# Evaluation of Common Meal Activities of Collective Housing in Sweden <br> MIZUMURA Hiroko 


#### Abstract

Collaborative housing in Sweden，kollektivhus in Swedish，are noteworthy examples that have proven to establish mutual cooperation in multi－family housing，mainly through common meal activities．My society，in Japan，we have also introduced collaborative housing based on Swedish style since 2000，however I have heard that some of them have faced difficulties to manage common meal activities，because of difference of lifestyle between Japan and Sweden．This study aims to find out the way how Swedish collaborative houses run their common meal activities and how residents value these activities


Keywords ：Collective housing，Common meal，Management，Evaluation，senior style， multi－generation style

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## Introduction

Collaborative housing in Sweden，kollektivhus in Swedish，are noteworthy examples that have proven to establish mutual cooperation in multi－family housing，mainly through common meal activities．My society，in Japan，we have also introduced collaborative housing based on Swedish style since 2000，however I have heard that some of them have faced difficulties to manage common meal activities，because of difference of lifestyle between Japan and Sweden．This study aims to find out the way how Swedish collaborative houses run their common meal activities and how residents value these activities．This study is composed of 2 methods ；questionnaires and case studies． 2 multi－generation style and 1 senior style collaborative houses in Stockholm will be chosen as the subjects of this study．
Senior style house is for residents over 40 without children and multi－generation house is open for all type of household．Questionnaires aim to gain an insight of the current situation and will enable the residents to evaluate common meals．Case studies will be undertaken to record the situation of common kitchens and dining areas as well as to understand the organization and management of the common meals．

## Aims

## Methods

The questionnaire survey was conducted during the researches on 7 November 2019 at Tullstugen， on 12 November at Sodra Staion，and on 14 November at Fardknappen，by leaving a questionnaire at the door of each local residence as well as entreating them to cooperate in completing the survey．The questionnaires were collected a week later by the residents，and dispatched to Japan after being translated into Japanese．The number of the respondents in each house counted 45 in Fardknappen， 11 in Tullstugen，and 25 in Sodera Station．The result of the survey is demonstrated by the tables of each resident＇s response and the graphs that illustrate the figures of the collective house for seniors（Fardknappen）and the collective houses for multi－generational households（the sum total of Tullstugen and Sodera）without the number of the non－responses，in order to clarify the tendencies at the two types of collective house．

## Results

## 1．The Characteristic of the Respondents

1）Gender
The gender of each respondent is indicated in Table 1．Additionally，the numbers of each gender at the collective house for seniors and the collective houses for multi－generational citizen are shown in Graph 1．In each residence，the proportion of female resident is regularly higher． Particularly，the collective house for seniors where many single residents live，has a high percentage of female resident，while the collective houses for multi－generational households where
the residents largely live with their family, has a certain percentage of male resident as well
2) Age

The age distribution of the respondents is referred in Table 2, and the age distribution of each collective house for seniors and the collective houses for multi-generational households is separately indicated in Graph 2. As a requirement for moving in a collective house for seniors, its applicants should be aged above 40 years. Hence, the respondents at Fardknappen, a collective house for seniors, are all over 50 years old as the majority of them are in the seventies, followed by the sixties. The residents aged over 90 or older only appear at the collective house for seniors.

On the other hand, the majority of the respondents at the collective houses for multi-generational households are in the forties, followed by the seventies. As its title suggests, each generation from the twenties to the eighties appears at the collective houses and a wide age group is living there.

Table 1 The Gender of the Respondents ( n )

|  | Male | Female | Non-Response | Total |
| :--- | ---: | ---: | ---: | ---: |
| Fardknappen | 16 | 29 | 0 | 45 |
| Tullstugen | 4 | 7 | 0 | 11 |
| Sodra Station | 10 | 14 | 1 | 24 |
| Non-Response | 2 | 3 | 0 | 5 |
| Total | 32 | 53 | 1 | 86 |



Graph 1 The Gender of the Respondents ( n )

Table 2 The Age of the Respondents (n)

|  | $20-29$ | $30-39$ | $40-49$ | $50-59$ | $60-69$ | $70-79$ | $80-89$ | $90-$ | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Fardknappen | 0 | 0 | 0 | 3 | 14 | 19 | 7 | 2 | 45 |
| Tullstugen | 0 | 3 | 0 | 0 | 2 | 5 | 1 | 0 | 11 |
| Sodra Station | 1 | 3 | 11 | 4 | 2 | 4 | 0 | 0 | 25 |
| Non-Response | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 5 |
| Total | 1 | 6 | 11 | 9 | 19 | 30 | 8 | 2 | 86 |



Graph 2 The Generation of the Respondents ( n )

## 3）The Number of People per Household

Table 3 and Graph 3 reveals the number of household members of each respondent．The single－ households are the most numerous，followed by the two－person households．

As a precondition，the collective house for seniors is only available for single households or husband－wife households．Furthermore，the collective houses for multi－generational households， possess a high proportion of single households and two－person households as well as a certain proportion of four－person and more－than－five－person households．
4）The Duration of Residence
The durations of residence of the residents are shown in Table 4 and Graph 4．The most numerous responses are＂ 25 years or plus long residence＂，followed by＂ $10-15$ years long＂and＂ $3-5$ years long＂．
In comparison with the collective houses for multi－generational households，the collective house for seniors has a high proportion of＂ 25 years or plus long residence＂．Although，it is followed by ＂ $3-5$ years long residence＂．On the other hand，at the collective houses for multi－generational households，the proportions widely distribute to each different residence period．

Table 3 The Number of the Respondents per Each Type of Household（ n ）

|  | Single | Two Persons | Three Persons | Four Persons | Five Persons or More | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Fardknappen | 24 | 21 | 0 | 0 | 0 | 45 |
| Tullstugen | 5 | 5 | 0 | 0 | 1 | 11 |
| Sodra Station | 5 | 5 | 2 | 9 | 4 | 25 |
| Non－Response | 2 | 2 | 1 | 0 | 0 | 5 |
| Total | 36 | 33 | 3 | 9 | 5 | 86 |



Graph 3 The Number of the Respondents per Each Type of Household（n）


Graph 4 The Durations of Residence of the Residents（ n ）

Table 4 The Durations of Residence of the Residents（ n ）

|  | Less than a year | $1-3$ years | $3-5$ years | $5-10$ years | $10-15$ years | $15-20$ years | $20-25$ years | More than 25 years | Non－Response | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Fardknappen | 0 | 2 | 9 | 6 | 8 | 3 | 4 | 13 | 0 | 45 |
| Tullstugen | 0 | 1 | 3 | 0 | 1 | 2 | 1 | 2 | 1 | 11 |
| Sodra Station | 6 | 6 | 1 | 4 | 3 | 2 | 2 | 1 | 0 | 25 |
| Non－Response | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 5 |
| Total | 7 | 9 | 13 | 12 | 14 | 7 | 7 | 16 | 1 | 86 |

5) The Relation between the Communal Dining Activity (Common Meal) and the Motives for Moving in a collective house

Table 5 illustrates the result of questioning whether or not conducting the communal dining activity (common meal) has affected their motives for moving in the collective houses. Most common responses that are from nearly half of the overall respondents, mention the communal dining activity as their motives for moving in.

The difference between the responses at the collective house for seniors and the responses at the collective houses for multi-generational households is indicated in Graph 5 which denotes a similar tendency of the responses. The proportion of the respondents who identified the communal dining activity as their motives for moving in the collective house, reach just under 50 percent. In the other words, it is confirmed that a little above 50 percent of the responded who answered either "no" or "either", did not emphasize the activity as their motive for moving in.

## 2. Participation in the Cooking Activities

1) Participation in Each Cooking Activity

Table 6 reveals the result of each experienced cooking activity in the communal dining activity (common meal), and Graph 6 shows the percentage of each cooking activity answered as

Table 5 The Respondents' motives for moving in the collective house ( n )

|  | Yes | No | N/A | Non-Response | Total |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Fardknappen | 20 | 15 | 9 | 1 | 45 |
| Tullstugen | 5 | 4 | 1 | 1 | 11 |
| Sodra Station | 11 | 8 | 6 | 0 | 25 |
| Non-Response | 5 | 0 | 0 | 0 | 5 |
| Total | 41 | 27 | 16 | 2 | 86 |



Graph 5 The Respondents' motives for moving in the collective house (n)
experienced by the respondents at the collective houses for seniors and multi－generational households．In Graph 6，a common tendency seemingly exists between the results at the collective house for seniors and multi－generational households．Many residents have generally experienced＂ 8 cooking＂，＂ 9 serving＂，＂ 10 dishwashing＂，＂ 11 table setting＂，and＂ 12 cleaning＂．In contrast，＂ 4 ordering the ordinary ingredients＂，＂ 6 payment of purchasing the ingredients＂，＂and＂ 13 accounting＂have been dependent on the particular residents．＂ 14 others＂includes responses like ＂no participation in the cooking activities＂，＂disposing of the leftovers＂，＂repairing kitchen／dining rooms，and installing food shelves in the room＂，and＂renewing some regular menus＂．

Table 6 Participation in Each Cooking Activity（n）

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Schedule Creation | Menu Creation | Cultivating Vegitables and Herbs | Ordering the Ordinary Ingredients | Ordering the Ecologocal Ingredients | Payment of Purchasing the Ingredients | Shoppinng the Ingredients and Recievinng the Ordered Ingredients |  |
| Fardknappen | 33 | 42 | 5 | 7 | 7 | 15 | 41 |  |
| Tullstugen | 7 | 11 | 0 | 6 | 2 | 4 | 8 |  |
| Sodra Station | 6 | 7 | 3 | 6 | 6 | 6 | 9 |  |
| Non－Response | 4 | 5 | 1 | 2 | 1 | 1 | 3 |  |
| Total | 50 | 65 | 9 | 21 | 16 | 26 | 61 |  |
|  | 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
|  | Cooking | Serving | Dishwash－ ing | Table Setting at the Dining Room | Dining <br> Room and Kitchen Cleaning | Collecting and Paying the Bill | Others | Total |
| Fardknappen | 44 | 32 | 44 | 44 | 44 | 19 |  | 45 |
| Tullstugen | 11 | 11 | 11 | 9 | 10 | 0 | 0 | 11 |
| Sodra Station | 21 | 18 | 21 | 17 | 19 | 4 | 1 | 25 |
| Non－Response | 5 | 4 | 5 | 4 | 5 | 1 | 0 | 5 |
| Total | 81 | 65 | 81 | 74 | 78 | 24 | 1 | 86 |



Graph 6 Participation in Each Cooking Activity（\％）

## 2) Difficulties/Burdens in Each Cooking Activity

The result of researching the activities that the residents found some difficulties and burdens in, when they participated in it, is indicated in Table 7, and each percentage of it depending on the collective houses for seniors and the multi-generational households is displayed in Graph 7.

Table 7 and Graph 7 disclose that the residents do seemingly not feel any difficulty or burden in any activity as most respondents answered " 15 nothing". Whereas, it is confirmed that there is a certain amount of the residents who have found some difficulties and burdens in " 1 schedule creation", "2 Menu creation". Additionally, eight respondents indicated " 14 others" where its contents were like "it is hard to employ the ecological ingredients", "it is hard to serve vegetarian

Table 7 Difficulties/Burdens in Each Cooking Activity (n)

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Schedule <br> Creation | Menu Creation | Cultivating <br> Vegetables and Herbs | Ordering the Ordinary Ingredients | Ordering the <br> Ecologocal Ingredients | Payment of Purchasing <br> the Ingredients | Shoppinng the Ingredients and Recievinng the Ordered Ingredients | Cooking |
| Fardknappen | 7 | 5 | 1 | 0 | 2 | 0 | 4 | 1 |
| Tullstugen | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 |
| Sodra Station | 2 | 2 | 0 | 0 | 1 | 0 | 1 | 4 |
| Non-Response | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Total | 9 | 10 | 1 | 1 | 4 | 0 | 5 | 6 |
|  | 9 | 10 | 11 | 12 | 13 | 14 | 15 |  |
|  | Serving | Dishwash- <br> ing | Table Setting at the Dining Room | Dining Room and Kitchen Cleaning | Collecting and Paying the Bill | Others | Nothing | Total |
| Fardknappen |  | 2 | 0 | 2 | 0 | 4 | 25 | 45 |
| Tullstugen | 1 | 1 | 0 | 1 | 0 | 0 | 8 | 11 |
| Sodra Station | 0 | 1 | 0 | 2 | 0 | 3 | 15 | 25 |
| Non-Response | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 5 |
| Total | 1 | 4 | 0 | 5 | 0 | 8 | 50 | 86 |



Graph 7 Difficulties/Burdens in Each Cooking Activity (\%)
dishes with a high nutritional balance＂，＂it is a waste of water and hot water＂，＂worrying about a sufficiency of each meal for everyone while cooking＂，＂it is difficult to cope when there is a difference in opinions over the menu＂．

3）Worthwhile Cooking Activities
The result of summering up all the cooking activities answered as worthwhile by the respondents is shown in Table 8，and each percentage of them depending on the collective houses for seniors and the multi－generational households are indicated in Graph 8.

The respondents either at the collective houses for seniors and multi－generational households have mutually found some enjoyments and satisfactions in＂ 8 cooking＂．On the other hand，＂ 1 schedule creation＂and＂ 2 menu creation＂were highly evaluated by the residents at the collective

Table 8 Worthwhile Cooking Activities（n）

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Schedule <br> Creation | Menu <br> Creation | Cultivating Vegetables and Herbs | Ordering the Ordinary Ingredients | Ordering the Ecological Ingredients | Payments <br> of <br> Purchasing <br> the <br> Ingredients | Shopping the Ingredients and Receiving the Ordered Ingredients | Cooking |
| Fardknappen | 17 | 32 | 3 | 6 | 4 | 2 | 8 | 37 |
| Tullstugen | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 11 |
| Sodra Station | 2 | 5 | 1 | 3 | 2 | 1 | 3 | 17 |
| Non－Response | 1 | 4 | 0 | 2 | 0 | 1 | 2 | 5 |
| Total | 20 | 44 | 4 | 11 | 6 | 4 | 16 | 70 |
|  | 9 | 10 | 11 | 12 | 13 | 14 | 15 |  |
|  | Serving | Dishwash－ ing | Table Setting at the Dining Room | Dining <br> Room and Kitchen Clearning | Collecting <br> Expenses and Accounting | Others | Nothing | Total |
| Fardknappen | 0 | 24 | 25 | 13 | 3 | 6 | 1 | 45 |
| Tullstugen | 1 | 2 | 5 | 3 | 0 | 2 | 0 | 11 |
| Sodra Station | 0 | 8 | 8 | 2 | 1 | 6 | 2 | 25 |
| Non－Response | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 5 |
| Total | 1 | 36 | 38 | 19 | 4 | 14 | 3 | 86 |



Graph 8 Worthwhile Cooking Activities（\％）
house for seniors though, they were barely seen to be enjoyable at the collective houses for multigenerational households. Some contents of " 14 others" could be categorized into some other choices, but they generally were the following opinions: "conversations and groupworks while cooking", "conversations with friends", "being with others, and working on multiple tasks with others.", "eating and drinking", "first, it is a joy to participate in cooking, being amused by working with others, and all the tasks are interesting", "when someone compliments dishes", "dining with others", and "interacting with internal and external people including the guests from outside".

## 3. Participation in the Common Dinners

The numbers of common dinners taking place per week at the surveyed facilities in this research were 5 times from Monday to Friday at Fardknappen, the collective houses for seniors, and 4 times from Tuesday to Friday at Tullstugen and Sodra Station, the collective houses for multigenerational households. The following data are the result of its participation.

1) The Number of Attendances at Each Common Dinner per Week

Table 9 shows the result of the number of attendances in a week at each collective house, and Graph 9 reveals its result classified by the respondents at the collective houses for seniors and multi-generational households.

There is a difference of the number of common dinners in a week between the collective houses

Table 9 The Number of Attendances at Each Common Dinner per Week ( n )

|  | Once a week | Twice a week | Thrice a week | Four times a week | Five times a week | No Participation | Others | Non-Response | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Fardknappen | 4 | 4 | 13 | 11 | 9 | 0 | 3 |  | 1 |
| Tullstugen | 0 | 5 | 4 | 1 | 0 | 45 |  |  |  |
| Sodra Station | 1 | 7 | 9 | 3 | 0 | 1 |  | 0 | 11 |
| Non-Response | 0 | 1 | 3 | 1 | 1 | 2 | 2 | 2 | 25 |
| Total | 5 | 17 | 29 | 16 | 0 | 0 | 0 |  | 0 |



Graph 9 The Number of Attendances at Each Common Dinner per Week (n)
for seniors and multi－generational households which are 5 times and 4 times，however，the respondents at the both type of collective houses mostly attend 3 times each week．The overall tendency explicates that the residents at the collective house for senior frequently participate in it more than 3 times a week，whereas the residents at the collective houses for multi－generational households generally attend it less than 3 times a week．The reasons for a low participation rate at the collective houses for multi－generational households are as follows：＂being busy with other events＂，＂I cannot make it in time＂，＂my husband has been staying in a nursing house and I normally have dinner there，and I am losing my appetite little by little＂，＂my family have been living somewhere else and I need to go there＂，＂as I suffer from diabetes，I do not eat it when a common dinner contains a lot of carbohydrate．
2）The Number of Take－Outs of the Common Dinners per Week
At all three collective houses，the left－over foods from common dinners are sold as take－out foods． The state of its service is indicated in Table 10 and Graph 10.

To this question，the most popular answer was＂once in a week＂though，it was followed by ＂others＂whose content contains such opinions like＂sometimes like once every three weeks＂，＂I use its take－out when it has a really nice dish＂，and＂I use it，when I am sick or my friend takes a dog with as a dog cannot enter the kitchen＂．Additionally，the reasons of purchasing a take－out food are such as＂when I cannot come home by the dinner time＂，＂for the tomorrow＇s lunch＂，＂when I cannot

Table 10 The Number of Take－Outs of the Common Dinners per Week（n）

|  | Once a week | Twice a week | Thrice a week | Four times a week | Five times a week | Others | Non－Response | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Fardknappen | 9 | 7 | 2 | 0 | 1 | 19 |  | 7 |
| Tullstugen | 4 | 4 | 1 | 0 | 0 | 2 |  | 0 |
| Sodra Station | 11 | 3 | 4 | 0 | 0 | 6 |  | 10 |
| Non－Response | 3 | 0 | 0 | 0 | 0 | 2 |  | 0 |
| Total | 27 | 14 | 7 | 0 | 1 | 29 |  | 8 |



Graph 10 The Number of Take－Outs of the Common Dinners per Week（ n ）
finish my own portion", "I do not like to waste food", "when I come home late after meeting someone, or when I am sick", and "in order to save time and money".
3) The Number of Dinners at Home in a Week

The number of the dinners people having at home instead of participating common dinners is indicated in Table 11, and its situation depending on the type of the collective houses for seniors and multi-generational households is illustrated in Graph 11.
"Once a week" was the most popular answer either at the collective houses for seniors and multi-generational households. Moreover, a certain amount of the respondents answered "others" whose contents were, for example, "sometimes, around twice or thrice a week", "I eat at home when I am sick", "I do not take a lot of meals at dinner as I eat a lunch properly", "when I am sick or I cannot go back home", "when my least favorite dish on the table". The respondents were also questioned about the reasons of having a dinner at home, and they answered as follows: " when I want to be on my own or having a guest at home", "when I do not like the menu", "I eat at home expect when the menu seems very nice and I can spare a time to have a dinner at the shared kitchen", "when there is a dish I prefer not to eat", "I am having more ecological vegetarian life, and the vegan dishes at the common dinner is not my taste", "I do not eat it there when there is a soup at a common dinner as I have a gluten allergy, thus I cannot finish whole meal", and "when I have a left-over from the weekend or it has a dish I prefer not to eat".

Table 11 The Number of Dinners at Home in a Week ( n )

|  | Once a week | Twice a week | Thrice a week | Four times a week | Five times a week | Always Going to <br> Common Dinner | Others | Non-Response | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Fardknappen | 13 | 8 | 2 | 4 | 0 | 3 | 12 | 3 | 45 |
| Tullstugen | 3 | 0 | 3 | 1 | 0 | 4 | 0 | 0 | 11 |
| Sodra Station | 6 | 4 | 4 | 2 | 1 | 0 | 6 | 2 | 25 |
| Non-Repsonse | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| Total | 23 | 15 | 10 | 7 | 1 | 7 | 18 | 5 | 86 |



Graph 11 The Number of Dinners at Home in a Week (n)

## 4．The Evaluation of the Communal Dining Activity（the Common Meal）

1）The Significance／Effects of the Communal Dining Activity（the Common Meal）
The result of the survey regarding the significance and effects of the communal dining activity （the common meal）is illustrated in Table 12，and each proportion of the respondents in each answer category depending on the collective houses for seniors and multi－generational households is indicated in Graph 12.
As demonstrated in Graph 12，the significance and effects of the communal dining activity（the common meal）are assessed in the same way at either type of the collective houses．Particularly，

Table 12 The Significance／Effects of the Communal Dining Activity（the Common Meal）（n）

|  | 1 | 2 | 3 | 4 | 5 | 6 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Strengthening the bonds between the residents | Fulfilling the responsibilities as a resident | Participation in a social activity | Deepening understanding of each other | Enjoying cooking among friends | Eliminating Ioneliness |  |
| Fardknappen | 38 | 37 | 25 | 40 | 30 | 31 |  |
| Tullstugen | 9 | 4 | 6 | 10 | 8 | 6 |  |
| Sodra Station | 22 | 12 | 15 | 21 | 11 | 14 |  |
| Non－Response | 5 | 4 | 3 | 4 | 5 | 2 |  |
| Total | 74 | 57 | 49 | 75 | 54 | 53 |  |
|  | 7 | 8 | 9 | 10 | 11 | 12 |  |
|  | Contributing to an environmenta I lifestyle | Reducing the housework | Saving money and good－quality meals | Learning new recipes | Having a well－ balanced and good diet | Others | Total |
| Fardknappen | 19 | 27 | 29 | 26 | 20 | 4 | 45 |
| Tullstugen | 6 | 4 | 7 | 9 | 6 | 0 | 11 |
| Sodra Station | 14 | 15 | 16 | 8 | 4 | 2 | 25 |
| Non－Response | 2 | 4 | 5 | 4 | 2 | 0 | 5 |
| Total | 41 | 50 | 57 | 47 | 32 | 6 | 86 |



Graph 12 The Significance／Effects of the Communal Dining Activity（the Common Meal）（\％）
the entries " 1 strengthening the bonds between the residents" and " 4 deepening understanding of each other" are highly rated. Conversely, the entry " 2 fulfilling the responsibilities as the residents" differentiates between the tendencies at the collective houses for seniors and multi-generational households as around 80 percent of the residents at the collective house for seniors seemingly took it seriously while only 40 percent of the residents at the collective houses for multi-generational households considered it important. Additionally, " 5 enjoying cooking among friends", and " 6 eliminating loneliness and feeling happiness by cooking with friends" were rated lower in the collective houses for multi-generational households than the collective house for seniors.
" 12 others" contains the opinions like "it is a lot of fun to try new menus with friends", "I can learn and be inspired by other people while cooking with them", "according to the cooking rotation, I am in charge of cooking once every 6 weeks, thus, I can use the other 5 weeks freely and wisely", and "it is good that other people try and enjoy various types of menus and meals".
2) The Problems regarding the Communal Dining Activity (the Common Meal) that Must Be Solved The result of asking the respondent about the problems in the communal dining activities (the common meals) at each collective house that must be solved, is indicated in Table 13. Graph 13

Table 13 The Problems regarding the Communal Dining Activity (the Common Meal) that Must Be Solved ( n )

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Insufficiency of the management structure | Establishing a mutual agreement | Filling a vacancy fora sick member | Reinforcing cooking teams | Balancing it with an individual life | Dealing with children and family | Hygiene Management | Size of the kitchen and equipments | Others | Total |
| Fardknappen | 4 | 11 | 4 | 5 | 7 | 1 | 3 | 2 | 3 | 45 |
| Tullstugen | 0 | 0 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 11 |
| Sodra Station | 0 | 0 | 8 | 0 | 3 | 5 | 5 | 0 | 4 | 25 |
| Non-Response | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 5 |
| Total | 4 | 11 | 14 | 6 | 12 | 8 | 8 | 4 | 8 | 86 |



Graph 13 The Problems regarding the Communal Dining Activity (the Common Meal) that Must Be Solved (\%)
shows each proportion of the respondents at the collective houses for seniors and multi－ generational households to each entry．

The result differentiates the tendency at the collective houses for seniors from the collective houses for multi－generational households．For example，the respondents at the collective house for seniors mostly mentioned＂ 2 establishing a mutual agreement in a cooking team＂in the questionnaire，whereas no one at the collective houses for multi－generational households，pointed it out．On the other hand，at the collective house for seniors，＂ 3 filling a vacancy when someone in a cooking team is sick＂was indicated the most，and followed by＂ 6 dealing with children and family while washing plates and cleaning the kitchen＂and＂ 7 the hygiene management of the meals and serving the meals．The tendencies revealed in this result were presumably reflected by the differences between generations and household compositions．
3）The Significance／Effects of having meals at the Common Dinners
The result of the questionnaire questioning about the significance and effects of having meals at the common dinners are shown in Table 14，and each proportion of the respondents at the collective houses for seniors and multi－generational households to each entry is disclosed in Graph 14.

Graph 14 reveals that the significance and effects of having meals at the common dinners，were similarly evaluated either at the collective houses for seniors and multi－generational households． Particularly，＂ 1 strengthening the bonds between the residents＂，＂ 6 no need to cook by myself＂，＂ 2 enjoying chats with the others at a meal＂，＂ 3 a good opportunity to socialize with the others＂were highly evaluated．Conversely，a small number of the respondents at the collective houses chose＂ 5 eliminating loneliness＂for its significance and effects．

## 5．The Analysis of the Survey Results

1）The Management of the Communal Dining Activity（the Common Meal）
The management situations of each three collective house are summarized in Table 15 and Table 16.
The summary of the management of the communal dining activity（the common meal）is as follows ：each type of collective house employs a common method which is that the residents take part in cooking dinner on weekdays，and they mostly eat it at the dining room called common dining．However，the specific details of the management are distinct in order for each collective house to respond flexibly based on its situation．

First，regarding the number of common meals，it took place at the collective house for seniors 5 times a week and at the collective houses for multi－generational household 4 times a week．The number of cooking teams and its members varies depending on the collective house．The budget of common meals is also different at each type of the collective houses though，the collective house for seniors has a smaller budget which was 3000 SKE，compared to the budgets at the two collective houses for multi－generational households which are 4700SKE and 6500 to 7000 SKE．As a reason for that，some growing children with a healthy appetite living in the collective houses for

Table 14 The Significance/ Effects of having meals at the Common Dinners ( n )

|  | 1 | 2 | 3 | 4 | 5 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Strengthening the bonds between the resident | Enjoying meals and conversations at dinner | A opportunity to be sociable | Gaining a sense of supporting each other | Eliminating Ioneliness | No need to cook on my own |
| Fardknappen | 37 | 37 | 33 | 21 | 4 | 36 |
| Tullstugen | 9 | 9 | 8 | 5 | 0 | 10 |
| Sodra Station | 20 | 15 | 20 | 9 | 2 | 20 |
| Non-Response | 4 | 4 | 2 | 2 | 0 | 5 |
| Total | 70 | 65 | 63 | 37 | 6 | 71 |
|  | 7 | 8 | 9 | 10 | 11 |  |
|  | Saving money and goodquality meals | Eating uncooked foods | Tasting new meals | Actualization of healthy, balanced diet | Other | Total |
| Fardknappen | 24 | 27 | 28 | 24 | 0 | 45 |
| Tullstugen | 8 | 6 | 8 | 2 | 0 | 11 |
| Sodra Station | 14 | 14 | 7 | 8 | 1 | 25 |
| Non-Response | 4 | 4 | 3 | 2 | 0 | 5 |
| Total | 50 | 51 | 46 | 36 | 1 | 86 |



Graph 14 The Significance/ Effects of having meals at the Common Dinners (\%)
seniors could supposedly be cited. Additionally, the collective houses for seniors employs a prebooking and voucher system, whereas the collective houses for seniors only require the users to enter their names and some personal information on a note after a dinner, and to pay the bill by the end of month which is assumedly a measure for the households which have children and difficulties in meal planning.

As demonstrated above, the framework of the activity at the three collective houses are in common, although, the specific forms of management are organized and conducted based on the generations of the residents, and the lifestyles at each collective house within a reasonable range.

Table 15 The Management Situation of the Communal Dining Activity at the Surveyed Collective Houses 1

| Name of House | Fardknappen | Tullstugen | Sodra Station |
| :---: | :---: | :---: | :---: |
| Type | For Seniors | For Multi－Generational Households | For Multi－Generational Households |
| Ownership Form | Public Rental | Corporative Ownership | Corporative Ownership |
| Residents／Households | 47 households， 57 residents | Around 70 residents | 63 households |
| Generations | From 56 years old to 94 years old | Under 0 year old to 85 years old | From households with small children to senior citizens |
| Number of Common Meals | 5 times a week（Monday－ Friday） | 4 times a week（Tuesday to Friday） | 4 times a week（Tuesday to Friday） |
| Number of Cooking Teams | 6 teams | 5 teams | 4 teams |
| Number of People in a Cooking Team | From 8 to 11 people | From 9 to 10 people | 15 people（including 2 responsible persons） |
| Support Members | Obtaining the support members depending on the situation of each time．Its extent is between 2 and 8 people． | Some people who have resided in the collective house join in as guests． | 2 to 4 from each group participate in as the support members． |
| Tasks in Charge | Planing the contents of meals， grocery shopping，preparing the ingredients，table setting，cooking， and dishwashing． | Menu planing，grocery shopping，cooking，dishwashing， and kitchen cleaning． | Menu planing，grocery shopping， cooking，dishwashing，and kitchen cleaning． |
| Cooking Schedule | －A cooking team is separated into 2 groups for the tasks． <br> －The first group works on cooking，table setting，and preparation of dinner．The second group is in charge of dishwashing and cleaning the dinning room after a dinner． | No specific response | －A day before the cooking day，one of the members makes preparations in advance． <br> － 2 members are in charge of cooking． One of them could join in it later on and work on table setting and replenishing seasonings． <br> －The third member takes a role in confirming attendences and dishwashing． <br> －The other 2 members are responsible for dishwashing and cleaning． |
| Budget for a Week | 3000SEK | 4700SEK | 6500～7000SEK |
| Expense per Meal | －Basic price is 27SEK（45SEK on Friday）． <br> －Each guest charged at the basic price． <br> －Free for children under 7 years old，18SEK for children between 7 and 12 years old，and the basic price for anyone over 12 years old． | －Basic price is 30SEK（40SEK on Friday）． <br> －Free for children under 6 years old，and 20SEK for children between 6 and 12 years old． <br> －Each guest charged at the basic Price＋10SEK． | －Basic price is 36SEK <br> －13SEK for children under 12 years old，and 22SEK for anyone between 13 and 19 years old． <br> －40SEK for each guest． <br> －28SEK for a take－out． |
| Booking／Payment Methods | Pre－booking required（by 9 am on the day），Voucher（9SEK per ticket） | Pre－booking unrequired． <br> Recording a participation of each resident in a note，and each payment are made by the end of month． | Pre－booking unrequired．Recording a participation of each resident in a note，and each payment are made by the end of month． |

Table 16 The Management Situation of the Communal Dining Activity at the Surveyed Collective Houses 2

| Name of House | Fardknappen | Tullstugen | Sodra Station |
| :---: | :---: | :---: | :---: |
| Type | For Seniors | For Multi-Generational Households | For Multi-Generational Households |
| Ownership Form | Public Rental | Corporative Ownership | Corporative Ownership |
| Dissemination of the menu | On Facebook, the website, and the notice boards. | On Facebook, the notice boards in the elevators. | On Facebook, the notice boards in the elevators. |
| Portion of meal | If there is a significant change, it should be informed to the cooking team during the day. | Flexibly dealing with it. | Always cooking just the right portion or slightly more. |
| Leftover Foods | - Being sold for take-out. <br> - Before 9pm, three vouchers for each meal, and after 9pm, two vouchers for each meal. | - Being sold in lunchboxs | - The leftover foods keep frozen for anyone who wants take it home. <br> - In the case of taking it home, an user is asked to enter the name in a note and the invoice will be issed later. <br> - If there is a lot of leftover, they keep frozen for the next cooking. |
| For Allergic Foods and Vegetarian Foods | - Allergy countermeasures for gluten intolerance are always available. <br> - At every meal, a vegitarian food is offered as a meal opition. | - Allergy countermeasures for actose intolerance and nut allergies are always available. It is also offered for other allergies if requested. <br> - At every meal, a vegitarian food is offered as a meal opition. | - Allergy countermeasures for lactose intolerance and gluten intolerance are always available. <br> - At every meal, a vegitarian food and a vegetarian food are offered as a meal opition. |
| Hygiene Management | - Cleaning the kitchen and discarding all the leftover foods on every Friday night or every Saturday. <br> - Carefully cleaning the facilities relating to the common kitchen once every 7 week. | The hygiene management is performed within reason. | Washing hands before cooking. |
| For Food Poisoning | No occurrence so far. | No occurrence so far. | No occurrence so far. |

In addition, for example, any cooking member could have been flexibly replaced in the event of an emergency or sudden illness, and the elderly members have been assigned to share the work with less physical burden.

The research clarified that clear management frameworks exist at the three collective houses and their flexible managements bring sustainability to the activities.
2) Participation in the Cooking Activities

Concerning the cooking activity, the respondents were questioned about the experienced cooking activities, and the enjoyable and worthwhile cooking activities with multiple choices from the following 15 options.
(The 15 options for the significances of the cooking activities)
1 Schedule creation and adjustment of the cooking Activities
2 Menu creation

3 Cultivating vegetables and herbs
4 Ordering the ordinary ingredients
5 Ordering the ecological ingredients
6 Payment for ingredients purchases
7 Grocery shopping and receiving the ordered ingredients
8 Cooking
9 Serving
10 Dishwashing
11 Table setting at the dining room
12 Dining room and kitchen cleaning
13 Collecting expenses，and accounting
14 Others
15 Nothing（＊Except the experienced cooking activities）
As written above，Graph 15，Graph 16，and Graph 17 show the responses to the questions from the collective houses for seniors and multi－generational households．The same tendencies could be seen at the both types of collective house as it especially revealed that many residents participated in the activities such as cooking，serving，and dishwashing．Also，a large proportion of the respondents answered＂nothing＂either at the collective houses for seniors and multi－generational households．

In addition，many residents mentioned＂cooking＂in terms of enjoyable and worthwhile activity． Whereas，a certain amount of the residents at the collective house for seniors answered that they found a rewarding sense of satisfaction in＂menu creation＂．Moreover，in the open－ended questions， there were many responses illustrating the splendor of the activities，such as＂I moved in here， because I liked the concept of collective house more than anything．As I started cooking with the others，we try to invent new menus and new tastes＂．


Graph 18 The Significances of the Communal Dining Activity（the Common Meal）（\％） （Identical to Graph 12）


Graph 15 Experienced Cooking Activities (\%) (Identical to Graph 6)


Graph 16 Difficult and Burdensome Cooking Activities (\%) (Identical to Graph 7)


Graph 17 Worthwhile Activities (\%) (Identical to Graph 8 )

3）The Evaluation of the Communal Dining Activity（the Common Meal）
Graph 18 shows the result of the significances of the communal dining activity（the common meal） selected from 1 to 12 options for with multiple responses．
（The options for the significances of the communal dining activities）
1 Strengthening the bonds between the residents
2 Fulfilling responsibilities as a resident
3 To participate in a social activity
4 Deepening understanding of each other
5 Enjoying cooking among friends
6 Eliminating loneliness and enjoy working with others
7 Contributing to an environmental lifestyle
8 Reducing the housework
9 Saving money and cook good－quality foods
10 Learning new recipes
11 Having a well－balanced and good diet
12 Others
Graph 19 indicates the result of questioning the significances of the common dinners by the same method．
（The options for the significances of the common dinners）
1 Strengthening the bonds between the residents
2 Enjoying conversations with others during dinner
3 A good opportunity to be sociable
4 Gaining a sense of helping each other
5 Eliminating loneliness
6 Do not have to cook on my own
7 Saving money and having good－quality foods
8 To eat fresh－cooked meals
9 To try new tastes／foods
10 Having a well－balanced and good diet

## 11 Others

Regarding the significances of the communal dining activities as well as the common dinner， although there were some small differences between the collective houses for seniors and multi－ generational households，almost the same evaluation tendency was observed．Cooking and eating a meal together is evaluated as having an effect to strengthen the bonds between the residents． Moreover，it is highly assessed to save money and reduce the housework．On the other hand， concerning whether these activities relate to eliminating loneliness，the communal dining activities gained a slightly high evaluation at the collective house for seniors though，the common meals


Graph 19 The Significances of the Common Dinners (\%) (Identical to Graph 14)


## Graph 20 The Problems Relating to the Communal Dining Activities that Must Be Solved (\%) (Identical to Graph 13)

appeared with a low evaluation at either the collective houses for seniors and multi-generational households. Additionally, as illustrated in Graph 20, the respondents were also inquired about the problems relating to the communal dining activities, that must be solved at each collective house. (The options for the problems that must be solved)

1 Insufficiency of the management structure
2 Establishing a mutual agreement in a cooking team
3 Vacancy filling for sick members
4 Reinforcing the cooking teams
5 Balancing the communal activities with each individual life
6 Looking after children and families which working on tasks
7 Hygiene management
8 Size of the common kitchen
9 Others

The evaluation tendencies towards the significances and the effect at the collective houses for seniors and multi－generational households are in common though，the responses to the questions hugely differ．A large proportion of the respondents at the collective house for seniors mentioned it with the difficulty in establishing a mutual agreement，whereas the people at the collective houses for multi－generational households highly referred to how difficult it is to look after children and family while participating in an activity．This difference in the tendencies of the responses is supposedly caused by the contrast of the generations of the residents and the family structures between the types of the collective houses．

## Conclusion

From the results of those studies，following 2 points become clear．Firstly each houses introduced common framework to manage common meal activities，however there were many variations to deal with detailed works．Secondly evaluations of residents living in 3 houses were generally high， on the other hand agendas of activities were differ from senior style and multi－generation style houses．

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