



Disaster Impacts and Recovery from Typhoon Morakot--A Three- Year Follow-Up Social Survey

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Past Disaster Social Survey Done by NCDR



www.ncdr.nat.gov.tw

Year of Disaster Event

	2004		2005		2006	2007	2009		
Event	Typhoon Mindulle & Typhoon Aere		Typhoon Long-Wang	--	Heng-chun	Typhoon Krosa	Typhoon Morakot		
Type	Flood, Land-slide	Flood, Land-slide	Flood, Wind	Earth-quake	Earth-quake	Flood	Flood, Landslide		
Survey Year	2004	2005	2006	2006	2007	2008	2010	2011	2012

Issues covered:

Economic lost, risk perception, mitigation, social impacts, psychological impacts, and recovery.

Past Disaster Social Survey Done by NCDR



www.ncdr.nat.gov.tw

Survey data are available at....



<http://ncdr.nat.gov.tw>

In Chinese

Application needed



<https://srda.sinica.edu.tw>

In Chinese

NCDR's Survey vs Taiwan Social Change Survey



www.ncdr.nat.gov.tw

- In 2013, Taiwan Social Change Survey began to include the topic of Disaster Risk.
- Subjects:
 - NCDR → mostly disaster victims
 - Taiwan Social Change Survey → the general public
- Cover similar topics so comparisons b/w disaster victims and the general public can be made (e.g. disaster preparedness, choices of shelters, trust in different levels of government, social networks, etc.)

行政院 國家災害防救科技中心
National Science and Technology Center
for Disaster Reduction

首頁 關於中心 科技研發 推廣應用 國際交流 災害知識 資料服務 相關網站

資料服務

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資料服務 > 線上申請 >
社會經濟調查資料申請

社會經濟調查資料線上申請需登入後始可使用。
社會經濟調查資料申請之清單係指NCDR經核可後可提供申請之資料清單。
可提供申請之清單如下：

名稱	更新時間	下載
NCDR100年莫拉克颱風社會衝擊與復原調查 (第二期)	2014/08/26	報告下載
NCDR96年天然災害社會、心理、經濟影響調查：水災與龍王風災	2013/09/23	報告下載
NCDR97年天然災害社會、心理、經濟影響：柯羅莎颱風	2013/06/04	報告下載
NCDR96年天然災害社會、心理、經濟影響調查：恆春地震	2013/05/14	報告下載
NCDR95年天然災害之風險態度與減災行為調查：地震災害	2013/02/27	報告下載
NCDR99年莫拉克颱風社會衝擊與復原調查 (第一期)	2012/02/03	報告下載
NCDR94年水災與土石流風險認知調查執行報告	2006/08/24	報告下載
NCDR95年天然災害社會經濟衝擊與風險知覺調查	2006/08/24	報告下載

台灣社會變遷調查
Taiwan Social Change Survey

計畫簡介 調查現況 出版現況 資料使用 相關圖書
資料查詢 資料下載 意見交流 網站導覽

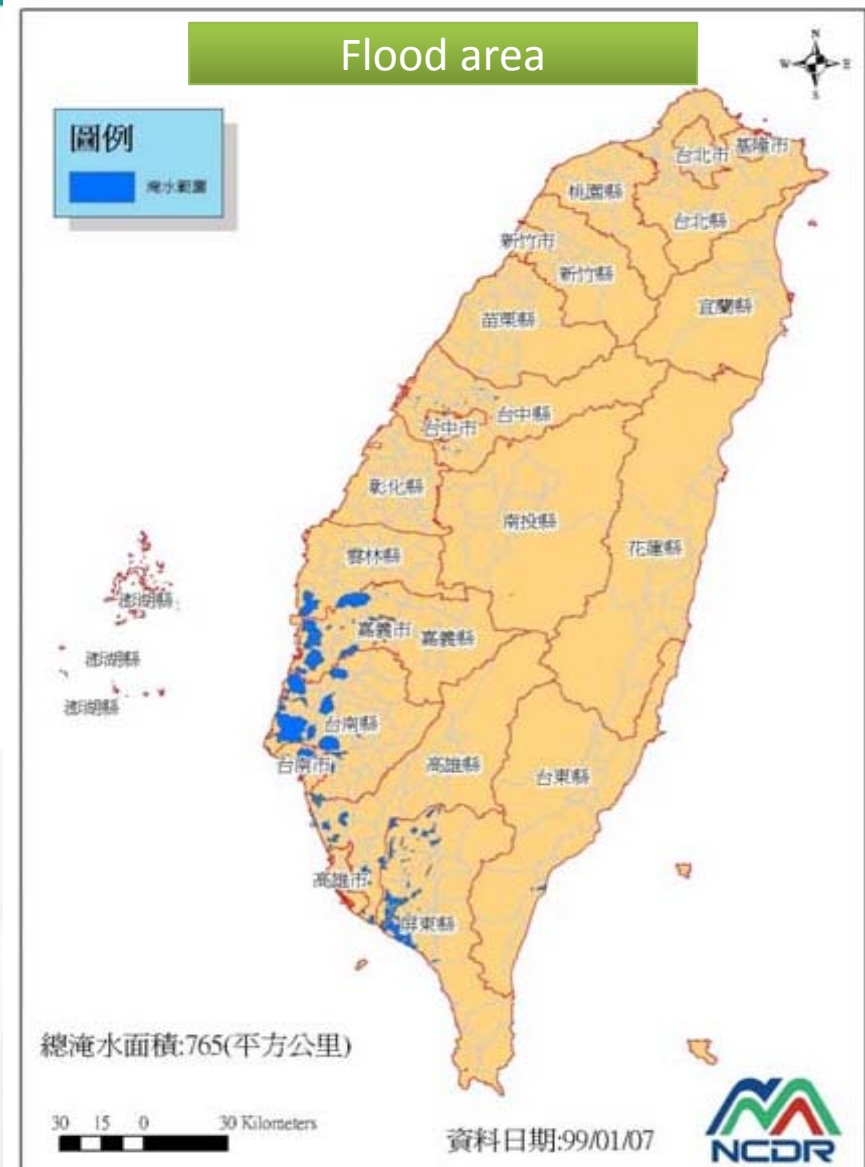
English Version 1997 East Asian Social Survey East Asian Social Survey

Introduction to Morakot Survey



www.ncdr.nat.gov.tw

- The largest accumulated precipitation observed was 3,060 mm in Mount Ali
- Transportation system failures
- Levee/dyke system breakdowns
- Landslide and flood
- Estimate loss: NT 90.47 billion
- Casualty numbers: 699 (Morakot Post-Disaster Reconstruction Council, 2010.11.11)
- Households seriously affected: 1,754 (department of social affairs, 2010)



Introduction to Morakot Survey



www.ncdr.nat.gov.tw

Purpose

- To understand the disaster impacts
- To understand recovery speed
- To understand factors affect recovery

Subject

- Families whose houses were seriously damaged during Typhoon Morakot and applied for government subsidies
- Survey Unit: household

Source of Interviewers

- Directorate General of Budget, Accounting and Statistics (DGBAS) of Executive Yuan

Time conducting Survey

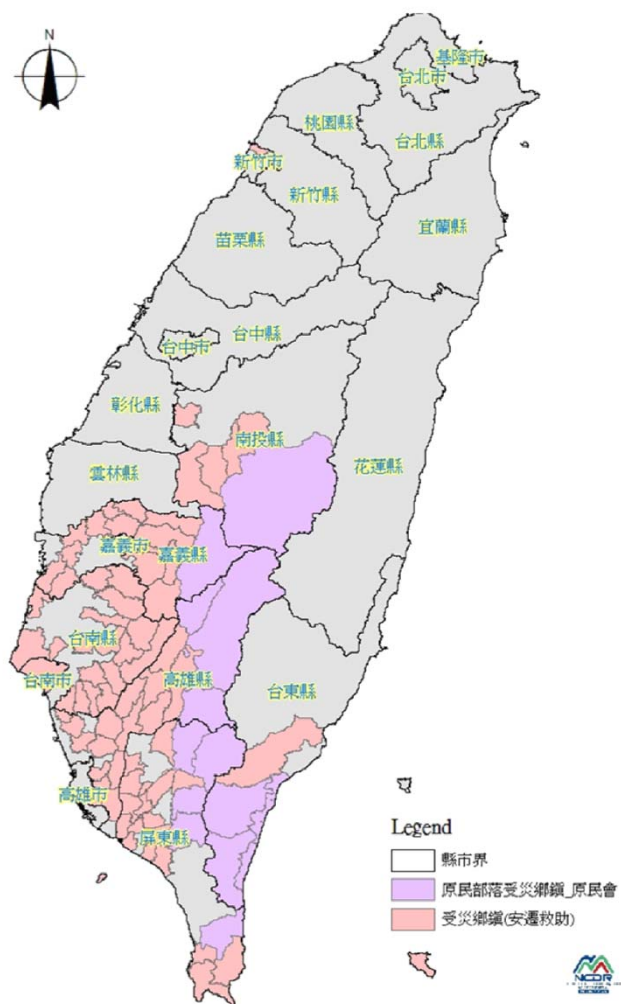
Year	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
2009	Time of Disaster Event							V				
2010						V						
2011							V					
2012									V			

Introduction to Morakot Survey



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Spatial Distribution of the household interviewed



資料來源：內政部社會司安遷救助申請名冊
(統計至2012年12月31日)

County/ City	# of households in the survey population	Year 2010 # of households successfully interviewed	Year 2011 # of households successfully interviewed	Year 2012 # of households successfully interviewed
Taitung County	141	140	138	135
Tainan City	87	86	118	99
Nantou County	40	39	39	37
Pingtung County	367	364	341	337
Kaohsiung County	902	817	758	726
Chiayi County	217	212	208	208
Total	1754	1658 (94.5%)	1602 (91%)	1542 (88%)
Same- Interviewee Number	--	1658	1310	1194 (68%)

General Topics of Survey Questions



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Survey year	Social							Psychological			Economic		Housing			
	Social network	Disabled	Mitigation	Trust	Evacuation/ Sheltering	Needs/assistance	Recovery	Risk perception	Coping	Health	Household loss	Unemployment	Current living condition	Communication	Permanent housing	Living quality
2010	V	V	V	V	V	V	V	V	V	V	V	V	V	V		(V)
2011	V	V		V		V	V		V	V		V	V		V	V
2012	V	V		V		V	V		V	V		V	V		V	V

A Major Challenge Met when Conducting the Post-Disaster Follow-up Survey



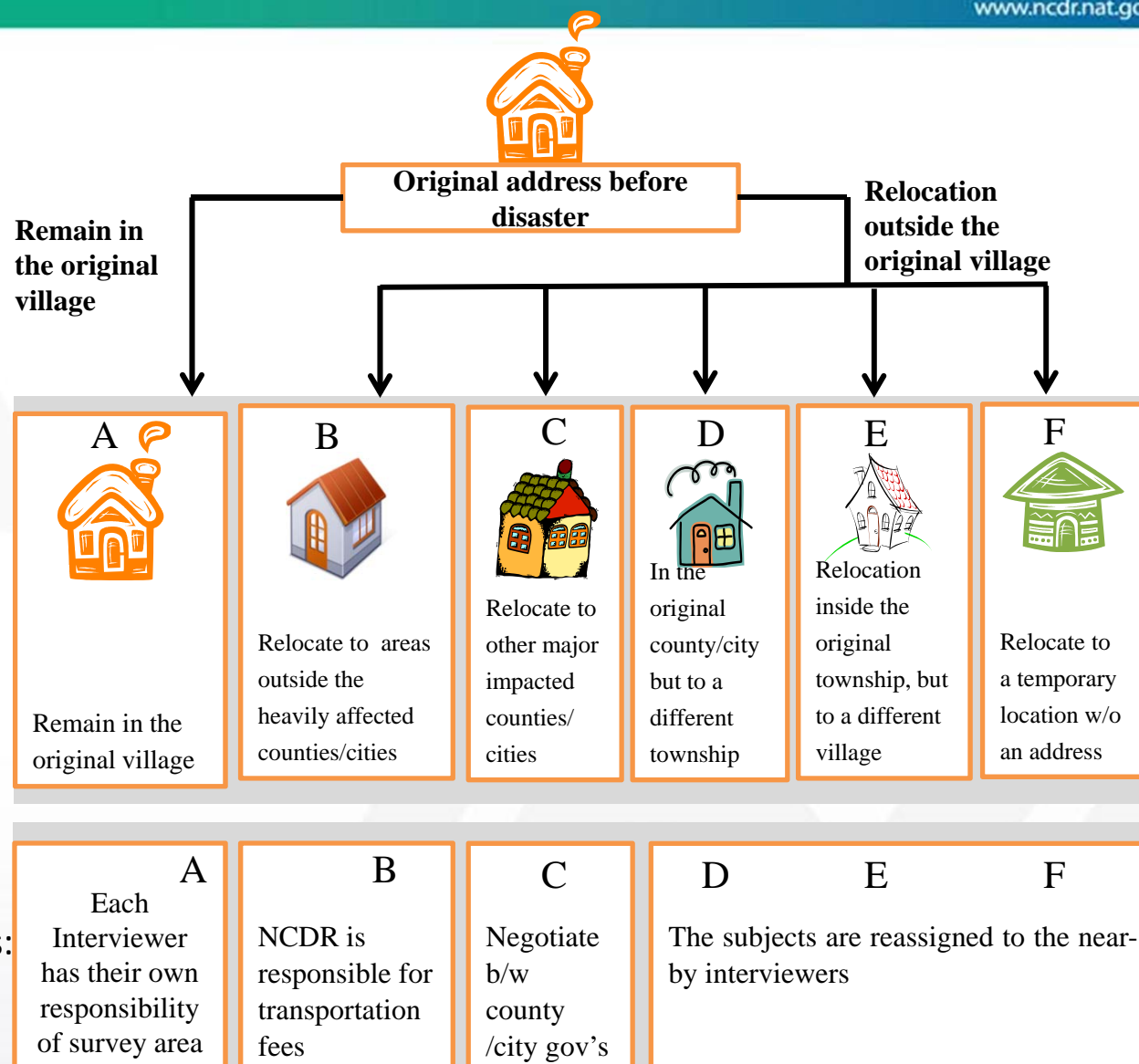
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Major challenge:

Loss of subjects over years

- In year 2010, 69% of the subjects relocated.
- The costs of tracking subjects increase because of relocation.

3 level local administrative areas:
village
township
cities/counties

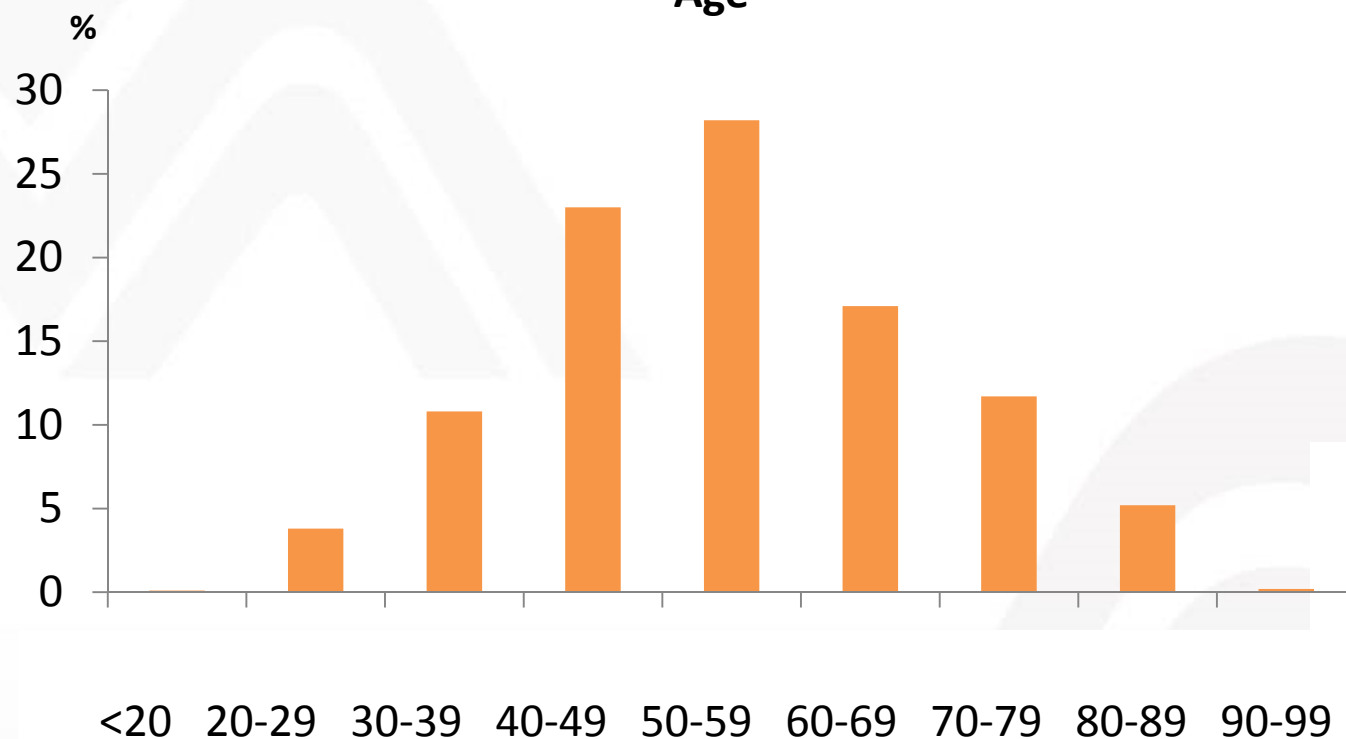


Survey Result: year 2012



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Age



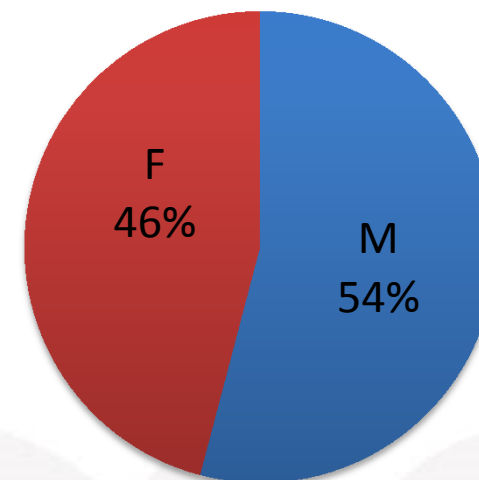
General Taiwanese median age in 2014: 39.2

Female: 39.9

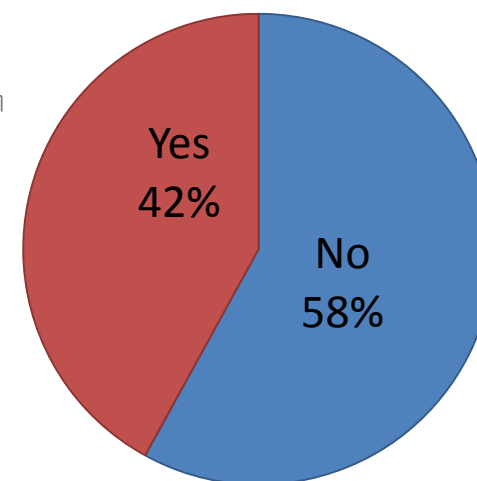
Male: 38.5

% of native Taiwanese 2.28%

Gender



Natives

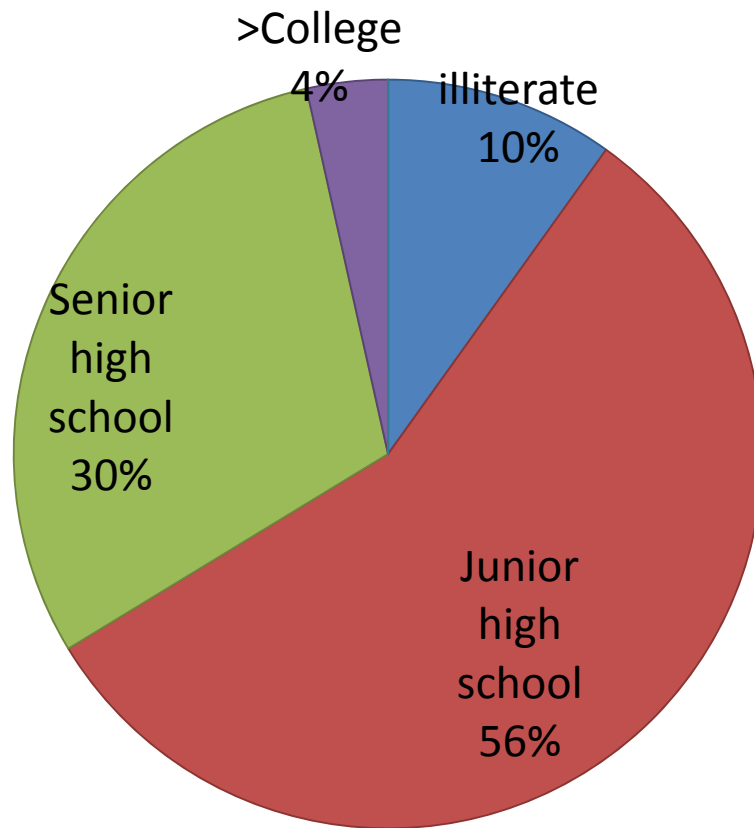


Survey Result: year 2012



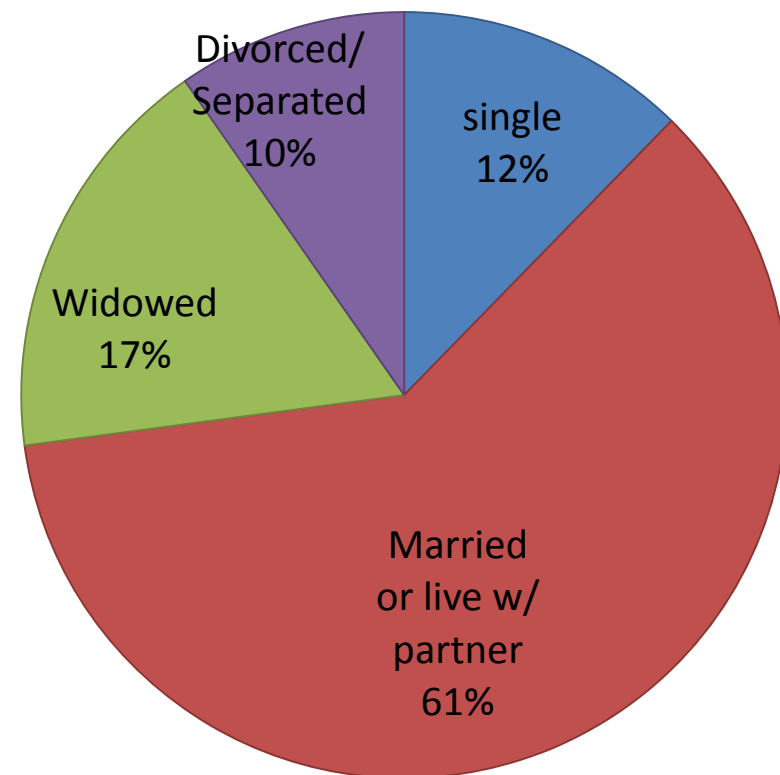
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Education



General Taiwanese in year 2012:
>college 39.4%; Senior high 31.9%

Marriage Status

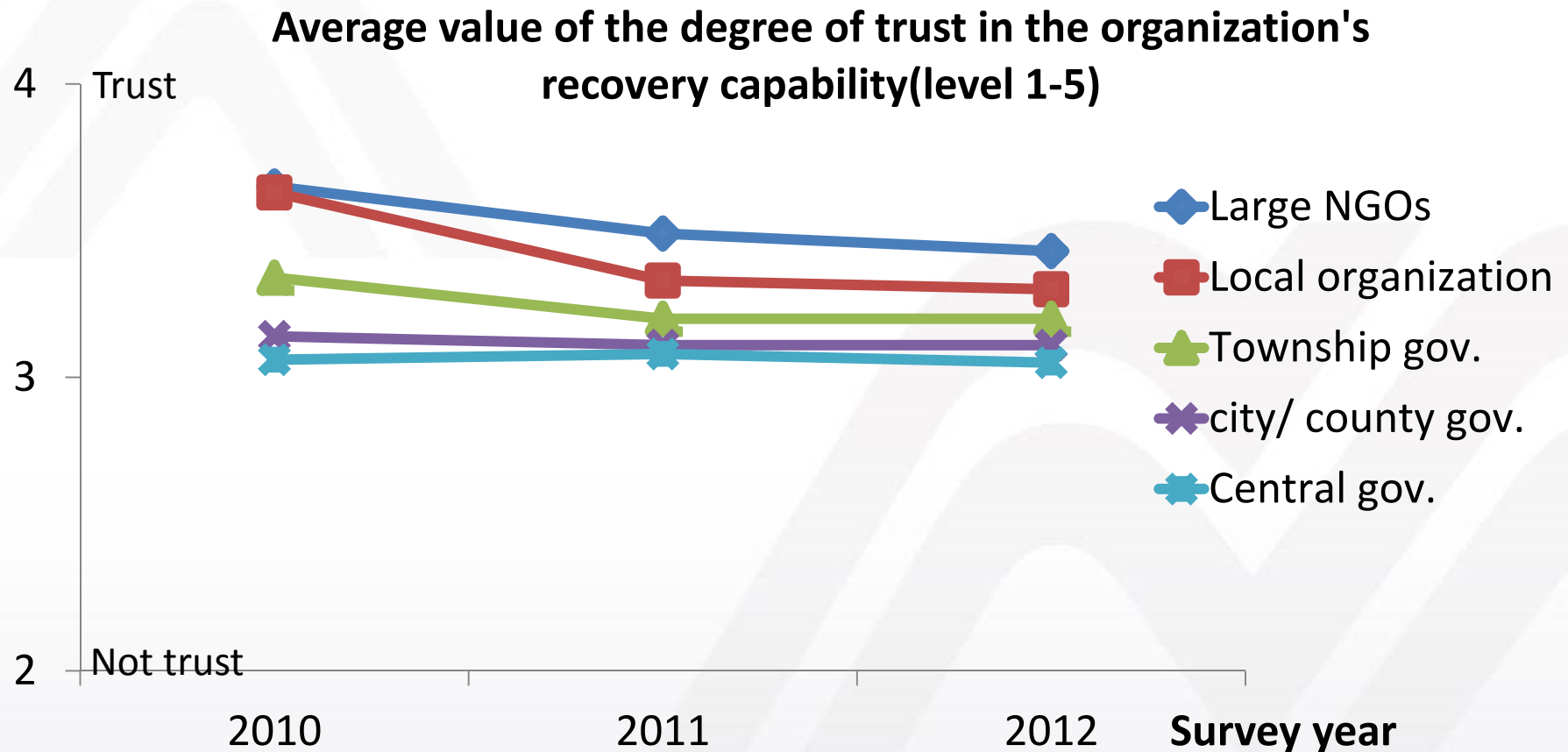


Social Trust



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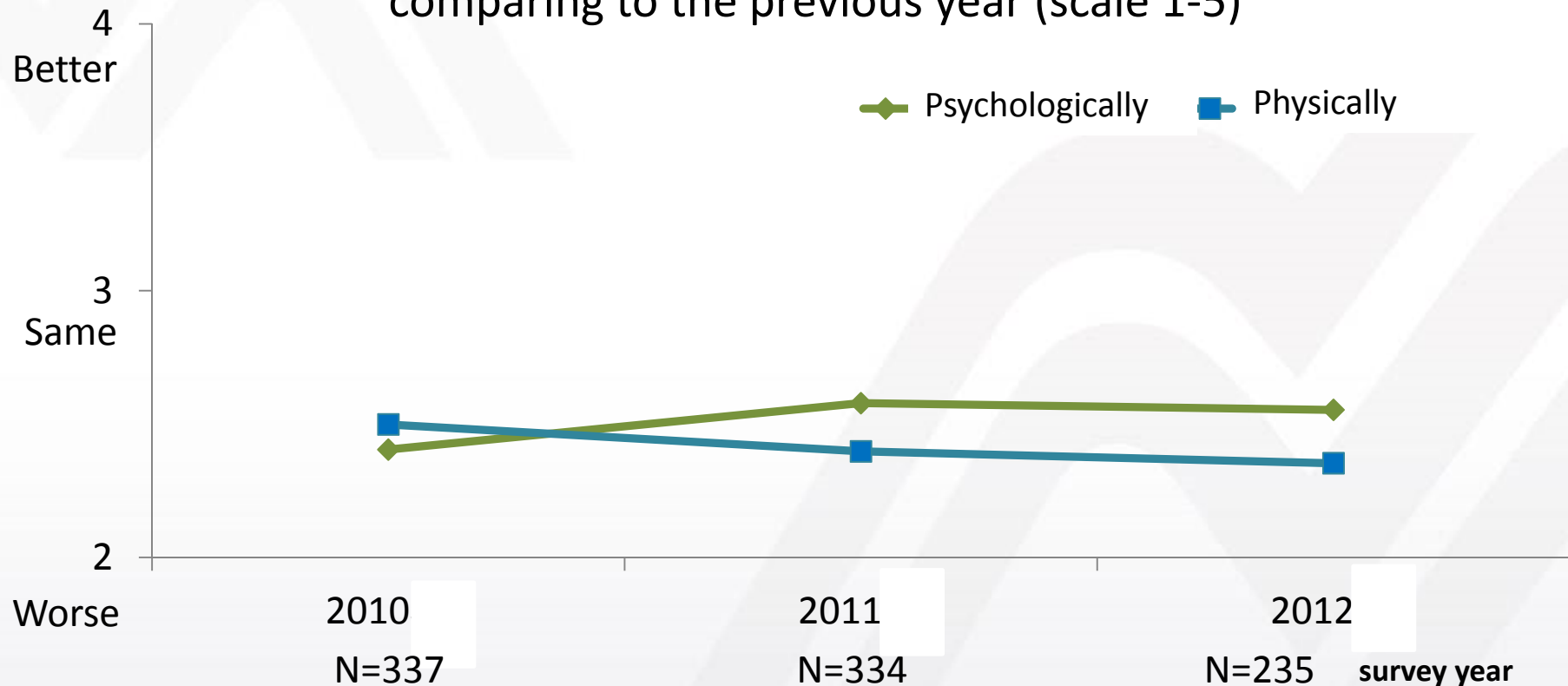
- All of the organizations have an average value above 3.
- Organization's rankings of the degrees of trust remain the same across years.
- The differences in trust toward different organizations decrease over years.



Disabled

- Health conditions get worse, both psychologically and physically
- The physical condition is worse than the psychological condition

Health condition mean
comparing to the previous year (scale 1-5)



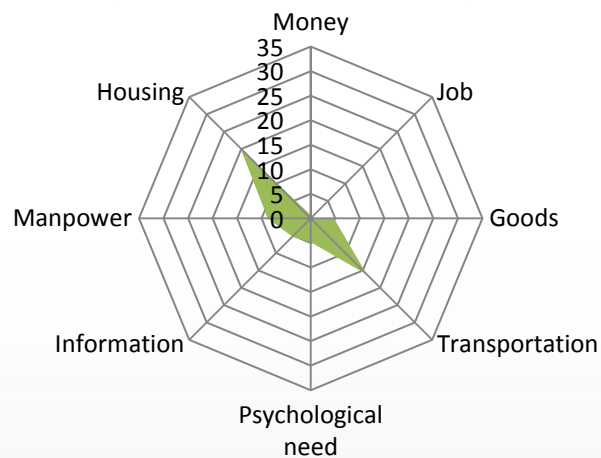
Gaps b/w Needs and Assistance received



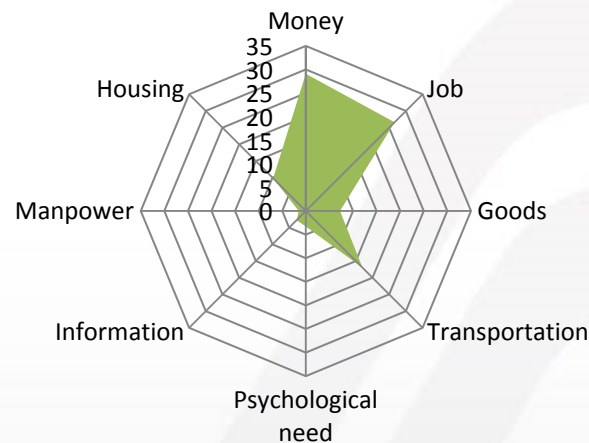
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- The gap b/w needs and assistances increases over years, especially the needs for jobs and goods.
- There is a constant demand for transportation help, which is not being met (around 15% of the responses each year).

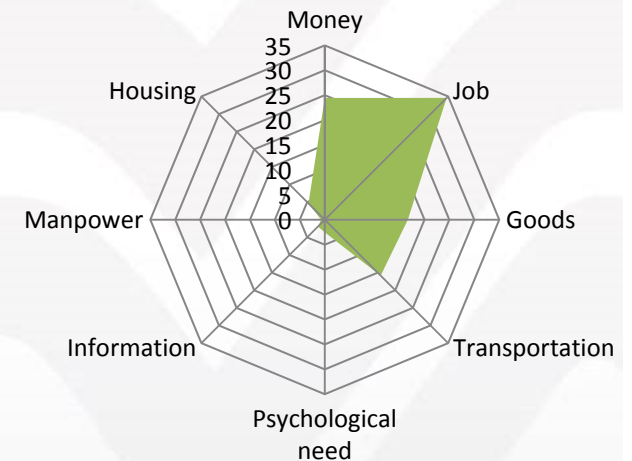
2010



2011



2012

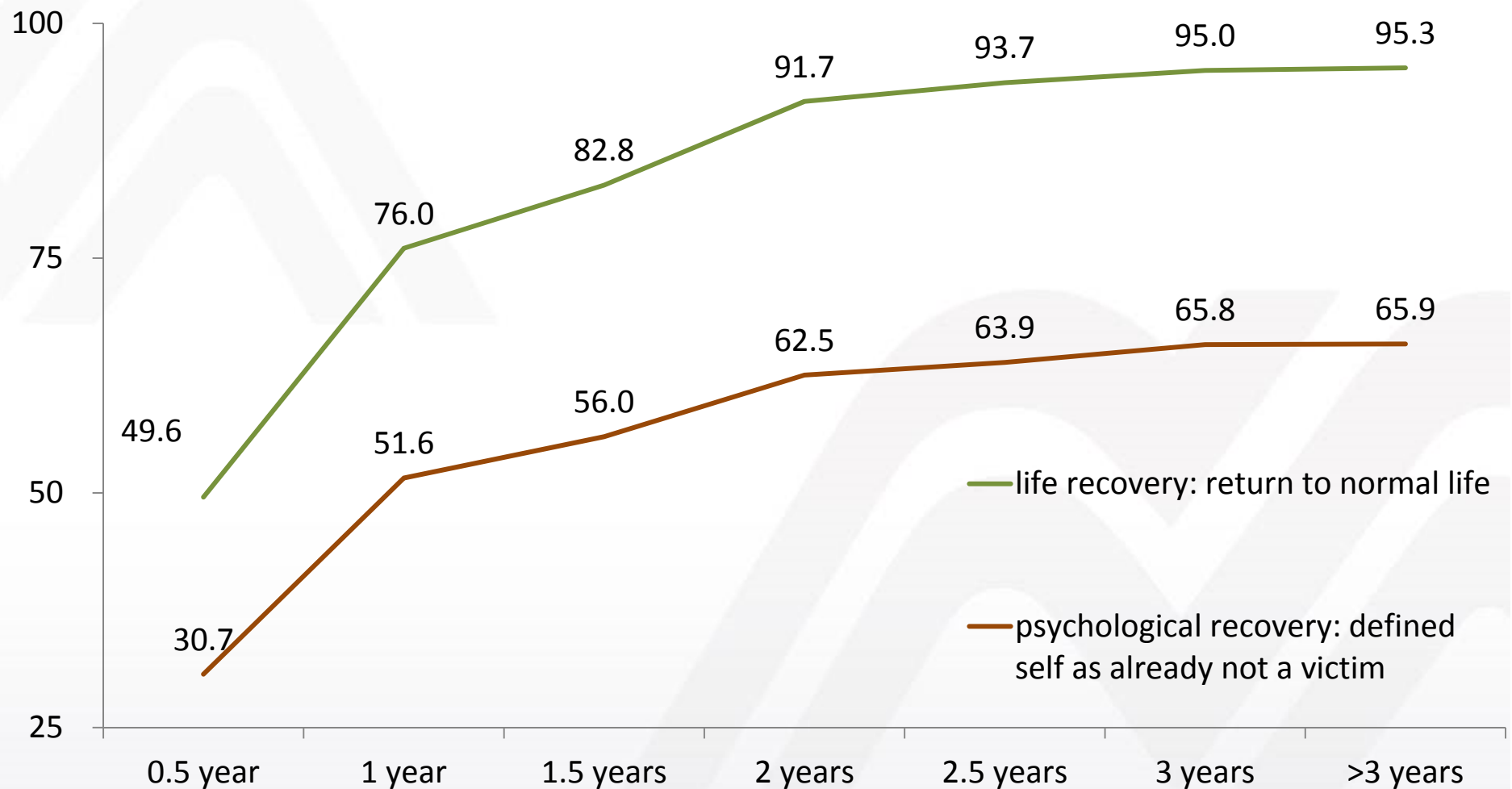


Percent of Recovery



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- The result shows that physically returning to a normal life is much easier than mentally perceiving oneself as not being a victim.

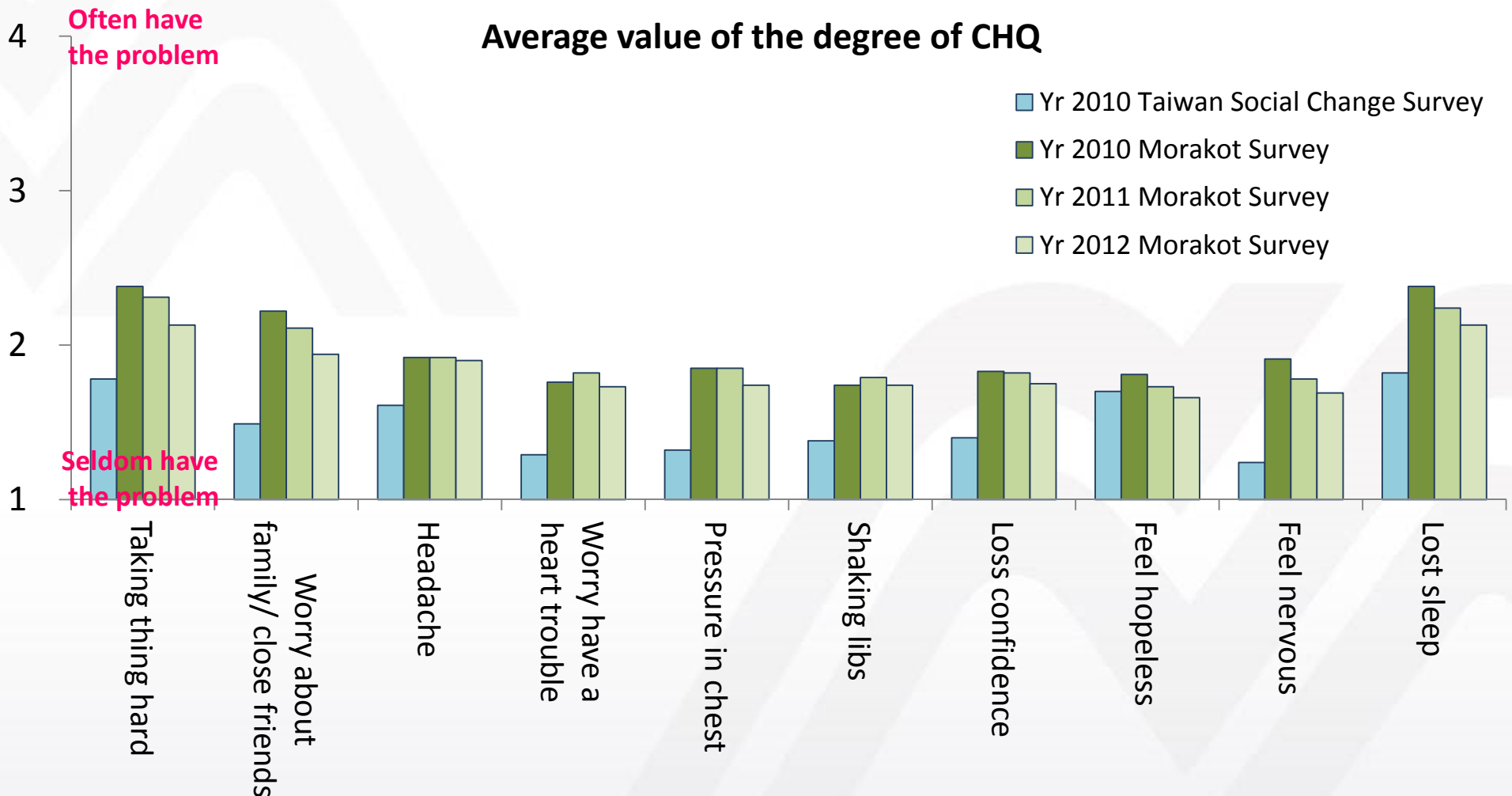


Psychological Impact and Recovery -Chinese Health Questionnaire(CHQ)



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- Three years after the disaster, the overall health condition of the subjects interviewed is still worse than that of the general Taiwanese people.

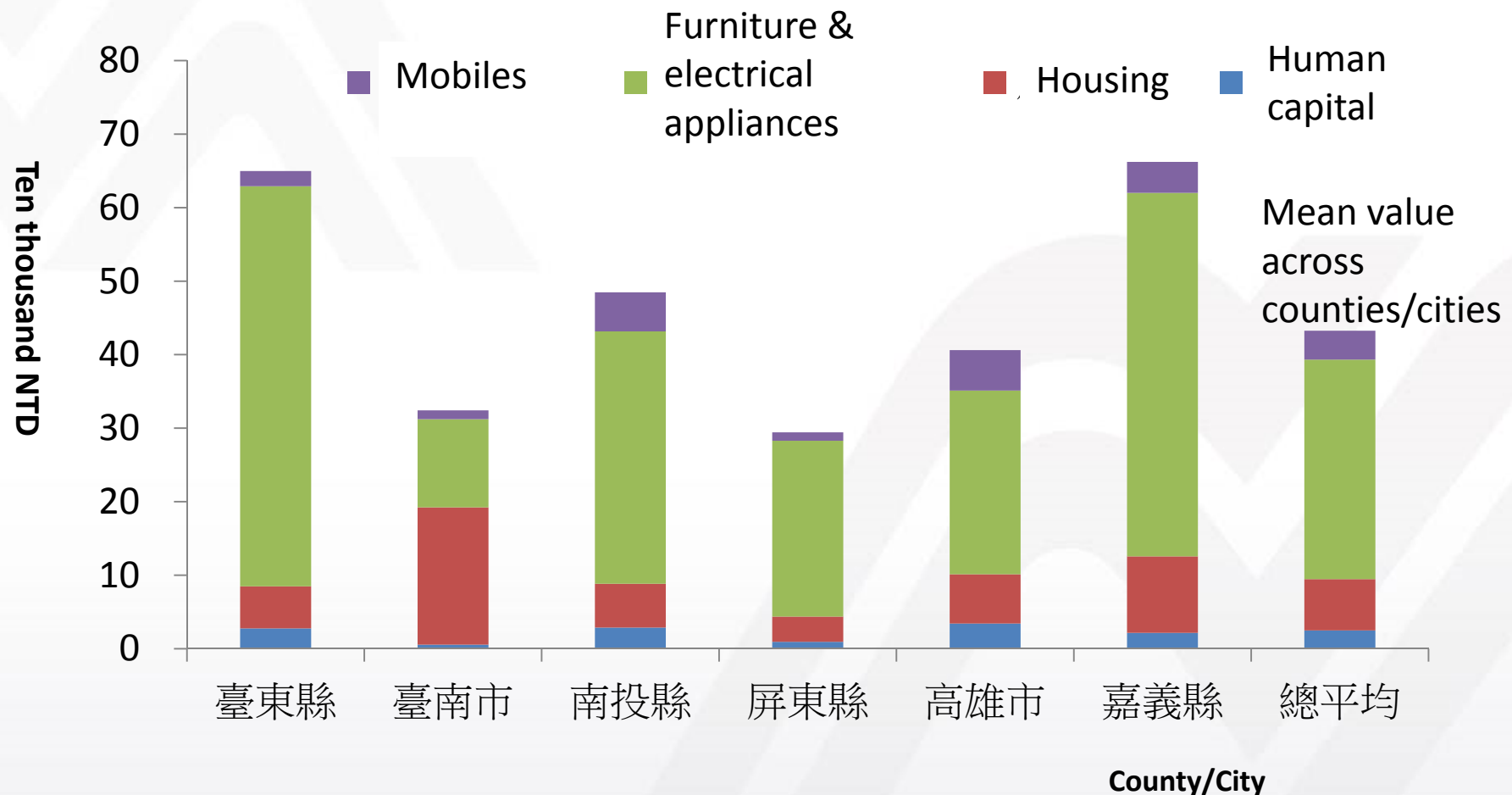


House Loss Mean



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- Most households suffer a heavy loss on the category of "furniture and electrical appliances" except for those in Tainan City.

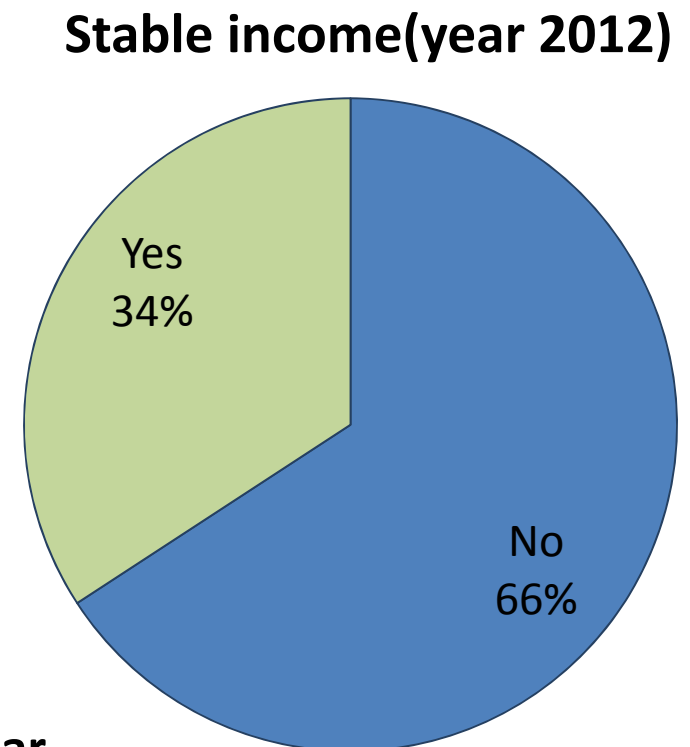
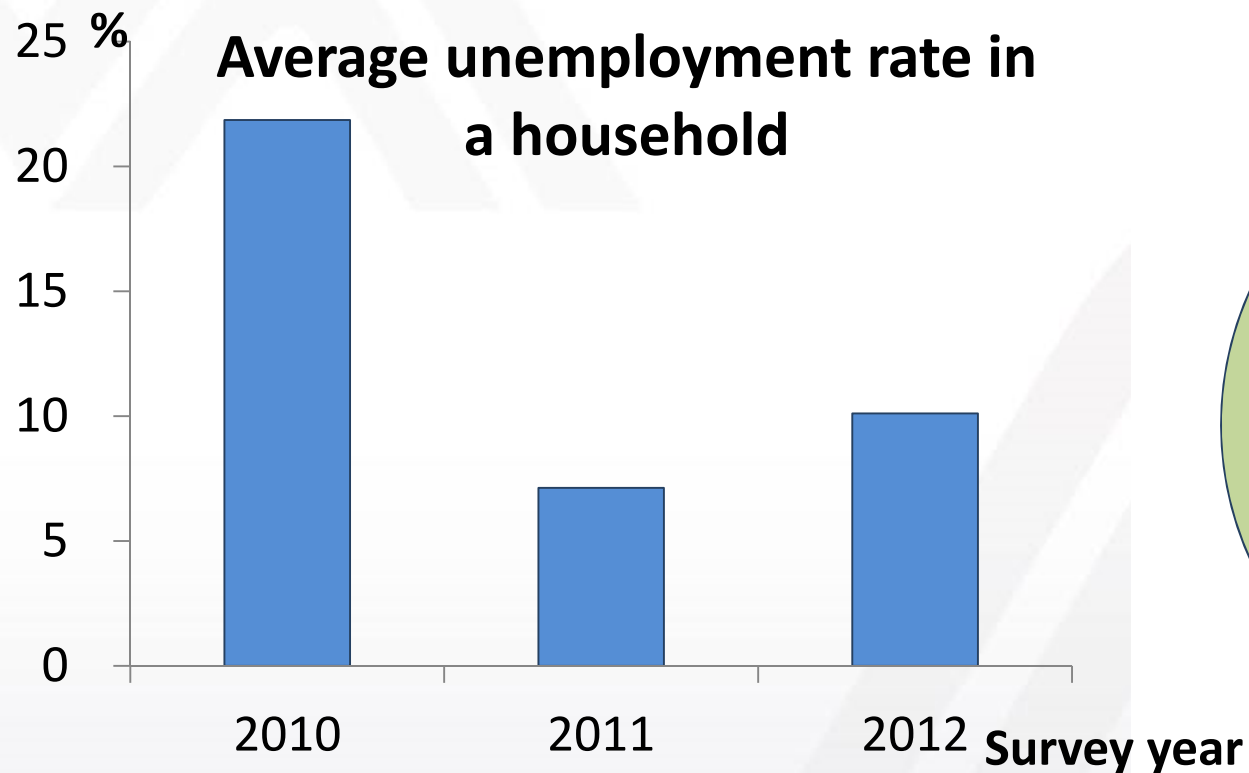


Income



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- The unemployment rate is around 20% one year after the disaster and decrease to around 10% in the third year.
- In the 3rd year, 66% of the subjects still have no stable income.



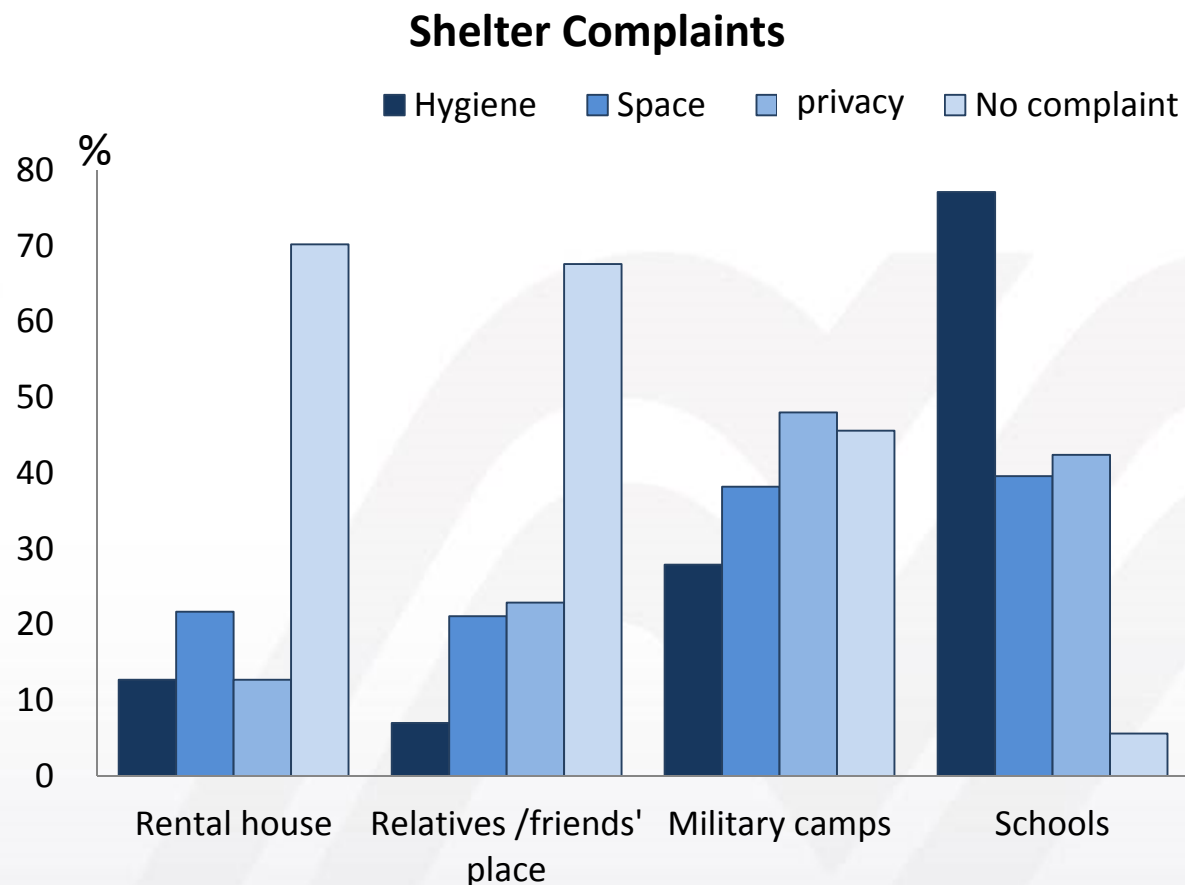
Shelters



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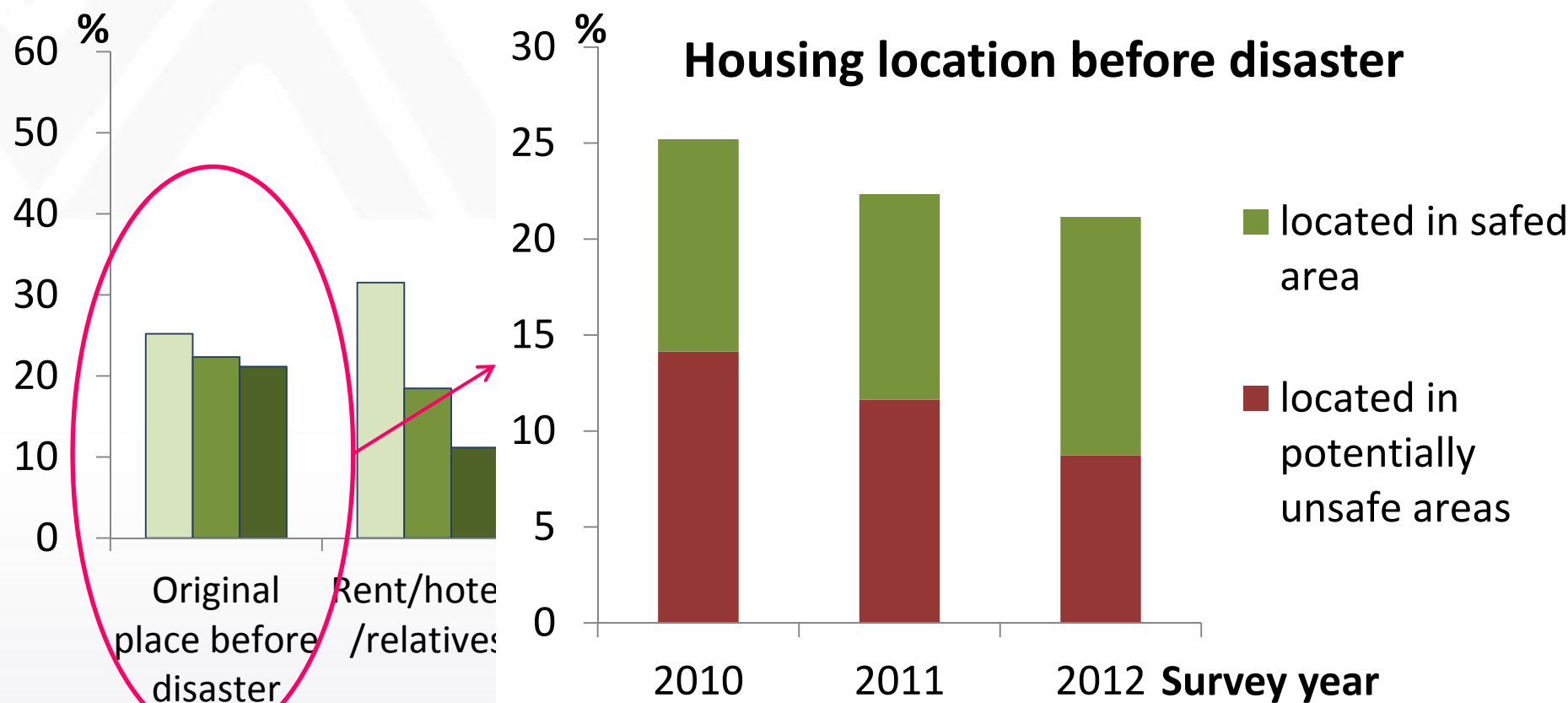
- Around 60% of the interviewee's households stay in places that are not official shelters provided by the government.
- There are relatively more complaints about the living conditions in official shelters.

Choices of Shelters	%
Rental	29.9
Relatives/friends	29.1
Military camps	18
Schools	12.5
Temples	3.8
Other	6.8



Housing Type

- Over 80% of the interviewee's households settle down in 3 years. (the combined percentage of housing types “original place before disaster”, “self-owned” and “permanent housing” each year is 57.2%, 73.7% and 84.6%)
- In the 3rd-year survey, 8% of the interviewed households still live in their original places that are marked as unsafe.

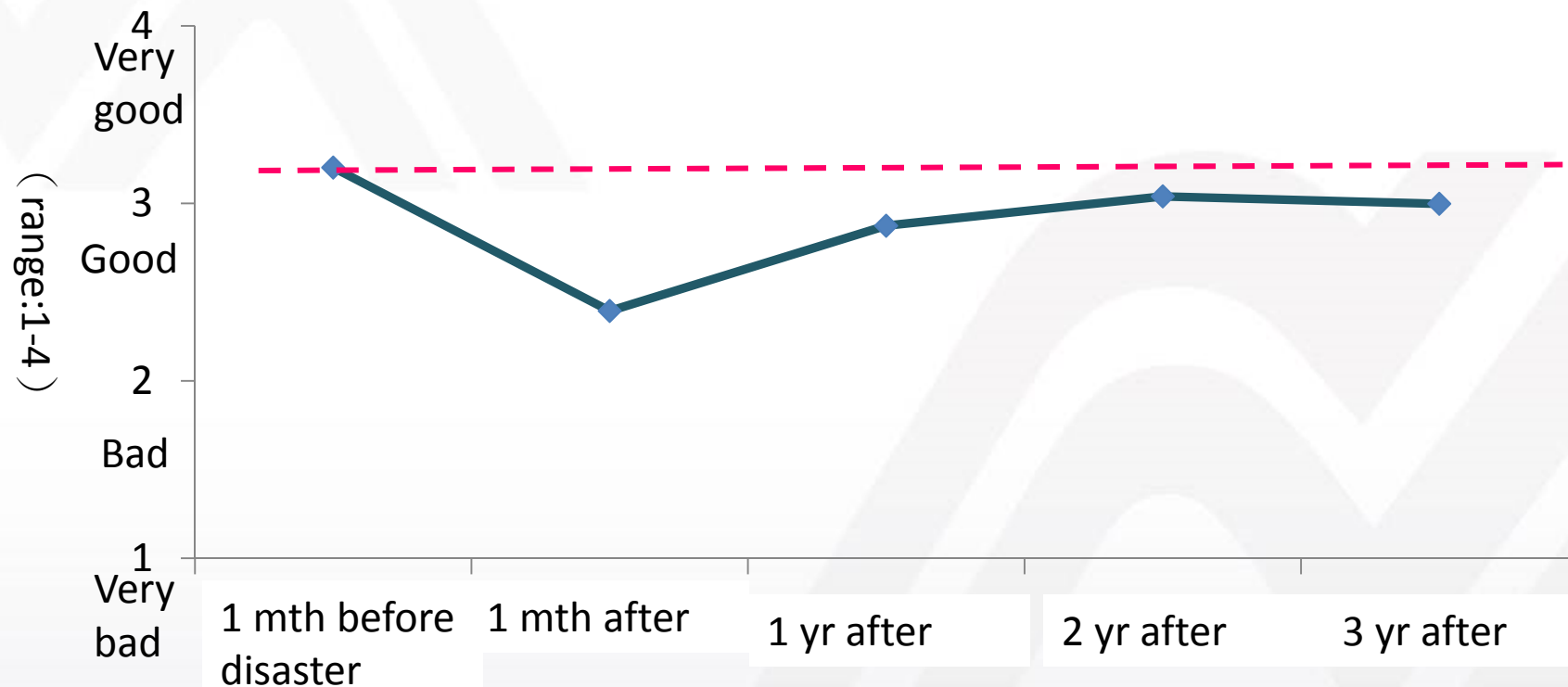


Average Living Quality of Housing



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- Living quality of housing is measured by the quality of the kitchen, the bathroom, the bedroom, the condition of privacy and the size of housing space.
- Overall, the quality improves over time. However, it has not returned to the original quality level in our 3-year survey.

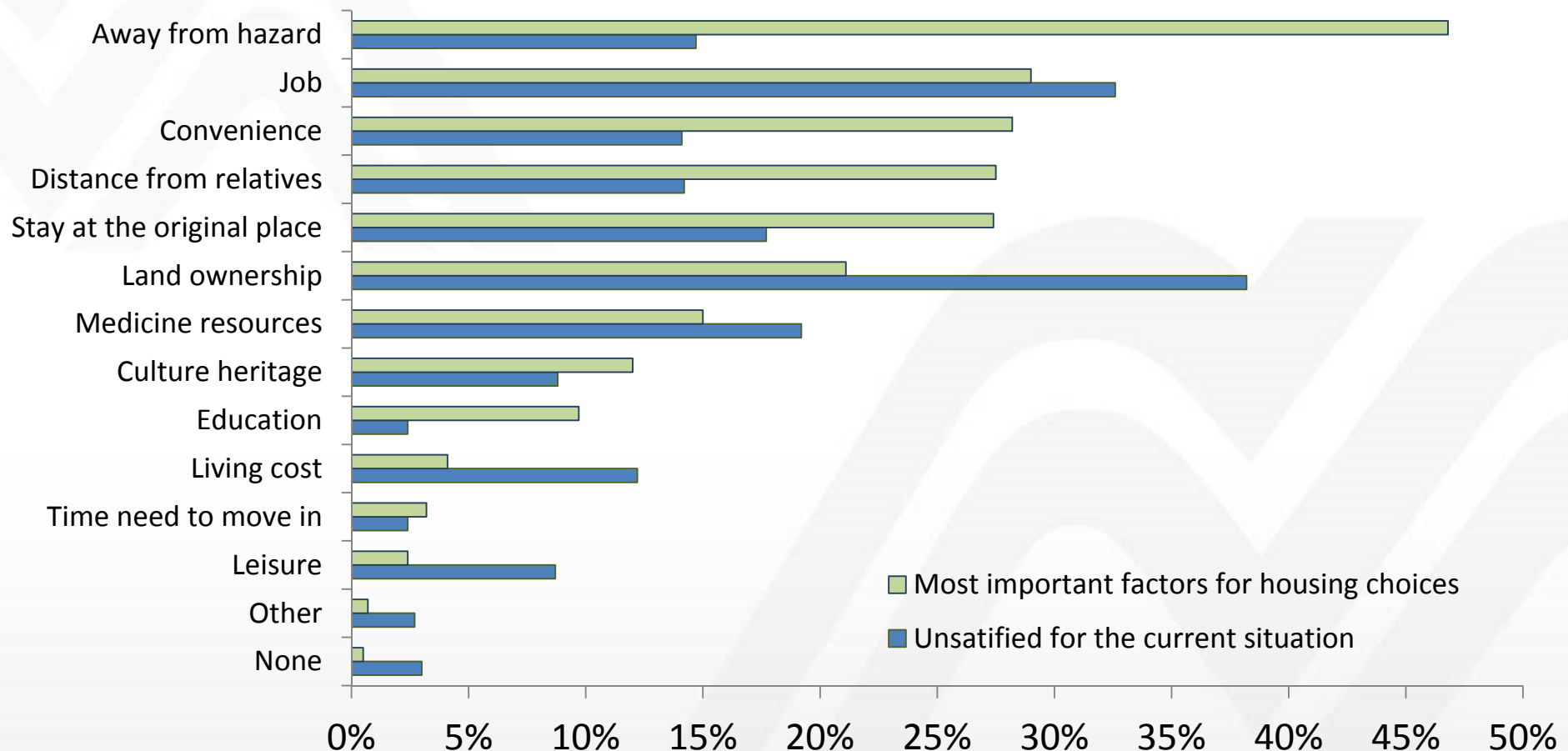


Factors Affecting Housing Choices: 3rd Year Survey



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- "Away from hazards" and "job opportunities" are the most important factors for housing choices.
- "Job opportunities" is one of the most unsatisfied issues.



Some Conclusions



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- **Recovery speed and type of recovery:** After three years, most interviewees are physically recovered, but most of them are not economically or psychologically recovered.
- **Shelters:** Many interviewees live in places that are not official shelters provided by the government. There are relatively more complaints about the living conditions in official shelters.
- **Housing:** Still about 15% of the households not yet settle down 3 years after disaster. 8% of the households return to their original places that are marked as unsafe.

Issues for Conducting a Further Recovery Survey



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- Given a large scale evacuation in a disaster, how do we start tracing victims right from the beginning and persist over a long time-span?
- How do we measure the recovery speed, or the state of recovery in general?
- What are the key issues that should be discussed in a survey on disaster recovery? e.g., repopulation, housing, working opportunities, social welfare facilities, social network rebuilding, resources allocation, etc.
- How to design a survey for a cross-country comparison?



National Science and Technology Center
for Disaster Reduction

