Relation between everyday behavior and intellectual psychological feature on elderly people

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Summary

It becomes aging society, and senior citizen's health and the problem of the dementia syndrome prevention are becoming targets of the concern. It is guessed to this tendency it is related to senior citizen's action in daily life and way of life. It was assumed that an ideal process of making to aged was described and came to have been used the idea "Successful aging and ideal aged" among researchers of the United States gerontology in recent years. The research that had been done about successful aging was a comparison of the state of excellent physiology and psychosocial senior citizens and the state of usual senior citizens.

What is the concept named successful aging? It can be said that it is a concept of comprising three contents of "living long, living healthy, and having something to live for satisfaction".

What result did the senior citizen dementia prevention practice activity of the Imari City Kurokawa-cho of current year achieve?

In this thesis, the answer of the senior citizen who investigated in fiscal year 2004 was analyzed, and what influence the ideal way of the action had had in the intellectual level, the something to live for satisfaction rating, and the social support in daily life was examined.

The subjects who answered this investigation are senior citizens of 65 years or more in the Saga Prefecture Imari City Kurokawa-cho, and they are 154 people (43 men and 111 females) who answered all of the investigations of the action in daily life, the investigation of an intellectual level, the investigation of the something to live for satisfaction rating, and the social support investigation, and did not leak.

Consequently, the following matters were clarified.

(1) The number of actions in daily life statistically correlates to the following characteristics by a high level. That is, it is an intellectual level, a something to live for satisfaction rating, a stable satisfaction rating, a positive satisfaction rating, and a social support. However, the number of actions in daily life was not related to the age. That is, the elderly people with many everyday actions maintain a high intellectual level, definite-aim-in-life satisfaction is high, and there is much support from the others, and also the way of life called so-called successful aging perform.

(2) The number of actions at free time is related to an intellectual level high and something to live for satisfaction rating, stability satisfaction rating, positive satisfaction rating, and the amount of social support also high. The more the number of actions at free time is, the higher the level of each characteristic is.

(3) In the relations about the number of pleasure, and intellectual level, the degree of definite-aim-in-life satisfactory, and social support score, it turned out that a man who had a lot of pleasure had higher relations. Moreover, it turned out that there is no relation between the number of pleasure and the stage of age. That is, in any age, the man with a lot of pleasure is that it is

high in an intellectual level, and is high also in definite-aim-in-life satisfaction, and there is also much assistance from other people.

Setting up the target adapted to oneself in everyday life from the above research result, and living happily positively leads also to prevention of Alzheimer's disease, and it turns out that a relation with other men also becomes good. This is considered to be being able to say to the elderly people of every age.

Purpose of this research

In recent years, the researchers of U.S. gerontology describe an ideal aging process, and have been developing various notional frameworks utterly. The term "successful aging" is used well by R.J.Havighurst (1961). What kind of thing is the concept of successful aging? It is also a fact that the meaning makes it vague although used well, a clear and single definition is not found, the focus of research is different if a researcher is different. There are some which it prescribed "Obtain satisfaction to a life as age is piled up" in inside, and there are some which it prescribed "It lets the process of life pass and complete the ideal development function of positiveness." Moreover, elderly people are in a healthy and happy state (well-being) physically, socially, and mentally, and there are some which say that it is in a satisfactory state in a relation with the others also about themselves. Probably, it may consider the contents which include the three contents, have living for a long time, a healthy thing, and definite-aim-in-life satisfaction, (Palmore1995).

Even in Japan, the activity of a community whose elderly people can have definite aim in life happily in various places is being performed. It seems that however, there are not so many places which are doing investigation research of the effect of practice activities scientifically. The writer has participated in "Alzheimer's disease prevention promotion activities" in Imari-shi, Saga for about ten years.

There, in order for administration and the volunteer of an area to cooperate and to do practice research, elderly people plan "the production classroom of definite aim in life" as activity of the community which can have definite aim in life happily, build an object area, and have been appealing for elderly people's participation. There are a rhythmical-exercises classroom, a ceramic art classroom, a karaoke classroom, the Taisho koto classroom, a game-of-go classroom, etc. as the classroom, and it has carried out 1 time every week or 1 time per biweekly week. Moreover, being helped each other by the neighborhood in a community is also cried for simultaneously. What kind of result did this activity mention? Here, mainly based on the reply investigated in the 2004 fiscal year, it will be shown how the state of action every day has influenced the degree of intellectual characteristic and definite-aim-in-life satisfactory, the quantity of social support, etc.

Subjects and Method

Subjects for investigation
The subjects for investigation are 65 or older-year elderly people living in Kurokawa-cho, Imari-shi, Saga-ken, During the Heisei 16 fiscal year, it will participate every day in action investigation, intellectual grade investigations, the degree investigations of definite-aim-in-life satisfactory, and all the social support investigations, and they are 154 persons (43 men, 111 women) without the omission in a reply.

Investigation methods
The investigations conducted here were the investigation of daily action, the investigation of an intellectual level, the investigation of the degree of definite-aim-in-life satisfactory, and the investigation of social support. These investigations were conducted using the individual interviewing method. The interviewer was the woman leader and public health nurse who have contact with the elderly people of this area usually, and get interested in social welfare.

The investigation domain performed by this re-

search is as follows.

(1) Investigation of everyday behaviors

The following contents are included in this investigation. ① Action at free time ② useful consideration for family life ③ on work by home ④ hobby and ⑤ the enjoyments.

The example for selection was shown in all question items. And it was the method of checking what applied. It asked to describe freely, when an answer was not applied to an example.

For example, about work at home, there were choices, such as a grandchild's care, shopping of daily necessaries, cooking, washing, cleaning of a room, care of flowers or plants, repair and carpenter work of furniture, and needlework, sewing. When not applied to these items, the free description column was prepared.

(2) Investigation of an intellectual level

The inspection about an intellectual level is the test which performs it individually using "test of kana character selection" of Kaneko (1990). This makes two or more work distribute attentiveness, and measures how one task is performed to within a fixed time. It is a subject which picks up and checks the vowel of the "Japanese alphabet" simultaneously out of the easy text written in "hiragana" while reading a meaning. Inspection time is for 2 minutes. When results of an investigation are examined until now, the score of the person with high age tends to be low.

(3) Investigation of something to live for satisfaction

At first, Haraoka proposed investigation of the degree of satisfaction in a life (1995), and it has been used in some researches after that. It is a question which investigates the degree of satisfaction about ten domains of life. Namely, 1. Sense of security in everyday life, 2. Pleasure in a daily life, 3. Satisfaction in everyday life, 4. Feeling of peacefulness in everyday life, 5. Fulfillment in a daily life, 6. Target in everyday life, 7. Reliance from the others, 8. Acceptance from surrounding people, 9. Possibility of a place which demonstrates its capability, 10. Possibility of tackling a new thing. As a result of factor analysis, Two factors were found out as a result of carrying out factor analysis of these results of an investigation. They are stable satisfaction and positive satisfaction.

(4) Investigation of social support

Referring to the measure of ISEL (Cohen, S. & Wills, T.A., 1985), SSQN (Sarason I.G., et al. 1983), Ura et al. (1989), and Noguchi (1991), The writer chose ten domains and constituted the measure of the social support for elderly people. Those domains of 10 are as follows. 1. Those who you meet and can enjoy themselves, 2. Those who you can order business when out, 3. Those who always take care of you, 4. Those who you can consult when you are troubled, 5. Those who can telephone or visit when you are lonely, 6.- those who encourage you, 7. Those who become kind and help you when uneasy, 8. Those who value you or esteem you, 9. Those who get used to the feeling which settled down when it was together, and 10. Those who take care of you when it is sick.

Next, in each domain, it was asked how much intimates there are. These questions were measured using the four-step measure. A social support score is a synthesizing point of the reply to these items.

Results of Investigation

First, The number of everyday actions was considered as the total of the numbers of replies to these five questions. That is, 1. The numbers of work at home, 2. Consciousness of being useful to a family life, 3. The numbers of actions in free time, 4. The numbers of hobbies, and 5. The numbers of pleasure.

Next, relations between "the numbers of actions in free time", "the numbers of pleasure", and average age, intellectual grade, satisfaction in life, numbers of social support of elderly people

groups were clarified.

1) Mutual correlations between each index

Table 1 shows the mutual correlation coefficient between the following indices. those indices can be set at age, the number of work in home, and Consciousness of being useful to a family life, the number of pleasure, the number of hobbies, the number of pleasure, the number of everyday actions, the degree of stable satisfactory, the degree of positive satisfactory, the degree of definite-aim-in-life satisfactory, the amount of social support, and an intellectual grade.

On the whole, Table 1 shows that the number of everyday actions are not almost related to age (r=0.097). But, except for a relation with age, the number of actions in everyday life correlates with other action features highly significantly. For example, with an intellectual grade -- (r=0.364) and with the degree of definite-aim-in-life satisfactory -- (r=0.426) and the degree of stable satisfactory -- (r=0.469) and with the degree of positive satisfactory (r=0.461) and social support (r=0.356) etc. Of course, the correlations between number of actions in everyday

life and with other actions are very high, for example, with the number of work in a home can be set at r=0.693 and useful considerations for family (r=0.641) and the number of actions of free time (r=0.796) and hobbies - (r=0.819) and pleasure (r=0.872), These correlations are very high.

It seems that you may think for any age, a man who has a lot of numbers of actions in daily life keeps an intellectual level high, the something to live for satisfaction high, there a lot of supports from others, and does the way of life so-called successful aging.

2) Relation between number of actions in daily life and psychological characteristics

The number of actions was divided into three stages of the high group (person with a lot of numbers of actions), middle groups (The number of actions is the normal people), and low groups (person with little number of actions) in daily life. Next, the relation between the action stage in daily life and the age stage was examined, the relation between an action stage and an intellectual level was examined in daily life, the relation

Table 1 Correlations between actions, intellectual, and other psychological characteristics

	1	2	3	4	5	6	7	8	9	10	11
1.Age	1										
2.number of home work	-0.100	1									
3.Useful consideration for family	-0.184	0.465	1								
4.Actions at free time	-0.089	0.408	0.482	1							
5.Number of hobbies	-0.051	0.433	0.394	0.602	1						
6.Number of enjoyment	-0.062	0.398	0.446	0.674	0.670	1					
7.Actions in everyday	-0.097	0.693	0.641	0.796	0.819	0.872	1				
8.Sense of security	0.075	0.238	0.171	0.250	0.162	0.368	0.425	1			
9.Sense of positivity	0.008	0.202	0.188	0.316	0.294	0.383	0.461	0.793	1		
10.Satisfaction in everyday	0.043	0.241	0.199	0.315	0.256	0.415	0.469	0.944	0.949	1	
11.Social supports	0.049	0.192	0.169	0.307	0.203	0.402	0.356	0.600	0.605	0.664	1
12.Level of intelligence	-0.279	0.317	0.258	0.353	0.282	0.290	0.364	0.201	0.260	0.244	0.287095

between the action stage and the something to live for satisfaction rating was examined in daily life, and the relation between the action stage and the social support score was examined in daily life. The result is shown in figure from table and Fig. 1 to Fig. 7 of Table 2.

Table 2　The means of ages according to action stages in daily life

Action stages	n	mean	variance
upper	44	77. 66	18. 60
middle	57	79. 04	40. 75
lower	50	79. 00	45. 47

It is understood that there is no difference between daily lives of a group with a lot of numbers of actions and small groups of the number of actions in the average age. In a word, there are a person with a lot of numbers of actions and little person in any age in daily life. Differences of the number of actions come to originate in the individual variation in daily life.
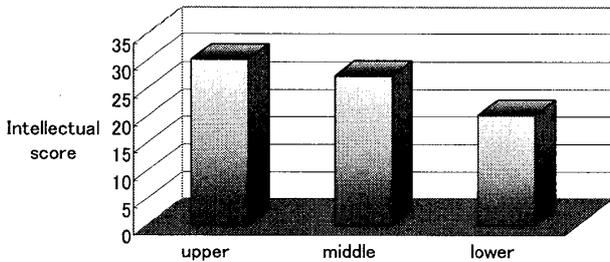
Fig. 1　Relation between levels of everyday actions and intellectual score

Next, Fig. 1 shows the relation between the level of the everyday number of actions, and an intellectual score.
Fig. 1 shows the following thing. That is, it turns out that the correlation with the level of the everyday number of actions and the intellectual score is very high. If the average of an intellectual level is considered, the higher rank group of the everyday number of actions is 30.18 and for middle group, It is 27.15, and for a low

rank group, It is 20.06. It turns out that the people who have a numbers of actions in everyday life have high intellectual grade.
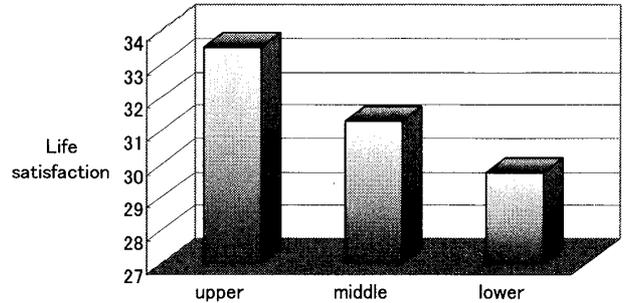

Fig. 2　Relation between levels of everyday actions and life satisfaction

When Fig. 2 was examined, it turned out that the correlation between the numerousness of actions in everyday life and the degree of life satisfaction is high. The group with many actions in every day has higher satisfactory than middle and few groups (F=8.79, p<.01).
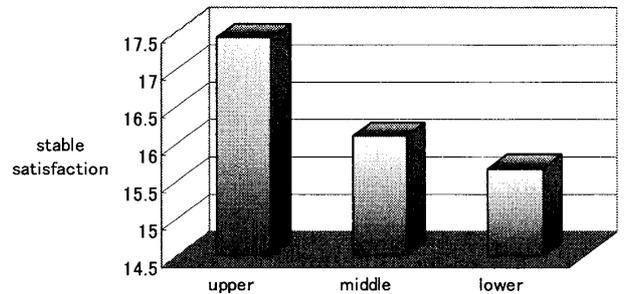

Fig. 3　Relation between levels of everyday actions and the stable satisfaction in daily life

Next, the relation between the level of action in every day and the degree of stable satisfactory is shown in Fig. 3.
There is a high correlation between the number of actions and the stability satisfaction rating in daily life when Fig. 3 is examined, and the group with a lot of numbers of actions is usually higher than a group and few group in psychological stability satisfaction rating, and understands the lowest is usually group order of a low group next in daily life (F=7.64, p<.01). In a

word, the more number of actions is, the higher the stability satisfaction rating is in daily life. This is similar to the tendency for the life satisfaction rating.
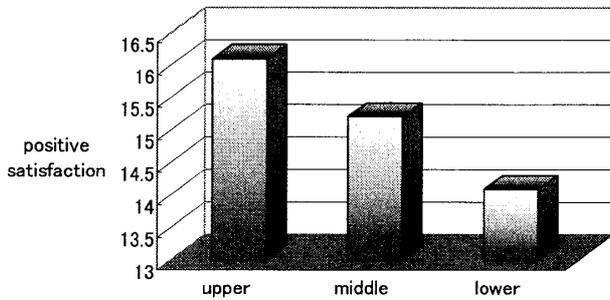

Fig. 4 Relation between levels of everyday actions and the positive satisfaction in daily life

When Fig. 4 is examined, the relation between action level in daily life and positive satisfaction rating are very high. The degree of positive satisfactory of a group with more actions in everyday life is also higher. (F=7.12, p<.01). In a word, it can be said that more the number of actions is, the higher a positive satisfaction rating is in daily life.

It is interpreted that the number of actions influences something to live for satisfaction rating, a stable satisfaction rating, and a positive satisfaction rating, and that shows that many of the number of actions are connected with successful aging in daily life.
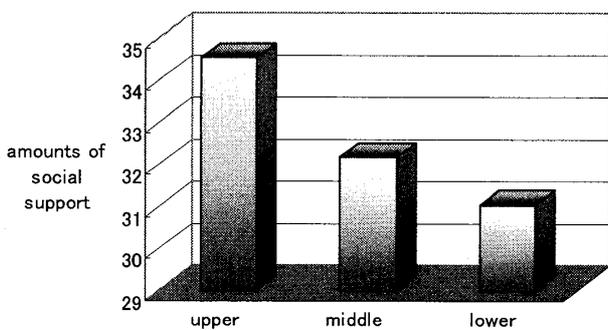

Fig. 5   Relation between levels of everyday actions and the amounts of social support

Next, it is Fig. 5 to have seen the relation between the action levels and the amounts of the social support in daily life.

From Fig. 5 it relates to the action stage high and the amount of a social support in daily life too. As for the average score of a positive satisfaction rating, it is understood that it is high in order of group with a lot of numbers of actions and a group middle next and the least action group in daily life (F=6.77, p<.01). In a word, it can be said that the more number of actions is, the higher the amount of a social support is in daily life.

3) **Relations between number of actions and psychological characteristics at free time**

One of the measures which assess the quantity which can act with its own intention, without receiving regulation is the number of actions in free time. Then, it divided into 3 of a higher rank group with many actions, a middle group with the ordinary number of actions, and a man low rank group with few actions groups based on the average value and standard deviation of the number of actions in free time.

It was inquired by the following four relations based on this. Namely, 1. The relation of the number of actions in free time and age stage, 2. the relation of the number of actions in free time and intellectual level, 3. The relation of the number of actions in free time and the degree of -life satisfactory, 4. the relation of the number of actions and social support score in free time, The result is shown in Table 3, Fig. 6, Fig. 7, Fig. 8, Fig. 9, and Fig. 10.

As Table 3 shows, the average age of a group with many actions is 78.29 years old and the average age of group with middle number of actions is 79.29 years old and that of low number of actions is 78.33 years old. It is thought that the number of actions in free time is based on individual difference regardless of age.

Table 3　Relation between number of actions at
free time and averages of ages

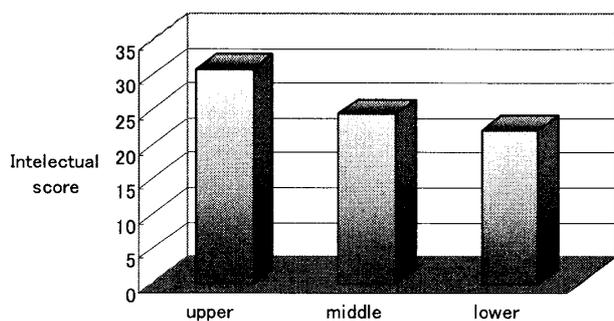| number of actions	n	averages of ages	variance
upper	51	78.29	29.09
middle	48	79.29	35.66
lower	52	78.33	43.24

Fig. 6　Relation between the levels of action
stage in free time and intellectual score

Next, let's find the relation of the action stage in free time and intellectual levels.

Fig. 6 shows the following thing. The action stage in free time and intellectual level are highly related. The average score of an intellectual test is 30.68 by the group with many actions in free time, is 24.30 by the group of a degree in the middle, and is 21.92 by few groups. It can be said that such a high intellectual level is maintained that there are many actions in free time (F=6.77, p<.01).
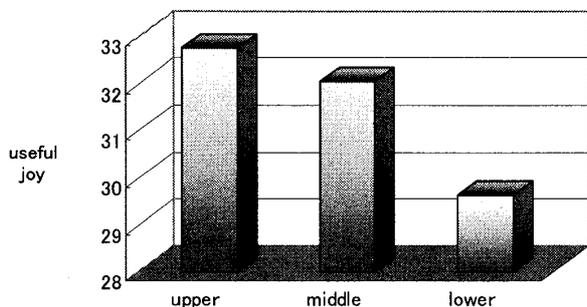

Fig. 7　Relation between the levels of action
stage in free time and useful joy

Fig. 7 showed the relation between the stage of the number of actions in free time, and the degree of useful joy.

When Fig. 7 was examined, it turns out that the number of actions in free time and the degree of useful joy are highly related. It divides into three groups, many groups, a common group, and few groups, on the basis of the number of actions in free time. When it sees about the average score of "useful joy", the score of many groups is 32.75, the average of a group is usually 32.04, and the average of few groups is 29.62 (F=7.175, p<.01). That is, it could be said that a man with more actions in every day has the higher grade of "useful joy."
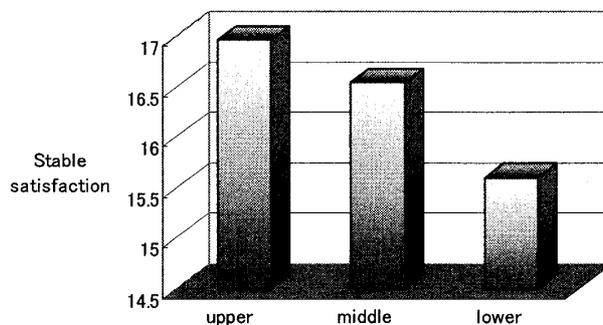

Fig. 8　Relation between the levels of the action
stage in free time and the stable satisfac-
tion in daliy life

Fig. 8 considered the relation between the number of the actions in free time, and a stable satisfactory degree.

When Fig. 8 is examined, it turns out that there is a high correlation between the number of actions and the degree of stable satisfaction in free time. On the average of the degree of stable satisfactory, the group with many everyday actions is 16.96, a group is 16.53, and few groups are 15.59. This is understood that the score of the degree of stable satisfaction is high in order of the everyday number of actions (F=4.784, p<.01). That is, it could be said that a man with more everyday actions has the higher degree of stable satisfaction.

Fig. 9 illustrated the relation of the number of actions and the degree of positive satisfaction in daily life.
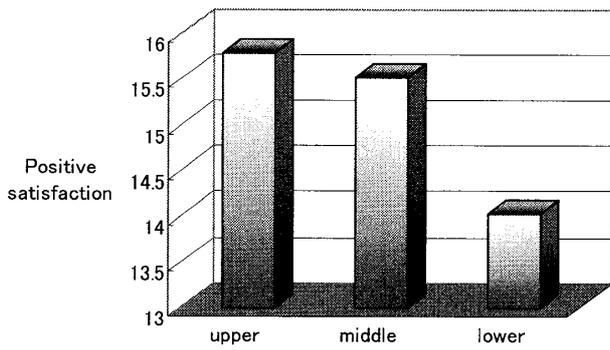
Fig. 9 Relation between the levels of the action stage in free time and the positive satisfaction in daily life

Fig. 10 Relation between the levels of the action stage in free time and amount of the social support

When Fig. 9 is examined, the relation between the stage of the number of actions and the degree of positive satisfaction in free time is very high. The group with many actions in free time has the high degree of positive satisfaction like the degree of stable satisfaction compared with a middle group or a low group. Moreover, compared with a low group, it turns out that a middle group is high (F=6.860, p<.01). That is, it turns out that a man with more actions of free time has the higher degree of positive satisfaction. If the relation between the degree of positive satisfaction and the number of actions in free time compares the relation between the degree of stable satisfaction, and the number of actions in free time, it will be considered for the degree of positive satisfaction to be a little stronger than the degree of stable satisfaction.

As mentioned above, it turns out that the numerousness of the numbers of everyday actions is highly connected with both the degree of useful joy the degree of stable satisfaction and the degree of positive satisfaction. It is interpreted as the number of actions being highly connected with a positive way of life and positive sense of security in every day life.

Next, the relation of the number of actions in free time and the quantity of social support is shown in Fig. 10. It turns out that the numerousness of the everyday numbers of actions is
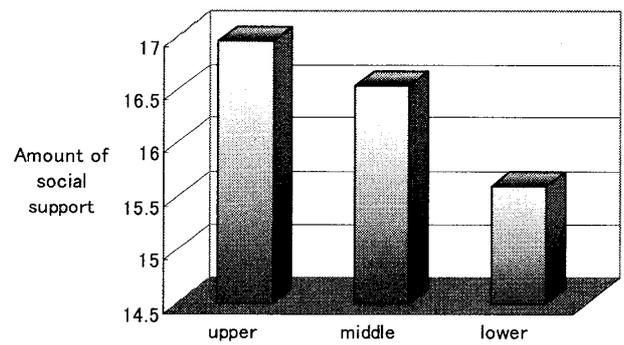
highly connected with both the degree of useful joy, the degree of stable satisfaction and the degree of positive satisfaction. It is interpreted as the number of actions is highly connected with a positive way of life and positive sense of security in every day life.

4) Relations between the number of pleasures and psychological characteristics

The number of pleasure is one of the measures which show the quantity of the action which can be performed happily. Respondents were divided into three groups based on the average value and standard deviation of a number of pleasures. That is, it is three, a higher rank group with many pleasures, a middle group with the ordinary number of pleasures, and a low rank group with few pleasures.

Next, the relations between the number of pleasures and psychological features were analyzed from the following four viewpoints. That is, they are the relation between pleasure and age, the relation between pleasure and an intellectual level, the relation between pleasure and useful joy, and the relation between pleasure and a social support score. Those results are shown from Table 4 and Fig. 11 by Fig. 15.

As Table 4 shows, the average age of men with many actions is 77.39 years old, the average age of persons with the ordinary number of actions is 80.47 years old, and the average age of men

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Table 4　Means of ages by levels of enjoyments

enjoyment	n	averages of ages	variance
upper	44	77.39	25.45
middle	47	80.47	44.38
lower	60	78.08	33.67

with few actions is 78.08 years old. There is no significant difference between these three groups' average ages. It is thought that many of the enjoyment depend on the individual variation.
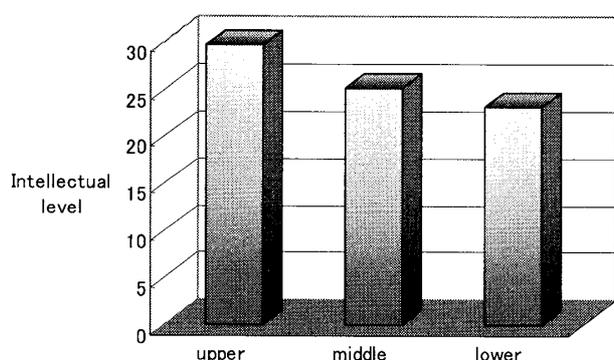

Fig. 11　Relations between the levels of enjoyment in daily life and intellectual level

Next, I will consider the relations between the levels of pleasure, and intellectual levels. It is understood that there is a high correlation between levels of the enjoyment and intellectual level at free time from Fig. 11. Averages of intellectual score of three groups with different number of enjoyments were compared. The score of the group with a lot of enjoyments is 29.59, the score of the group in the middle of enjoyments is 25.09, and the score of lower group of enjoyments is 23.12. Fig. 11 shows that a man with more enjoyments has a higher intellectual grade. $(F=4.58, .01>p>.05)$.

Fig. 12 shows that the relation between the levels of enjoyment in daily life and the degree of satisfaction is statistically significant.
Fig. 12 shows the strong correlation by the level of the number of enjoyments and pleasure where it lives. When it compares about the average of
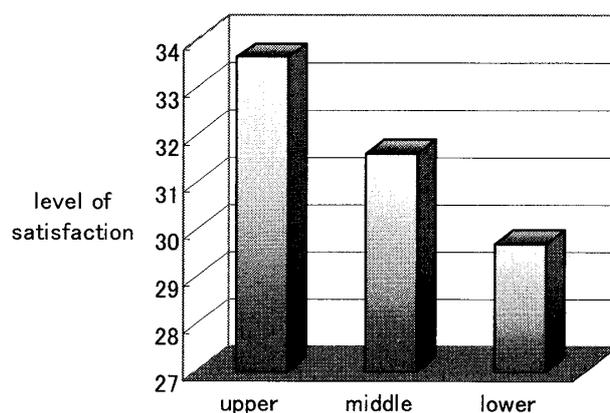

Fig. 12　Relation between the levels of enjoyment in daily life and the level of satisfaction

the degree of definite-aim-in-life satisfactory, the group with many actions of free time is 33.64, and the average of the middle group is 31.61 and a the average of the low group is 29.70. Fig. 12 shows that a man with more enjoyments has a higher satisfaction in daily life. $(F=10.68, p<.01)$. In a word, it can be said that pleasure where more the enjoyment is, the more it lives is higher.
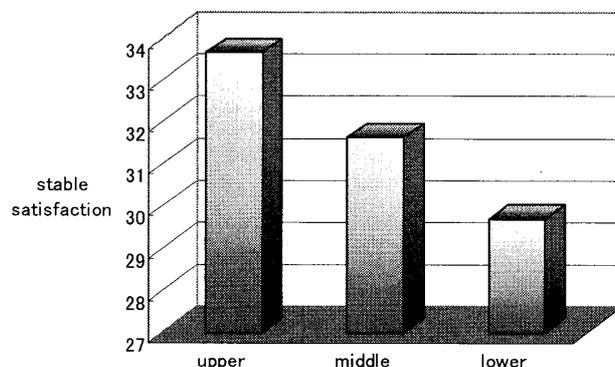

Fig. 13　Relation between the levels of enjoyment in daily life and the stable satisfaction

It is Fig. 13 to have shown the relation the number of enjoyments to the stability satisfaction rating.
If Fig. 13 is examined, the number of pleasure and the degree of stable satisfaction are correlated highly. Moreover, the group with a lot of pleasure has statistically higher stable satisfaction score than the middle group and the low

rank group in the degree of pleasure (F=7.549, p<.01). That is, it could be said that the degree of stable satisfaction is high, so that there is many pleasure.
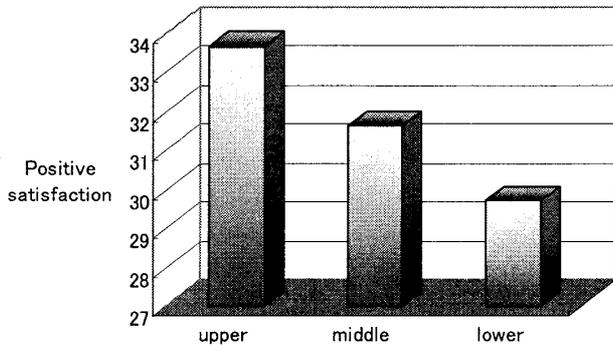

Fig. 14 Relation between the levels of enjoyment in daily life and positive satisfaction

Next, it is Fig. 14 to have seen the levels of enjoyment in daily life and the relations to a positive satisfaction rating.

When Fig. 14 is examined, it is understood that a high correlation is seen between the level of the enjoyment and the level of a positive satisfaction rating. Mean values of three positive satisfaction rating of the group with different number of enjoyments are compared. The positive satisfaction value of the group with a lot of numbers of enjoyments is 33.64, the value of the group in the middle is 31.61, and the values of few groups are 29.70. It decreases from a high-ranking group in order of few group through the middle group. It is understood that this tendency is a high degree of relation (F=10.68, p<.01). In a word, it is understood that the higher the rating of positive satisfactory, more the number of enjoyments is, too. As for the relation between positive satisfactory and the enjoyment, it is understood that a related level is higher than the relation between positive satisfaction and enjoyment.

There is a high correlation between the levels of the number of enjoyments and pleasure where it lives as mentioning above. Moreover, a high correlation between a number of enjoyments and a

stable satisfaction rating exists. It is understood that many of the enjoyment relate to the positive satisfaction rating and the stability satisfaction rating in daily life high.
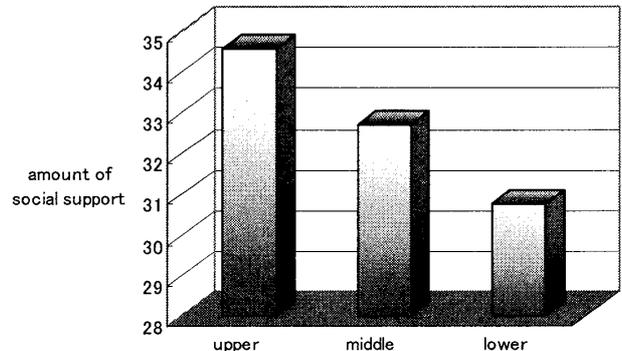

Fig. 15 Relation between the leveles of enjoyment in daily life and amount of the social support

Next, Fig. 15 is an examination of the relation to the stage of the enjoyment and the amount of the social support. It is understood that the relation between the stage of the enjoyment and the amount of the social support is strongly related from Fig. 15. As for amount of average of the social support, the amount of the group with a lot of numbers of enjoyments is 34.57, the amount of the middle group is 32.72, and the amounts of few groups are 30.77. When the amounts of the social support are compared between groups, it is understood that the group with a lot of numbers of enjoyments is statistically higher than the middle group and a low group (F=8.699, p<.01). In a word, it can be said that the group which has more the amount of a social support has also a lot of enjoyments. As mentioned above, it can be interpreted that having the enjoyment a lot can keep an intellectual level high, have a high something to live for satisfaction rating, have a high stability satisfaction, have a high, positive satisfaction, and receive a lot of help from other people.

From the above-mentioned, It has been understood that setting up a suitable target for oneself, and living positively and happily in daily

life lead to the prevention of the dementia syndrome, and rise the something to live for satisfaction. It seems that it is brought close to an ideal aging so-called "Successful aging".

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