Influence of Life Events and Social Support on the Development of Future Time Perspective

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We investigated the effects of life events and social support on the development of future time perspective (FTP) in a two-part study on women's college students. Study 1 investigated the effect of life events only using project, FTP and life event inventories. Results indicated that life events influence the depth of future extension, the degree of future orientation, and feelings of hopefulness. Study 2 investigated the effects of both life events and social support on the development of FTP using a social support inventory in addition to the inventories used in Study 1. Results indicated that social support and life events influence the certainty of time frames for finishing projects and that social support also influences the depth of future extension, feelings of hopefulness, sense of external control over the future and degree of future orientation.

【Key words】 Future time perspective, time perspective, life events, social support

Future time perspective (FTP) is defined as the totality of an individual's view of his or her psychological future existing at a given time (Lewin, 1942). Nurmi (1991) stressed that this concept is particularly important for young people for several reasons. First, a well-structured and extended FTP is characteristic of a well-adapted personality and allows for activities that are highly valued in modern society, such as delay of gratification, planning, problem solving and achievement. Second, adolescent problem behaviors, such as delinquency, problems in career choice and drug abuse are likely related to how young people perceive their future. Third, how young people perceive their future plays an important part in their identity formation, which is often defined in term of exploration and commitment concerning future-oriented interests.

FTP comprises the following three aspects: (1) cognitive; (2) affective; and (3) belief. The cognitive aspect includes future extension, content of FTP, future orientation and degree of structuralization of the future. The affective aspect refers to the feeling of hopefulness. The belief aspect measures belief about the future, especially the extent to which people believe they are able to influence and control their own future.

Study 1 investigates the effects of the life events on the development of FTP. Life events refer to the unexpected traumatic events such as parental death or divorce, and negative experience such as dis-

appointment in personal relationships and failure in schoolwork. Life events are thought to be serious factor that contribute to various mental diseases and psychological maladjustments, and considerable research has been conducted on the effects of life events on mental health.

Life events might therefore influence the development of FTP as an index of mental health, and it is considered that affected individuals might display decreased future extension and future orientation, increased sense of hopelessness and external control over the future, and negative content of FTP.

Previous research has indicated that factors such as age (Klineberg, 1967; Lessing, 1968, 1972; Shannon, 1975), sex (Schmid, Lamm & Trommsdorff, 1978; Trommsdorff, Burger & Fuchsle, 1978, 1980), social class (Brock & DelGiudice, 1963; Greene & Roberts, 1961; Judson & Tuttle, 1966; Leshan, 1952; Schmid, Lamm & Trommsdorff, 1978) and educational level (Fuchsle & Trommsdorff, 1980; Lamm, Schmidt & Trommsdorff, 1976; Trommsdorff, Burger & Fuchsle, 1978, 1980, 1982) influence the development of FTP; however, there has been no investigation of whether life events influence the development of FTP. Study 1 therefore investigates the effects of life events on the development of FTP.

FTP also comprises the three components, i.e., cognition, affect and belief. The present study therefore included these components.

Study 1

The purpose of Study 1 is to investigate whether life events influence the development of FTP. This study focused on the content of FTP, certainty of time frames for finishing projects, future orientation, future extension and degree of structuralization of FTP as the cognitive aspects of FTP, and focused on feelings of hopefulness as an affective aspect of FTP. The belief aspect here refers to the sense of external control over the future. The following hypothesizes were set.

Hypothesis 1: The content of FTP is more positive when the degree of impact of life events is weak than when the degree of impact is strong.

Hypothesis 2: The degree of FTP structuralization is higher when the degree of impact of life events is weak than when the degree of impact is strong.

Hypothesis 3: The degree of future orientation is higher when the degree of impact of life events is weak than when the degree of impact is strong.

Hypothesis 4: The feeling of hopefulness is greater when the degree of impact of life events is weak than when the degree of impact is strong.

Hypothesis 5: The sense of external control over the future is lower when the degree of impact of life events is weak than when the degree of impact is strong.

Hypothesis 6: Subjects locate more projects except fatigue in the certain period when the degree of impact of life events is weak than when the degree of impact is strong.

Hypothesis 7: The future extension of projects is longer when the degree of impact of life events is weak than when the degree of impact is strong.

Method

Thirty-four women's college students participated in this study.

First, an FTP inventory comprised of three subscales was administered. The first subscale measures future orientation and contains nine items (e.g., "I have a purpose and direction for my future", "I have a general plan for my life"). The second subscale measures feelings of hopefulness and contains 10 items (e.g., "I am looking forward to the future with great expectation", "I have hopes for my future"). The third subscale measures sense of external control over the future and contains five items (e. g., "I think that my future is determined by fate", "I think that it is best to leave future events to chance"). Subjects responded to these items using a five-point scale.

A project inventory was then administered to measure the content of FTP and future extension. First, an instructor gave students some examples of projects. Subjects were then instructed to propose seven projects that they were interested in and the time frame in which they thought they could conduct each project. Subjects were instructed to describe time frames in terms such as "immediately", "within my lifetime", "within XX years (days, months)", "after XX years (days, months)", "at XX years of age" "from XX (days, months, years) to XX (days, months, years)". When the period was uncertain, subjects were instructed to use a question mark.

Furthermore, the degree of structuralization of FTP was measured. Subjects were instructed to write down the projects that help to actualize its project in side of its project if there are projects that help to actualize its project among six projects except its project for each project.

Finally, a life events inventory based on a previous study by Coddington (1972) was administered. Subjects were instructed to list life events that had a negative impact both at the time of occurrence and in their present lives and to rate the degree of impact that they currently felt for each life event using a three-point scale.

Results and Discussion

Life events were classified into one of six categories based on content. Definitions and examples of the categories are shown in Table 1. Subjects with scores above the mean were classified into the High group and those with scores below the mean. Table 2 shows the mean of the number and degree of negative content of the five types of life events for each group.

Table 1 The definition and examples of categories

Catergory	Definition	Example
Death and sickness	This category refers to the one's and other's sickness and the significant other's death.	My grandfather died. My mother had an illness.
The problems in the interpersonal relationship	This category refers to problems in the interpersonal relationship.	I had the trouble with the friends. I had love in disappointment.
The failure in schoolwork and albeit.	This category refers to the failure in the school work and albeit.	I failed to earn enough credits. I had failure in the albeit.
The crisis in the beauty culture	This category refers to the crisis in beauty culture	I got fat. I had a rough skin.
The crisis in the economy	This category refers to the crisis in the economy.	I lost the money. I exhausted my savings.
Parental quarrel and divorce	This category refers to the parental quarrel and divorce.	My father was at outs with my mother. Parents divorced.

Table 2 The mean numbers of the five kinds of life events for each group

	Low group	High group
Death and sickness	0.25 (1.4)	0.57 (2.36)
Problems in the interpersonal relationships	0.3 (2.17)	1.14 (2.2)
Failure in the school work and albeit	0 (0)	0.78 (2.13)
Crisis in the beauty culture	0.1 (2.5)	0.21 (2.33)
Economy	0.05 (2.0)	0.07 (3.0)

Note: The parenthesis indicate the mean schocking scores.

Table 3 The content of FTP

Category	Definition	Example
Vocation	The category concerning the vocation	Become a public servants. Become a counselor. Find employment. become accustomed to work. open business.
Marriage and birth	The category concerning the marriage and birth	Marry. Have a baby.
Study and qualification	The category concerning the study, entrance to a higher grade and qualification	Study. Go to a graduate school. Study abroad obtain a clinical therapist's license.
Physical appearance	The category concerning the physical appearance	want to become a beautiful woman. want to become a stylish woman.

Love	The category concerning love	Love. make a boy friend. want to favor boy friend over all others want to be with boy friend all the time.
Economy	The category concerning the economy.	Work at a part time job. Become rich. build a house. buy a car. save money.
Play and hobby	The category concerning the play and hobby	raise the pet do gardening. watch more movie. Take lesson in tea ceremony. play with a family computer.
New experience	The category concerning the exciting experience	Go to the trip.
Mental growth	The category concerning the mental growth.	Become mentally strong. Become a gentle mannered person. Lead a fulfill life.
Daily life	The category concerning the daily life.	Have a meal. Clean the room.
Fatigue	The category concerning the fatigue.	Want to go to bed. Want to come home. want to rest.

Table 4 The content of FTP for each group

	Low group	High group
Vocation	12.1	7.4
Marriage and birth	10.6	8.6
Study and qualification	25.2	17.3
Economy	8.9	14.8
Play and hobby	8.9	14.8
New experience	9.7	11.1
Mental growth	3.3	8.6
Physical appearance	6.5	8.6
Love	1.6	1.2
Daily life	8.9	2.5
Fatigue	4.1	4.9

In the project inventory, several subjects failed to list seven projects. However, the following analyses were performed on the resulting data.

Projects were classified into one of 11 categories based on the content of FTP. Definitions and

examples of the 11 categories are shown in Table 3. Table 4 shows the percentage of each project types for each group; there were no large differences observed between the Low and High groups for all eleven categories. Thus, hypothesis 1 was not supported.

Figures 1 and 2 show the degree of FTP structuralization. For the analysis, projects in the study and qualification category were divided into study, graduation and qualification projects. Projects in the marriage and birth category were divided into marriage projects and birth projects. Fourteen kinds of circle are used in the Figures. These circles correspond to fourteen kinds of projects.

In the Figures, arrows start from the inside of the circle and move to either the circle or another circle. This means that the projects from which the arrows originate help to actualize the projects the arrows move to. The number indicated below the arrows refers to the number of projects that facilitated the completion of the projects or other projects. As shown in the Figure 1 and 2, there were no large differences in the degree of FTP structuralization between groups. Thus, hypothesis 2 was not supported.

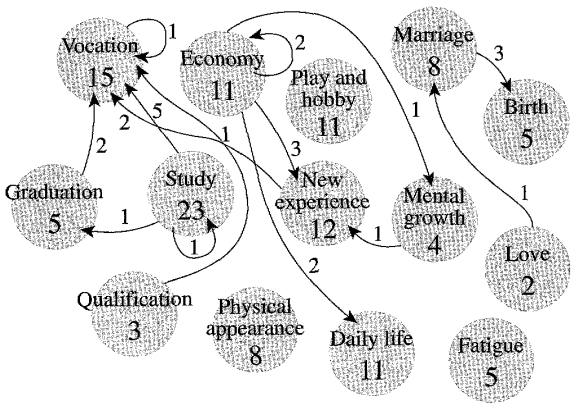

Fig. 1 The degree of FTP structuralization for Life event L group.

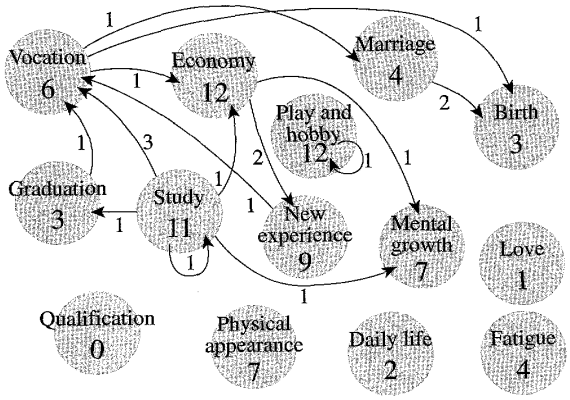

Fig. 2 The degree of FTP structuralization for Life event H group.

Table 5 shows the mean future orientation, hopefulness and external control scores as compared using a t-test. Mean future orientation and hopefulness scores were higher for the Low group than the

Table 5 The results concerning FTP inventory for each group

	Low group	High group
Future orientation	3.27	2.79
Hopefulness	3.50	3.10
External control	2.57	2.54

Table 6 The percentage of certain projects that occupy in the total number of projects for each group

	Low group	High group
Vocation	93.3	100
Marriage and birth	84.6	71.4
Study and qualification	90.3	85.7
Economy	90.9	91.7
Play and hobby	81.8	91.7
New experience	83.3	88.9
Mental growth	75.0	85.7
Physical apperance	100	85.7
Love	100	100
Daily life	90.9	100
Fatigue	100	100

High group (future orientation, $t=1.78$, $df=32$, $p<0.05$ and hopefulness, $t=1.94$, $df=32$, $p<0.05$, respectively). These results suggest that life events decreased future orientation and increased sense of hopelessness. Thus, hypotheses 3 and 4 were supported.

Projects were classified as certain or uncertain. Table 6 shows the percentage of certain projects for each group. No large difference in the percentage of certain projects between Low and High groups was observed in any category. Thus, hypothesis 6 was not supported.

The difference between the present subject age and the projected age at project actualization was used as a measure of future extension. For the 'lifetime' time frame, future extension scores were calculated by subtracting the subject's present age from the average Japanese lifespan. Figure 3 shows mean future extension scores. * Future extensions of projects in the vocation, economic and new experience categories were longer for the Low group than for the High group. These results suggest that life events prevent young adults from applying longer future extensions to projects in the vocation, economic and new experience categories.

Thus, while hypothesis 7 was partially supported, the number of projects for all categories was low. Additional large-scale research is needed to validate these findings.

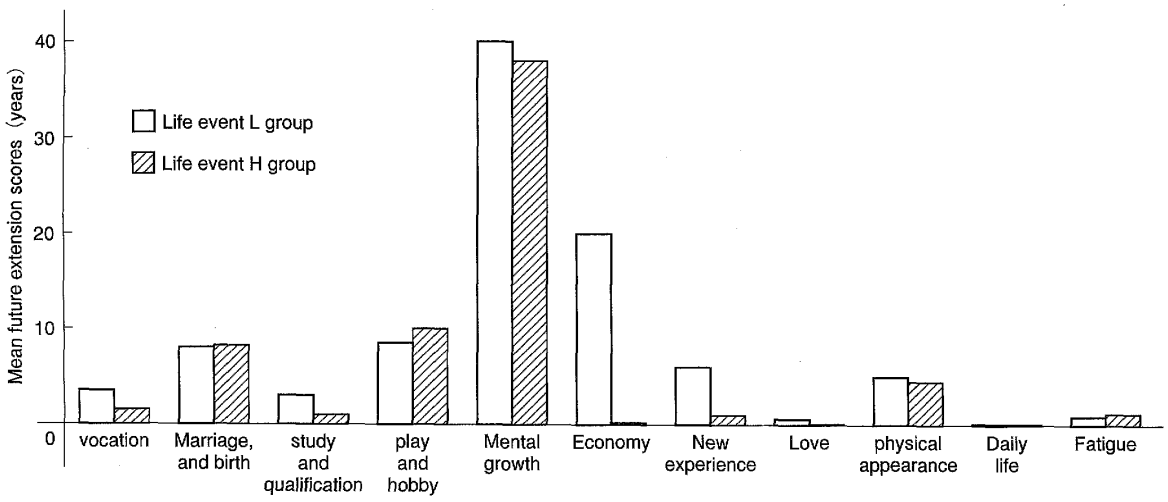

Fig. 3 The means for future extension scores for each group.

In conclusion, life events influenced the depth of future extension, the degree of future orientation and the feeling of hopefulness.

Study 2

It is considered that social support has a buffering effect that moderates the degree of impact of life events and plays an important role in the promotion and maintenance of mental health. On the basis of this assumption, much research has been conducted concerning the relationships between stress, social support and mental health. Thus, the effects of life events on the development of the FTP might also be determined by social support.

When the degree of social support is low, the effects of life events on the development of FTP are visible. Life events might prevent an individual from developing FTP when the degree of impact of life events is high.

However, when the degree of social support is high, the degree of impact of life events is moderated, even if the degree of impact of life events is high. Thus, the effects of life events on the development of FTP may be affected by social support. Study 2 therefore investigates the combined effects of life events and social support on the development of FTP.

This study also addresses on three components of FTP: cognitive, affective and belief. Content of FTP, certainty of the time frame for finishing projects, future orientation, future extension and degree of the structuralization of FTP were defined as the cognitive aspects of FTP, and feelings of hopefulness was the affective aspect of FTP. The belief aspect of FTP refers to the sense of external control over the future.

Hypotheses concerning the sense of external control, the certainty of the time frame for finishing projects, the content of FTP and the degree of FTP structuralization were not set, because the effects of

life events were not observed in the Study 1.

Hypothesis 1: The number of life events influences the degree of impact of life events. Social support has a buffering effect that moderates the degree of impact of life events.

Hypothesis 2: When the degree of social support is low, the future extension of projects is longer when the number of life events is low than when the number is high. However, when the degree of social support is high, the effects of life events on the length of future extension are not observed.

Hypothesis 3: When the degree of social support is low, the degree of future orientation is higher when the number of life events is low than when the number is high. However, when the degree of social support is high, the effects of life events on the degree of future orientation are not observed.

Hypothesis 4: When the degree of social support is low, feelings of hopefulness are increased when the number of life events is low than when the number is high. However, when the degree of social support is high, the effects of life events on feelings of hopefulness are not observed.

Method

Fifty-one women's college students participated in this study.

In addition to the FTP, project and life event inventories used in Study 1, a social support inventory was also administered. This inventory contained 18 items (e.g., "Do you have friends that encourage you when you are unhappy?", "Do you have friends who will listen to your problems?") Subjects responded to these items using a five-point scale.

Results

Subjects were classified into one of four groups that combined the High group (scores above the

Table 7 The mean numbers of the life events for each group

	Life event L		Life event H	
	Support L	Support H	Support L	Support H
Death and sickness	0.09	0.06	0.82	0.52
Problems in the interpersonal relationship	0.55	0.47	1.88	2.05
Failure in the school work and albeit	0.45	0.40	1.37	1.29
Crisis in the beauty culture	0	0.07	0.13	0.29
Economy	0	0	0.25	0.06
Parental quarrel and divorce	0	0.07	0.13	0.06

mean) and Low group (scores below the mean) for the number of life events with the High group and Low group for social support scores. Table 7 shows the mean values of the number of the six types of life events.

Table 8 shows the mean degree of negative content of life events listed by subjects. 2 (life event) × 2 (support) ANOVA was performed using the degree of negative content as the dependent variable. The results indicated that the main effect of life events is significant ($F=40.17$, $df=1/47$, $p<0.05$) and that the mean degree of negative content are higher for life event H group than for life event L group.

Table 8 The means for total shocking scores for each group

Life event L		Life event H	
Support L	Support H	Support L	Support H
2.27	3.07	8.75	7.94

Projects were classified into one of 11 categories based on content. The categories were the same one as those used in Study 1. Table 9 shows the percentages of the 11 project types for each group. No large differences were observed among the four groups.

Table 9 The content of FTP for each group

	Life event L		Life event H	
	Support L	Support H	Support L	Support H
Vocation	10.4	13.4	10.2	14.2
Marriage and birth	11.7	9.8	6.1	5.9
Study and qualification	14.3	11.6	12.2	15.1
Economy	10.4	7.1	10.2	9.2
Play and hobby	18.2	18.8	22.5	12.6
New experience	10.4	12.5	12.2	10.1
Mental growth	7.8	7.1	0	9.2
physical appearance	3.9	5.4	10.2	10.1
Love	2.6	2.7	2.0	0.008
Daily life	3.9	7.1	4.1	9.2
Fatigue	6.5	4.5	10.2	3.4

Figures 4-7 show the degree of FTP structuralization. No large differences were observed among the four groups. Projects were classified as certain or uncertain for each group. Table 10 shows these results.

For projects in the marriage and birth category, the percentage of certain projects was higher for

Table 10 The percentages of the certain projects for each group

	Life event L		Life event H	
	Support L	Support H	Support L	Support H
Vocation	100	93.3	100	100
Marriage and birth	77.8	54.5	66.6	100
Study and qualification	100	86.9	100	83.3
Economy	37.5	62.5	100	72.7
Play and hobby	92.8	64.3	72.7	60.0
New experience	100	64.3	83.3	83.3
Mental growth	83	25	0	81.8
Physical appearance	100	66.7	80	75.0
Love	100	66.7	100	100
Daily life	100	100	100	100
Fatigue	100	80	100	100

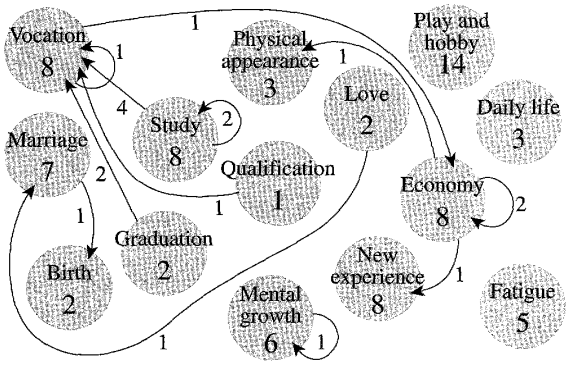

Fig. 4 The degree of FTP structuralization for Life event L-Support L group.

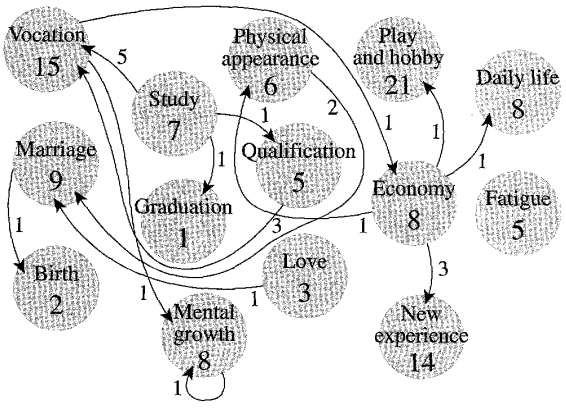

Fig. 5 The degree of FTP structuralization for Life event L-Support H group.

support L group than for support H group when the number of life events was low. The percentage of the certain projects was higher for support H group than for support L group when the number of life

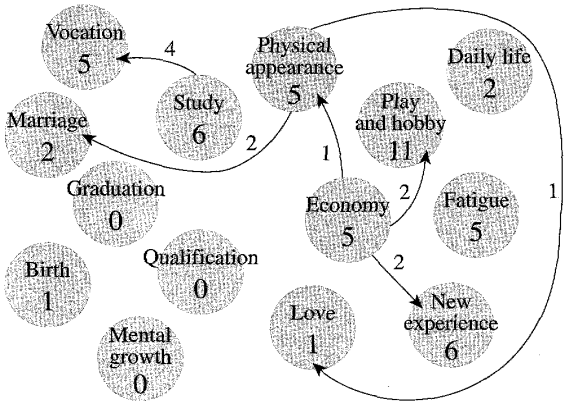

Fig. 6 The degree of FTP structuralization for Life event H-Support L group.

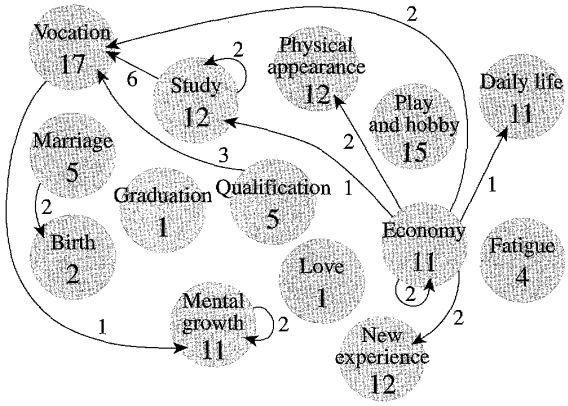

Fig. 7 The degree of FTP structuralization for Life event H-Support H group.

events was high. The percentage of certain projects was also higher for life event H group than for life event L group when the degree of social support was high.

For projects in the love category, the percentage of certain projects was higher for support L group than for support H group when the number of life events was low. The percentage of certain projects was also higher for life event H group than for life event L group when the degree of social support was high.

For projects in the mental growth category, the percentage of certain projects was higher for life event H group than for life event L group when the degree of social support was high. The percentage of certain projects was also higher for the support L group than for the support H group when the number of life events was low.

For projects in the fatigue category, the percentage of certain projects was also higher for life event H group than for life event L group when the degree of social support was high.

For projects in the economic category, the percentage of certain projects was higher for support L group than for support H group when the number of life events was high. Conversely, the percentage of certain projects was higher for support H group than for support L group when the numbers of life

events was low. The percentage of certain projects was also higher for life event H group than for life event L group when the degree of social support was low.

For projects in the physical appearance category, the percentage of certain projects was higher for support L group than for support H group when the number of life events was low. The percentage of certain projects was also higher for life event L group than for life event H group when the degree of social support was low.

For projects in the play and hobby category, the percentage of certain projects was higher for life event L group than for life event H group when the degree of social support was both high and low.

For projects in the new experience category, the percentages of the certain projects were higher for support L group than for support H group under the condition in which the numbers of the life events are low. The percentages of the certain projects were also higher for life event H group than for life event L group when the degree of social support was high.

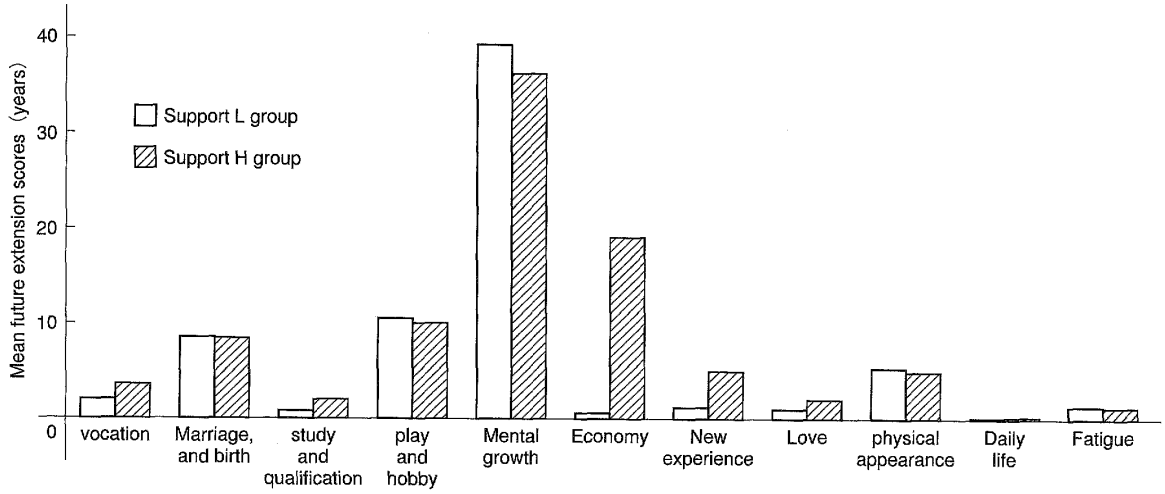

Fig. 8 The means for future extension scores of Support H and L groups in the Life event L condition.

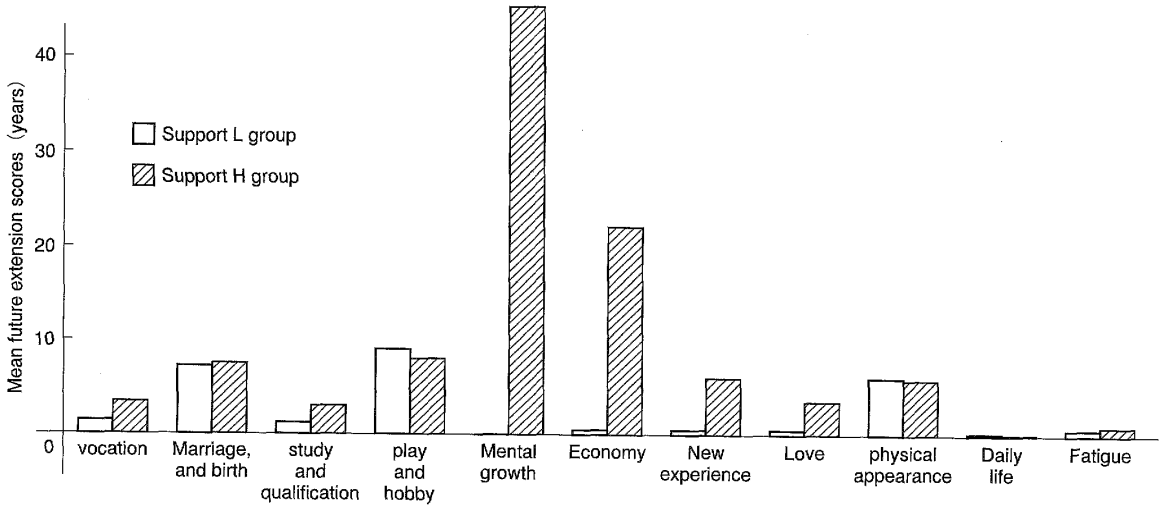

Fig. 9 The means for future extension scores of Support H and L groups in the Life event H condition.

The difference between the subject's age and the age at which projects would be actualized was used to measure future extension. Figure 8 and 9 show mean future extension scores for each group. * The future extension scores of projects in the vocation, economic and new experience categories were higher for support H group than for support L group regardless of the number of life events.

Table 11 lists the mean hopefulness, future orientation and external control scores for each group. First, 2 (life event) × 2 (support) ANOVA was performed using hopefulness score as the dependent variable. The result indicated that the main effect of support is significant ($F=9.13$, $df=1/47$, $p<0.01$) and that the mean hopefulness scores were higher for support H group than for support L group.

Table 11 The results concerning FTP invertory for each group

	Life event L		Life event H	
	Support L	Support H	Support L	Support H
Future orientation	2.86	3.43	3.01	3.55
Hopefulness	3.29	3.67	3.25	3.72
External control	2.71	2.07	3.00	2.35

Second, 2 (life event) × 2 (support) ANOVA was performed using future orientation scores as the dependent variable. The result indicated that the main effect of support is significant ($F=6.23$, $df=1/47$, $p<0.01$) and that the mean future orientation scores were higher for support H group than for support L group.

Finally, 2 (life event) × 2 (support) ANOVA was performed using external control scores as the dependent variable. The result indicated that the main effect of support is significant ($F=8.87$, $df=1/47$, $p<0.01$) and that mean external control scores were higher for support L group than for support H group.

Discussion

In the present study, we aimed to confirm whether social support has a buffering effect that moderates the degree of impact of life events. The results indicated that social support does not influence the degree of negative content of life events, and we could not confirm the buffering effect. However, social support might encourage individuals to cope with the impact of life events. The number of life events also influenced the degree of negative content. This result suggests that the degree of impact of life events is stronger when the numbers of life events is high than when the number is low. Thus, hypothesis 1 was partially supported.

Regarding the content of FTP, no large differences in the ratio of projects was observed among four groups for all project types. Thus, there was no observable effect by life events and social support

on the content of FTP. In addition, no large differences regarding the degree of FTP structuralization were observed.

However, large differences were observed in the percentages of certain projects among four groups. The results were interpreted as follows. When the life events are a few, support L group might attempt to cope somehow with stress caused by life events.

The first method to cope with stress for the support L group is to seek supportive relationships. The second method is to seek new projects and to relieve stress. The third method is to become mentally strong. Thus, these methods might become more important for support L group than for support H group, which has many supportive relationships.

Therefore, support L group might locate more marriage and birth, mental growth and new experience projects in a certain period than support H group when the number of life events is low. Physical appearance projects also help to actualize the projects in the marriage category. Therefore, the results described above might be observed in the projects in the physical appearance category.

However, in the life event H condition, FTP is threatened if the degree of social support is low. Thus, support H group might locate more projects, excepting fatigue, in a certain period than support L group when the number of the life events is high. However, this result was observed only for marriage and birth projects. Further research is needed to clarify this result.

Life event H group also located more fatigue, mental growth, new experiences, marriage and birth projects in a certain period than life event L group when the degree of social support is high. It is considered that life event H group, with a high number of life events, attempt to become mentally strong when the degree of social support is high; thus, projects in the mental growth category would become the important concerns. Life event H group may also relieve stress by starting new experience projects when the degree of social support is high, and thus new experience projects will become important concerns.

Furthermore, the life event High group will want to rest when the degree of social support is high. Thus, fatigue projects will become the important concerns. This group also recognizes the importance of interpersonal relationships when the degree of social support is high, and marriage and birth projects are important concerns.

Thus, life event H group might locate more mental growth, new experiences, marriage and birth, and fatigue projects in the certain period than life event L group when the degree of social support is high.

However, in the support L condition, FTP is threatened when the number of life events is high. Thus, life event L group might locate more projects except fatigue in the certain period than life event H group in the support L condition. However, such result was observed for the only projects in the

physical appearance and play and hobby categories. Further research is needed to better understand the results of the present study.

Regarding future extension, projects in the vocation, economic and new experience categories was higher for support H group than for support L group. These results suggest that the support H condition, which produces close interpersonal relationships, was perceived by subjects as the projects in the vocation, economic and new experience categories with greater future extension.

However, the effects of life events on the depth of future extension were not observed in Study 2. This result is inconsistent with the results obtained in Study 1. Furthermore, the effects of life events on the depth of future extension were not determined by social support. Thus, hypothesis 2 was not supported. Further research is needed to clarify these results.

Regarding FTP inventory, the main effects of social support were significant on all three subscales and mean hopefulness and future orientation scores were higher for support H group than for support L group. Conversely, mean external control scores were higher for support L group than for support H group. These results suggest that the social support H condition that produces close interpersonal relationships is related to an increased sense of hopefulness, a lower sense of external control over the future and higher future orientation.

However, the effects of life events on feelings of hopefulness and degree of future orientation were not observed in Study 2. These results are inconsistent with the results obtained in the Study 1. Furthermore, the effects of life events on feelings of hopefulness and degree of future orientation were not determined by social support. The results concerning feelings of hopefulness and future orientation indicate that hypothesis 3 and 4 are not supported, and further research is needed to clarify these results.

In conclusion, the results of Study 1 suggest that life events influence the depth of future extension, feelings of hopefulness, and the degree of future orientation. However, in Study 2, the effects of life events observed in Study 1 were not observed. Furthermore, the effects of life events were not determined by social support. Instead, social support and life events influenced certainty of the time frame for finishing projects, and social support also influenced the depth of future extension, the degree of future orientation, feelings of hopefulness and sense of external control over the future.

However, the number of projects for all categories was low. Additional large-scale research is needed to validate these findings. In addition, the effects of social support and life events on the content of FTP could not be confirmed in Study 1 or 2. Social support or life events might influence future extension, i.e., the extent to which young adults expand and contract the domains rather than the content of FTP. However, there was a methodological issue in the present study. Subjects were instructed to list exactly seven projects. We feel that the use of open-ended questions would allow sub-

jects in life event H and support L group to list a few projects according to their perception and understanding of FTP. Further investigations on the effects of life events and social support in the content of FTP using this method are required.

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A footnote

* Considering the standard deviations of High and Low groups and the differences in the means between High and Low groups, this conclusion might be valid.

(2008年１月31日受理)