachers cooperated in conducting a survey of PWDs in their areas and sending them for registration. They also provided them with knowledge about the rights of PWDs under the Rehabilitation Act. The project activities included: physical rehabilitation services, occupational training, special education programs and fund-raising. Each activity was responsible by its unit committee. In addition, the project provides a loan with interest for PWDs to use as seed money in their business or occupation. The project was able to raise large amounts of funding through the participation and involvement of SBR District residents.

3.2.2. The Club for PWDs

In 1998, PWDs, through the guidance and facilitation of Sriboonruang District Hospital, organized a club of PWDs in SBR District. The club has 50 members and a committee with a chairman and secretary. The office is situated in Sriboonruang Rehabilitation Center within the compound of Sriboonruang Hospital. Since it is still a growing organization, the activities are limited. However, they were able to get funds from the Department of Social Welfare and the Ministry of Labor and Social Welfare to run the club activities in the amount of 200,000 baht. The activities of the club included occupational training, physical rehabilitation and meetings among club members to plan work opportunities for PWDs. They had planned to recruit more members and to have a PWD representative from each of the 12 Tambons (subdistricts) to sit as a committee member so that they could share problems and exchange experience. They also planned to set up a life insurance scheme for PWDs.

3.2.3. The Sriboonruang Foundation

The Sriboonruang Foundation is an organization established for the purpose of helping relieve the financial problems of SBR District, a model district project. This foundation has its specific functions to mobilize funds to:

1. support the activities of Sriboonruang; a model district project and the club for PWDs.
2. act as a consultative body for the Sriboonruang Project.

3. work as a coordinating body among the Sriboonruang Project, the Club for PWDs and the community. The committee of the Sriboonruang Foundation is separated from the Sriboonruang Project so that it will be independent in decision-making and management. It will also relieve the workload of the Sriboonruang Project staff. The committee of the foundation consists of representation from the government, NGOs, private sectors and the people of Sriboonruang District. It is chaired by the director of Sriboonruang Hospital, through the nomination of its members.

3.2.4. The Tambon Administrative Organization (TAO)

Public consciousness and movements in Sriboonruang have increased awareness of the TAO in every tambon of the problems of PWDs in their own responsible area. They were encouraged to allocate a budget for specific purposes to support PWDs in various forms. They provided financial assistance to PWDs to individuals as well as groups; e.g., providing transportation for PWDs to participate in social activities organized for PWDs on National PWDs Day. Some TAOs had planned to allocate funds for the construction of infrastructure and public facilities necessary for PWDs such as street footpaths, ramps, toilets and drinking water and recreation facilities.

3.2.5. Sriboonruang Hospital

Sriboonruang Hospital is an extraordinary district hospital, for the director, Dr. Kriengsak Akepongse, is highly motivated. He is strongly committed to the problems of PWDs. Efforts were made to renew activities of the CBR Center and revitalize the spirit of the staff which had been steadily declining since the Foundation for PWDs was withdrawn. A special hospital team was set up for PWD activities. A social worker was assigned to take full time responsibility, specifically for CBR, and to be an active secretary of the team.

The services provided by Sriboonruang Hospital for PWDs include: medical rehabilitation and treatment services (diagnostic service, laboratory inspection and other types of special examination), hospital nursing care, home visiting service, counseling service and referal for special treatment services.

3.2.6. Pilot School with Integration (Mainstreaming) Programs

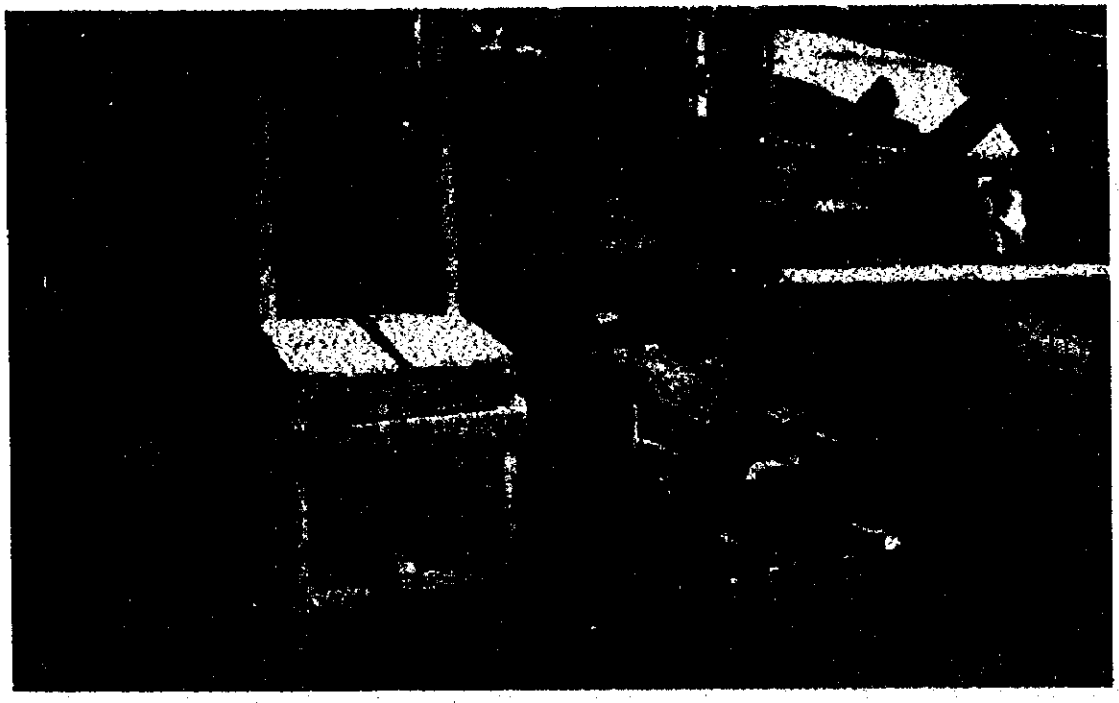
There were three pilot schools in SBR District that integrated special education children into regular programs; they were Muangmai Vitaya School, Baan Don Por School and Baan Sriboonruang School.

Observation of activities and an in-depth interview with a teacher was conducted in Muangmai Vitaya School. The finding revealed that at present the school accommodates 40 disabled children who study together with a total of 700 students. The teacher, Ms. Sarapee Naambundit, had been personally interest in teaching the children with disabilities even before the integrated program was announced. She had tried to develop teaching techniques as well as modify the teaching methods for these children by her own initiative and many years later she was sent for training on communication with PWDs. She said integrated education program had many problems to be solved such as:

1. Relationships between disabled children with disabilities and normal children are not natural
2. Although the children with disabilities may have average learning abilities compared to their non-disabled class-mates, but in general, they are slower learners with short spans of concentration due to their handicaps. Thus, the rate of learning slowed. Cooperation among the families is needed to prepare the children with disabilities appropriately before sending them to school.
3. A deficiency of qualified and devoted teachers for these children exists due to a shortage of teacher human resources in general; therefore, an integrated educational program is extra work for the teacher.

3.2.7. The Local Wisdom of Poo-Prai

Poo Prai (Grandpa "Prai") is a 71-year-old man of SBR District whose only grandson "Suriya" had been a crippled child since he was born. Suriya had cerebral palsy from an abnormal delivery. Grandpa Prai was the only one in the family that had hope for Suriya. He took Suriya to see the doctor at every appointment and performed physical rehabilitation for him regularly as instructed by the physician. Most striking, Poo Prai improvised equipment from household materials to be used as rehabilitative tools for Suriya, such as walking ramps, crutches, canes, and wheel chairs. His indigenous wisdom became famous not only in the village and SBR District, but all over the country. He is now a resource person for every PWD center. Poo Prai said his inspiration came from the encouragement of the staff of the Foundation for PWDs who gave him constant emotional and technical support. His grandson is now 16 years old and is studying in the senior class of his secondary school. His physical handicaps, although much improved, are still prominent but he has the skills to manage his life efficiently.



Improvised Equipment for Disability Rehabilitation

Local wisdom and Indigenous technology
"from grandpa to grandson with love"

CHAPTER IV
Discussion and Recommendations

The study of support for PWDs was conducted through several methods of data collection, including surveys of PWDs and relatives, FGD with key community informants in-depth interviews with authorities, observation of activities, and a review of documents. The findings provided knowledge on the situation of disability and CBR, and its related compound problems.

4.1 Rehabilitation Program for PWDs

The Rehabilitation of Disabled Persons Act, BE 2534 (1991), presented policies to provide equity between disabled and non-disabled persons in society. For example, it allows disabled persons to become senators, to work in government positions and to have the right to be employed. The law entitles PWDs, who have registered under the Rehabilitation Act, to receive rehabilitation services including:

a. medical rehabilitation service, medical treatment costs, aids and equipment for rehabilitating physical, mental/psychological conditions or improving capabilities.
b. providing all levels of education as appropriate either in ordinary schools or special schools.
c. giving advice, consultation and occupational training appropriate to their physical condition and potential to work.
d. entitling them to participate in social activities and access to various facilities and essential services.
e. providing government lawsuit services and contact with governmental organizations.

The main policy of the CBR is to promote community members, including state and private agencies in the city and rural areas, family members of PWDs, local organizations at nationwide, provincial, district, subdistrict and village levels to work together in using community resources and local knowledge to contribute to the rehabilitation of PWDs to their highest potential. Thus, the family and community will participate in caring for and providing rehabilitation efforts for the PWDs in the community. This will result in maintaining a happy life for the PWD.

In conclusion, the CBR consists of four components; i.e., medical educational, occupational/vocational, and social/psychological rehabilitation.

Responsible factors for minimal progress of CBR action

Although governmental policy was clearly laid out and a strong commitment was demonstrated through the support of large amounts of governmental funds for CBR action, the implementation had made only minimal progress. The responsible factors ranged from ideological, technical and managerial to cultural components.

1. First and foremost, the knowledge and technology for the CBR were imported and were not appropriate for local and rural application. For example, to wheel the imported wheel chair on the dusty unpaved village road and to construct street footpaths or ramp ways in public toilet in the village, were all absurd ideas which would be impossible in the rural community setting today. Therefore, the local body of knowledge and indigenous technology existing in the community should be encouraged and systematically collected, through research and development, and adapted to suit the needs and way of life for PWDs in the Thai cultural context.

2. The shortage of personnel to work in CBR programs in terms of quantity and quality; i.e., lacking of skills, knowledge, and understanding of CBR concepts and practices at the urban and rural levels and the curriculum in university and college limited development.

Recommendations for the development of personnel working with PWDs include:

- Increasing the availability of personnel training and upgrading the skills of untrained personnel who are now working with PWDs.
- Requiring all personnel working with PWDs, (health, education) to complete a specific number of hours of " upgraded skills training" each year with evaluative reports tied to salary increases.
- Providing regular workshops for staff to learn adaptive technology available for servicing PWDs.

3. The capabilities of the family and community to deal with PWDs were lacking. FGDs with key informants revealed that the community had little concern for PWDs. The community leaders had little or no knowledge at all about the problems of PWDs in their village. The health priority of PWDs ranked low due to the fact that the impact of disability to society is not visibly obvious. The communities did not think of PWDs as a burden because the family takes care of PWDs themselves. The belief that disability results from sin or misconduct was widespread. In addition, rural people, due to their poverty and economic disadvantage, were more concerned with their living conditions and finances more than health and social problem.

The attitudes of some key informants expressed toward PWD reflected the prejudice of the community against disability and PWDs in general. There were families that felt ashamed of having a disabled child and tried to hide them from the public. The school teacher admitted that integrating disabled children into regular classroom is impossible because they disrupted and slowed down the class.

It is recommended that a comprehensive approach at the family and community levels should be strengthened by integrating all essential aspects into PWD services. Social and economic problems of PWDs and families should be addressed as much as their impairments and health problems.

4. Almost all health/medical care facilities concentrate their services on corrective treatment of the impairments rather than functional rehabilitation; therefore, the facilities and equipment necessary for rehabilitation services are inadequate. It is recommended that the dissemination rehabilitation concepts and skill training to carry out PWD activities should be strengthened among medical staff and authorities.

5. The coordination between involved organizations for the CBR was also a problem, including: referral system management, classification criteria for registration, i.e., the MOPH has five levels of impairment while the MOE has nine levels and inadequate medical specialists to issue certificates of registration. There were needs to develop a practical standard for use that would be accepted by all partners – through the appointment of a working group on the problematic issues. Another recommendation is to have a liaison officer at each institution that would be able to make recommendations on needs which can be given to all the various organizations.

6. Since there are several sectors involved in the Rehabilitation Act, such as the MOPH, Ministry of Labor and Social Welfare, Ministry of Education, Ministry of University, BMA, Budget Bureau and also non-government organizations; therefore, the intersectoral coordination problem was inevitable and resulted in problems of practical management. The Office of Rehabilitation Authority can only give recommendations and suggestions but has no power to reinforce. Unless the authority came from the Prime Minister with united enforcement the problem of intersectoral coordination could not be solved. However, it is necessary to distribute functions and roles for CBR services among various organizations, since one organization can not provide the full range of rehabilitation services needed by PWDs. Doing so is a huge investment with too many specialties and detailed functions; it is too big a job for any individual organization to handle. Therefore, in coping with the problem, and in order to serve the disabled most effectively and efficiently, it is recommended to develop an informal network and build a good sense of understanding among collaborating sectors so each organization

knows its role in coordination with others through liaison officers in each organization.

7. The ministerial regulations issued under the Rehabilitation of Disabled Persons Act was a law intended to facilitate assistance and support in society with no compulsory status. The measures were rather in the form of motivations and incentives, such as, the company or industry that employed the PWD will be entitled to tax exemptions. But for the working place that did not want to hire PWDs, there was no negative consequence. Therefore, the vocational/occupational rehabilitation as well as social rehabilitation were not very successful. It might be workable if the law had attached the negative incentives such as increasing taxation for non-employment of PWD.

4.2 The Situation of the CBR in NBL

As it was revealed by the qualitative study, the activities of the CBR for PWDs in NBL District were quite impressive. There was a strong commitment for the CBR program among government officials at provincial and district levels. Collaboration among various organizations, including, district offices, district hospitals, local parliament and schools, as well as unofficial leaders, i.e., abbots, and Poo Prai were efficient and effective. The team was regarded nationwide as a professional rolemodel for the CBR.

After a long period of withdrawal by the Foundation for Handicapped Children, the activities of the CBR were continued and sustained. The physical facilities and funds were available with good management. However, those activities were only active and recognized at the district level. There were no, or only very little spill-over effects in the community, either at Tambon or village levels. Little was known or discussed about the Sriboonruang Project, PWD Club, Sriboonruang Foundation, Integrated Education School or the wisdom of "Poo Prai"

The factors contributing to the situation were due to the nature of the functions and roles of the government organization that concentrated and

confined the work within their settings. The strategy was also reactive rather than proactive. The lack of public relations and public education were also contributing factors.

Recommended Proactive Strategies for CBR In the Village

It is recommended to use the proactive strategy for the CBR in the village and to:

1. Develop a mobile team staff who will serve as a catalyst to mobilize the activities in the community and to coordinate between the community and involved organizations for needed assistance.

2. Set up the CBR unit in the community; i.e., CPHCC, in which simple and routine activities can be handled by local people or VHVs themselves under the supervision of specially trained health center staff and periodic supervision by medical teams from district hospitals.

3. Provide knowledge and understanding in regard to the disabled to the community people in order to correct negative social attitudes, in the form of group education, individual dialogues at home visits, and public relations through the means of the public address system in the village.

4. Encourage the participation and involvement of the community in any activity for PWDs, including the assignment of responsibility in handling specific activities, and giving recognition to promote motivation.

5. Use Participatory Action Research as a tool to mobilize civic consciousness for PWDs, and effect collective decisions and actions in the form of a civil society.

4.3 Project on Future Technical Cooperation with JICA for PWDs in Thailand

Justification

The study on support for PWDs in Thailand revealed that the prevalence of PWDs is the highest in the northeastern. There were more males than females in all age groups except in the old age group aged 60 years and over. However, the highest rate is found among the older age

physical and mobility impairment had the highest prevalence, 128.2 per 1,000 population, followed by hearing impairment, mental and seeing impairment, respectively (74.5, 67.0 and 46.9 per 1,000 population).

Although the government had provided assistance to PWDs, in terms of medical, educational, occupational, and social services, through the Rehabilitation Acts, BE 2534, the fact that 5 percent of the total estimated PWDs were registered under the Act, despite 66 percent of them had expressed their need for assistance from the government, which included all services specified in the Act. The reasons were mainly due to the limitations on the PWDs part. Most of them are poor, living in rural non-municipal areas and physical handicapped. Poor understanding of family and community and a lack of facilities and equipment for commutation were also barriers. The government and community also had limitations in terms of a shortage of skilled and qualified personnel, including medical specialists, public health nurses, physiotherapists, social workers and teachers. In addition, the institutional based non-proactive type of service was unable to cover the majority of PWDs.

With reference to the philosophy of the CBR that aimed at providing an equity between the disabled and non-disabled in society, and the CBR policy of promoting the community members, including state and private agencies to work together to contribute to the health and welfare of PWDs, therefore, it is necessary to strengthen the capacities of all sectors involved, in terms of improving their knowledge, understanding, skills and expertise to perform their tasks in providing services to PWDs. These include the family and community members, health personnel, school teachers, as well as the PWDs themselves.

The examples of activities are:

1. Training PWD Leaders

Under the JICA assistance scheme of "trainee acceptance" and "expert dispatch," training will be organized for PWDs who show capabilities and interest to devote themselves to the health and welfare of all PWDs. The training will be either a domestic course for Thai PWDs or an international course for PWDs from neighboring countries, i.e., Laos, Cambodia, Vietnam and Myanmar.

Objective:

1. to provide PWDs information and knowledge regarding other PWDs leading to a deeper understanding of PWD problem.
2. to provide opportunities for PWDs to share problems and exchange experience in problem management.
3. to enable PWDs to serve as leaders in the promotion of welfare measures for PWDs at local and regional levels.

Method and Content

The training will consist of lectures, study tours and practice on:

- analysing the current situation to understand the needs of PWDs
- promoting organized activities for PWDs
- improve public relations programs regarding the rights and needs of PWDs
- organizing social activities for PWDs

Training Sites

- The domestic training will be organized in the Northeastern region, where the Rehabilitation Center for the Disabled is located; e.g., Udornthani or Khonkaen Province.

- The international training will be conducted either in Thailand or in Japan.

2. Vocational Training for PWDs

Under The JICA assistance scheme of "JOCV," a vocational training is proposed for poor, unemployed PWDs who need assistance to work and earn money. The vocational training will be designed to suit the types of impairments of trainees and will be organized in the community to fit the local context. Community resources, including, human resources, materials, technology and local knowledge will be mobilized to support training.

Objective:

1. to provide knowledge and skills for PWDs to conduct works appropriate for their impairments
2. to provide the opportunity for PWDs to find employment and to access the chance for successful employment and business opportunities
3. to alleviate the low economic status of PWDs and family
4. to equip PWDs with dignity and self-reliance
5. to mobilize community resources to contribute to the improvement of the quality of life of PWDs.

Method and Content

The JOCV teams, consisting of all kinds of professional experts, will be the trainers of the training. The content of training will vary according to the conditions and needs. Home industry training may include: mushroom raising mat and basket weaving, artificial flower making and, garment manufacturing. Training in the institution may include computer training, printing, electronics, metal working, accounting and management.

Training Site

The home industry training should be conducted in the community at household sites. The institutional training should be conducted vocational colleges (technological colleges) or teacher colleges (Rajapat Institutes) which are scattered over almost every province in Thailand.

3. Capacity Strengthening for Personnel Working with PWDs.

Findings revealed that the greatest felt needs of PWDs was for medical services and special equipment and that there was a shortage of qualified personnel working with PWDs. The total number of doctors who had received medical rehabilitation certification, to date, was only 41 persons all over the country. The other types of personnel; i.e., public health nurses, social workers, and medical technicians, were lacking knowledge and skills such as home nursing, counseling, rehabilitation prosthesis, production and repairing, orthosis and other equipment operation. Knowledge and skill training regarding rehabilitation services for PWDs; therefore, is proposed to be conducted under the JICA assistance scheme of "expert dispatch" or "JOCV team program". The training will be a "training for trainers".

Training Site

The training will be conducted in Institutes such as Khonkaen University within the Faculty of Medicine, Faculty of Medical Technology, Equipment and Physiotherapy, Faculty of Nursing and School of Social Workers.

Objective:

1. to strengthen the capability of the health personnel working with PWDs, in terms of knowledge and skills regarding rehabilitation services

2. to familiarize health personnel working with PWDs to modern concepts, strategies and technologies appropriate for PWDs
3. to prepare health personnel to be the trainers for the training of other health staff
4. to provide the necessary facilities and equipment for training institution, and training activities

Method and Content

The training method will include lectures, demonstrations, and practice. The content will vary according to professional jobs and responsibilities:

- Medical assessment, diagnosis and rehabilitation for medical doctors
- Home nursing care, family-based care and community-based rehabilitation for public health nurse
- Nursing assessment and nursing diagnosis of PWDs for hospital nurses
- Counseling and case management of PWDs for social workers.
- Production and repair of prosthesis, orthosis, hearing aids, and other equipment for technicians

Similar training should be also applied to other types of personnel working for PWDs, outside the health sphere, such as, school teachers, school administrators, as well as educators and education administrators. The topics for training will include, special education and integration education for PWDs and improvement of accessibility to mainstream vocational training.

4. Disability Resource Team

A technical cooperation with JICA and existing international organizations like the ILO or FAO could be organized to develop a Disability Resource Team to complement rehabilitation programs and provide an integrated training environment for PWDs and non-PWDs. The team will not

limit its focus to just training or the rehabilitation center, but extend its services to reach out to PWDs in remote areas. The composition of team members will be multidisciplinary, including health personnel, teachers, vocational instructors and business assistants. Health Centers or the CPHCC in the community could be used to set up a community office or unit for rehabilitation. The Disability Resource Team will coordinate their work with assistant coordinators in each district. These coordinators will actively locate and identify PWDs who need rehabilitative services, or who have no current skill training and are interested in gaining employment or starting a small business.

5. Community Empowerment through Participatory Action Research

To mobilize community consciousness and empower PWDs, their families, and the community, to be self-reliant in the management of their own health and social problem. The process of PAR will enable the community people to identify their own problems and needs, to decide the means and methods to handle and manage their problems with their own resources. Finally, they will be able to utilize the knowledge learned from the PAR process to transform their social realities, through collective action. The CBR units can be established in the community with the assistance and support of the TAO and VHVs and as a result of PAR. This activity can be supported by JICA under the CEP scheme.

Bibliography

1. Department of Medicine, Ministry of Public Health, "Community Based Rehabilitation for Persons with Disabilities ", 1991.
2. Foundation for Handicapped Children, "Manual of disability prevention: Disability is Preventable",
3. Foundation for Handicapped Children, "Dohsa-Hou for Disability Children in Japan", 1998.
4. Foundation for Handicapped Children, "Prai Grandpa's Toy", second print, 1997.
5. Institute of Population and Social Research, Mahidol University, "National Survey on Pre-school and School Disabled Children", 1998.
6. Kanitha Thewindhorpakdi "Rehabilitation for the Disabled: Way to Success of people with disability", Department of Social Welfare, Ministry of Labor and Social Welfare, 1996.
7. National Statistics Office, "The Status of Thai Disabled Persons", Office of Prime Minister, 1999.
8. Office of Rehabilitation for Disabled Person Committee, Department of Social Welfare, Ministry of Labor and Social Welfare, "Directory of GOs and NGOs Working with Disabilities".
9. Office of Rehabilitation for Disabled Person Committee, Department of Social Welfare, Ministry of Labor and Social Welfare, "National Plan of Rehabilitation for the Disabled 1997-2001".
10. Office of Rehabilitation for Disabled Person Committee, Department of Social Welfare, Ministry of Labor and Social Welfare, "Annual Report 1999".
11. Office of Rehabilitation for Disabled Person Committee, Department of Social Welfare, Ministry of Labor and Social Welfare, "Manual for Persons with Disabilities".
12. Office of Rehabilitation for Disabled Person Committee, Department of Social Welfare, Ministry of Labor and Social Welfare, "Rehabilitation for Persons with Disabilities Acts 1991".

13. Pantyp Ramasoota, Suchada Thawesit and Somjai Pramanpol. Evaluation Report "Rehabilitation Project, Sriboonruang District, Udonthani Province." ASEAN Institute for Health Development, Mahidol University, March, 1994.
14. Pantyp Ramasoota, Suchada Thawesit and Somjai Pramanpol. "The Community Self-Help for the Disabled: Sriboonruang District, Udonthani Province." ASEAN Institute for Health Development, Mahidol University, June, 1994.
15. Prapont Praethanond (translator) , "Outdoor Life in spite of Disabilities" , Rainbow Bridge Fund, Foundation for Handicapped Children, 1996.
16. Sriboonruang Rehabilitation and Prevention for Persons with Disability Committee "Sriboonruang: Role Model for Rehabilitation and Prevention" Nong Bua Lamphu,1996.
17. Sirindhorn National Medical Rehabilitation Center, Department of Medicine, Ministry of Public Health, Bulletin of Medical Rehabilitation, vol.8 (2), May-August, 1999.
18. Sirindhorn National Medical Rehabilitation Center, Department of Medicine, Ministry of Public Health, Bulletin of Medical Rehabilitation, vol.8(3), September-December, 1999.
19. Sirindhorn National Medical Rehabilitation Center, Department of Medicine, Ministry of Public Health, "Executive Summary for supporting Community Based Rehabilitation under National Health Development Plan 8", 1999.
20. Sirindhorn National Medical Rehabilitation Center, Department of Medicine, Ministry of Public Health, "Medical Rehabilitation Standard Development", 1995.
21. Sirindhorn National Medical Rehabilitation Center, Department of Medicine, Ministry of Public Health, "Annual Report", 1998.
22. Sirindhorn National Medical Rehabilitation Center, Department of Medicine, Ministry of Public Health, "Future of Community Based Rehabilitation Program", National Conference, Feb 27- March 1, 1995.

23. Som-arch Wongkhomthong, Chongkoknce Chutimatavin, "Research on the Needs of Community Based Rehabilitation (CBR) for Disabled Persons in Thailand", ASEAN Institute for Health Development, Mahidol University, 1998.
24. Somsri Ruksasri (translator), "Precious to God", Rainbow Bridge Fund, Foundation for Handicapped Children, 1999.