

Material

An Analysis of the Psychological Weaning Process of Japanese Undergraduate Students

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Introduction

It is very important to try to understand students' views of their internal psychological situation in order to offer them a more suitable curriculum in university. Some research had already been conducted for this purpose [1-7], however in this study research was focused on the psychological weaning process according to the authors' empirical realization about the increase in the number of students who are maladjusted to school life due to their own family problems. Many studies suggest the importance of the students' relationship with their parents in their development as a human being, even in late adolescence [8-18]. Adolescents are required to undergo psychological weaning from their parents to adjust to their place in the social life of the community. The quality of parental representations facilitates the second individuation process, which in turn facilitates psychological adjustment later in life. The second individuation process mediates the influence parental representations may have on psychological adjustment in late adolescence [16].

Studies have been conducted on the psychological weaning process of college students since 1972 [19], but the process has not been clearly explained yet. During university school life, students are required to expand their relationship network and are also expected to further develop their capacity for mature intimacy with peers. For many students the first time they begin to live alone and away from their family is when they start studying at university. These demands and changes may affect their psychological weaning process.

There are many studies [17-20] about the internal psychological factors relating to development in late adolescence, but there are few reports about how such external changes affect their psychological weaning process. For example, Sullivan and Sullivan [21] showed that adolescents who left home to attend college reported a significant increase in positive feeling about the parent-children relationship, compared to those who commuted from home. Such events may promote the psychological weaning process.

In Japan, Kotaka [21-22] studied the factorial structure of late adolescents' attitude and behavior toward their parents using a questionnaire given to university students. Her aim was to make clear the parents' role in the psychological weaning. Results from the factor analysis of the data revealed several primary factors (• favorable parental influence • confrontation with parents • obedience to parents • affectionate

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bond with parents • recognition of parents as independent persons) and secondary factors (• affiliation orientation • objective orientation • independent person). It was proposed that these factors were central to understanding the psychological weaning process.

The object of this study is to take a step further to make clear the present condition of the psychological weaning process of our university students and how it relates to their activity and thought in their school life. Some reports [12,14,18] showed that in undergraduates, the influence from mother related strongly to 'adjustment', 'self-efficacy', independence, and secure attachment representations with romantic partners; so for this study, we initially focused on the maternal relationship. Here we discussed the relation of their psychological weaning level from the mother to their social activity and feeling towards the mother using a renovated version of Kotaka's scale.

Method

1. Subjects

The subjects available for analysis were 500 university students (male 144 female 356, mean age 19.91) belonging to X University.

2. Materials

To measure the level of psychological weaning from the mother, we referred to the 25-item scale using Kotaka's primary factors [22]. In this study, we focused only on the relationship with the mother, and the term 'parents' in Kotaka's scale was changed to 'mother' for this research. According to Kotaka's study, the items consisted of five factors: favorable mother influence, confrontation with mother, obedience to mother, affectional bond with mother, and recognition of mother as an independent person. The score in each factor was the sum of the ratings. We asked further questions in order to specify which experiences related to the psychological weaning process. These included questions about their social experiences (e.g. 'Have you ever had a part time job?'), their relationship with their mother (e.g. 'Have you talked with mother frequently?'), their feeling towards mother (e.g. 'Do you love your mother?'), and feeling towards their parent(s) (e.g. 'Do you have a good relationship with your father?'). The statistical analysis was made by using SPSS 10.0J.

3. Procedure

With informed consent, the questionnaire was handed out to each student during lectures in 2004. The following informed consent agreements were written on the head of the face sheet and also read aloud • the object of this study is only to get the mass data to know the character of parent-child relationships in adolescents • the unsigned data is calculated statistically and each individual's data will only be used to write a paper • there is no obligation to answer all of the questions. Five hundred and fifteen sheets were collected and five hundred student responses (97.1 %) were available for analysis.

Results

[1] Results of the scale on mother-child relationship in adolescents

Results from the analysis of the score of all students, the mean and SD in each factor are shown in Table 1. The cases in which there were significant differences between the mean scores of students in each category are shown in the text below.

There were significant sex differences between male and female students (Table 2). The mean scores of female students in three factors (favorable mother influence, affectionate bond with mother, recognition of mother as an independent person) were significantly higher than those of male students. There were no significant differences in any factors between students who left home to attend university and those who commuted from home.

Table 1 Score of the Scale on Mother-child Relationship in Adolescence 1. Total (N=500)

factors	mean	SD
1.favorable influence from mother	17.68	3.72
2.confrontation with mother	14.27	4.02
3.obedience to mother	12.94	3.41
4.affectionate bond with mother	21.76	3.00
5.recognition of mother as an independent person	19.76	2.92

Table 2 Score of the Scale on Mother-Child Relationship in Adolescence 2. Sex Differences

factors	male (n=144)		female (n=356)	
	mean	SD	mean	SD
1.favorable influence from mother ¹	16.96	3.66	17.98	3.71
2.confrontation with mother	14.08	3.92	14.34	4.07
3.obedience to mother	12.69	3.60	13.04	3.33
4.affectionate bond with mother ²	20.91	3.17	22.10	2.86
5.recognition of mother as an independent person ³	19.16	3.21	20.00	2.77

^{1,2,3}There were significant sex differences ($p < .05$).

¹ $t(498) = -2.785$ ² $t(498) = -4.066$ ³ $t(498) = -2.745$

[2] The relationship between psychological weaning and other factors

To know the relationship between the level of psychological weaning from the mother and the other factors, the students were divided into two groups according to their answer to each question; yes, or no. In each of the five factors, the mean score of students who chose 'yes' was compared with the score of students who chose 'no' by t-test.

(1) Psychological weaning and students' social experiences

Six questions were asked to know the students' experiences which were suggested to relate to the rela-

tionship with mother. There was no significant difference between the mean score of students who answered 'yes' and that of students who answered 'no' in these two questions; During your time at university, do you live with or separate from your family ?, Have you ever lost an important person, a person who meant a great deal to you? Table 3 shows only the results of four questions, in which there were significant differences between the mean score of the student group choosing 'yes' and the group choosing 'no' in any factors.

Table 3 Score of the Scale on Mother-Child Relationship in Adolescence and Students' Social Experiences

experiences	factors			
	confrontation ^a	obedience ^b	affectionate bond ^c	independent person ^d
Part-time job (n=448:52)		YES<NO ¹ 12.08<14.13		
Romantic relationship (n=386:114)		YES<NO ² 13.66<15.39		
Romantic relationship for two years or more (n=33:52)	YES<NO ³ 13.66<15.39		YES>NO ⁴ 22.23>20.82	
Sharing of the cost of living (n=380:118)		YES<NO ⁵ 12.74<13.57		YES>NO ⁶ 19.96>19.13

The results were shown when there was a significant difference ($p < .05$) between mean scores of students who chose each answer (YES/NO).

The mean scores were described below the answers (YES/NO).

¹ $t(498) = -2.692$, ² $t(498) = -2.583$, ³ $t(83) = 2.299$, ⁴ $t(83) = -2.366$,

⁵ $t(496) = -2.335$, ⁶ $t(496) = 2.726$

() suggests the number of students who selected each answer.

a-d shows each factor of the questionnaire on parent-relationship in adolescence. ^aconfrontation with mother ^bobedience to mother ^caffectionate bond with mother ^drecognition of mother as an independent person

The students who did not have dealings with the same romantic partner for more than one month were more confrontational than the students who enjoyed the romantic companionship with a steady partner for more than two years. The students, who had no experience of a part time job, and/or romantic relationship, and/or no sharing of the cost of living with parents, were more obedient to the mother than the students who had these experiences. The students who enjoyed the romantic companionship for more than two years felt a stronger affectional bond with the mother than the students who did not. The students who shared the cost of living with the parents recognized the mother much more as an independent person than the students who did not.

(2) Psychological weaning and maternal relationship

We asked the students about the difference in age from their mother and the character of their interaction.

Table 4 shows the three items, in which there were significant differences between the mean score of students who chose 'yes' and those who chose 'no' in any factors.

Table 4 Score of the Scale on Mother-Child Relationship in Adolescence and the Relationships with Their Mother

objective facts	factors			
	influence ^a	confrontation ^b	obedience ^c	affectionate bond ^d
Mother was 26 years or more senior (n=167:330)				YES>NO ¹ 21.14<22.06
Talking with mother when faced with a problem (n=384:114)	YES>NO ² 18.47>15.04	YES<NO ³ 13.35<13.95	YES>NO ⁴ 13.29>11.75	YES>NO ⁵ 22.20>20.28
Enjoying spending time with their mother (n=191:307)	YES>NO ⁶ 18.99>16.78	YES<NO ⁷ 13.40<14.81	YES>NO ⁸ 14.48>12.22	YES>NO ⁹ 22.37>21.38

The results were shown when there was a significant difference ($p < .05$) between mean scores of students who chose each answer (YES/NO).

The mean scores were described below the answers (YES/NO).

¹ $t(495)=-3.028$, ² $t(496)=9.351$, ³ $t(496)=-3.303$, ⁴ $t(496)=4.327$

⁵ $t(496)=5.528$, ⁶ $t(196)=6.758$, ⁷ $t(496)=-3.866$, ⁸ $t(496)=6.131$

⁹ $t(496)=3.856$

() suggests the number of students who selected each answer.

a-d shows each factor of the questionnaire on parent-relationship in

adolescence. ^afavourable influence from mother ^bconfrontation with mother

^cobedience to mother ^daffectionate bond with mother

The students who talked with their mother when they had troubles and/or who enjoyed spending time with their mother had a more favorable influence from their mother and showed more obedience than the students who did not have these experiences. The students who had not talked with their mother when they had troubles and/or who had not enjoyed spending time with their mother were more confrontational with their mother. The students whose mothers were their senior by more than 26 years, and/or who talked with their mother when they had troubles, and/or who enjoyed spending time with their mother felt a stronger affectional bond with their mother than the others.

(3) Psychological weaning and students' feelings toward their mother

Six questions were asked about their feelings toward their mother. Seventy five percent of students answered that they were aware of the aging of their mother, but there were no significant mean differences between the groups who felt so and the groups who did not in any factors. Table 5 shows the results of questions, in which there were significant differences between the mean of scores of students who chose 'yes' and those who chose 'no' in any factors.

The students who felt that they loved their mother, and/or they were loved by their mother, and/or they had a good relationship with their mother, and/or they respected their mother, and/or they hoped to live with their mother in the future, had more favorable influence from mother and felt a stronger affectional bond than the students who did not have these feelings. The students who disliked their mother, and/or who had a bad relationship with their mother, and/or who did not respect their mother, and/or who

Table 5 Score of the Scale on Mother-Child Relationship in Adolescence and the Students' Feeling toward Their Mother

students' feeling toward mother	factors			
	influence ^a	confrontation ^b	obedience ^c	affectionate bond ^d
I love Mother. (n=473:25)	YES>NO ¹ 17.94>12.88	YES<NO ² 14.12<17.12		YES>NO ³ 21.99>17.44
Mother loves me, (n=481:17)	YES>NO ⁴ 17.89>11.82		YES>NO ⁵ 13.06>9.35	YES>NO ⁶ 21.92>17.12
Good relationship with Mother (n=475:25)	YES>NO ⁷ 17.90>13.17	YES<NO ⁸ 14.04<19.00	YES>NO ⁹ 13.04>10.7	YES>NO ¹⁰ 21.97>5.455
I respect Mother. (n=434:64)	YES>NO ¹¹ 18.29>13.55	YES<NO ¹² 13.55<18.29	YES>NO ¹³ 13.13>11.64	YES>NO ¹⁴ 22.19>18.80,
Living with Mother in the future (n=258:240)	YES>NO ¹⁵ 16.93>8.39	YES<NO ¹⁶ 13.63<14.95		YES>NO ¹⁷ 22.37>21.10

The results were shown when there was a significant difference ($p < .05$) between mean scores of students who chose each answer (YES/NO).

The mean scores were described below the answers (YES/NO).

¹ $t(496) = 6.932$, ² $t(496) = -3.682$, ³ $t(496) = 5.500$, ⁴ $t(496) = 6.913$,

⁵ $t(496) = 4.496$, ⁶ $t(496) = 4.542$, ⁷ $t(498) = 6.172$, ⁸ $t(498) = -5.974$

⁹ $t(498) = 3.196$, ¹⁰ $t(498) = 5.455$, ¹¹ $t(496) = 10.532$,

¹² $t(496) = -4.718$, ¹³ $t(496) = 3.292$, ¹⁴ $t(496) = 7.267$,

¹⁵ $t(496) = 4.479$, ¹⁶ $t(496) = -3.713$, ¹⁷ $t(496) = 4.777$.

() suggests the number of students who selected each answer.

a-d shows each factor of the questionnaire on parent-relationship

in adolescence. ^afavorable influence from mother ^bconfrontation with mother

^cobedience to mother ^daffectionate bond with mother

did not want to live with their mother in the future, were more confrontational with their mother. The students who felt that they were loved by their mother, and/or they had a good relationship with their mother, and/or they respected their mother, were more obedient than the others.

(4) Psychological weaning and family relationships

We asked about the students' relationship with their father and their feelings on the relationship between their parents (Table 6).

The students who answered that they had a good relationship with their father and/or they felt that their parents had a good relationship were more obedient to their mother and felt a stronger affectional bond than the students who did not think so. The students who felt their parents had a good relationship had a more favorable influence from their mother than those who did not feel so. The students who recognized that they had a bad relationship with their father and/or their parents had a bad relationship, were more confrontational with their mother. The students who thought that their parents had a bad relationship recognized their mother more as an independent person than the students who did not.

Table 6 Score of the Questionnaire on Mother-Child Relationship in Adolescence and the Students' Thoughts about Their Parents

The relationship on parents	factors				
	influence ^a	confrontation ^b	obedience ^c	affectionate bond ^d	independent person ^e
Good relationship with father (n=419:55)		YES<NO ¹ 13.97<15.95	YES>NO ² 13.02>11.98	YES>NO ³ 21.87>20.96	
Good relationship between parents (n=411:63)	YES>NO ⁴ 16.37>7.87	YES<NO ⁵ 13.98<15.62,	YES>NO ⁶ 13.05>11.92	YES>NO ⁷ 21.99>20.35	YES<NO ⁸ 19.64<20.67

The results were shown when there was a significant difference (p < .05) between mean scores of students who chose each answer.

The mean scores were described below the answers (YES/NO).

¹t(472)=-3.492, ²t(472)=2.153, ³t(472)=2.121 ⁴t(472)=2.348

⁵t(472)=-3.060, ⁶t(472)=2.172, ⁷t(472)=3.208, ⁸t(472)=-2.614

() suggests the number of students who selected each answer.

a-e shows each factor of the questionnaire on parent-relationship in adolescence. ^afavorable influence from mother ^bconfrontation with mother ^cobedience to mother ^daffectionate bond with mother ^erecognition of mother as an independent person

[3] Result of factor analysis of the score on the scale on mother-child relationship in adolescents

According to Kotaka's method [21-22] the data was analyzed using factor analysis. Three factors were extracted (Table 7).

Table 7 Result of Factor Analysis of the Score of the Scale on Mother-Child Relationship in Adolescence.

	Factor I	Factor II	Factor III
	cooperativeness	autonomy	conflict
1.favorable influence from mother	0.725	0.275	-0.432
2.confrontation with mother	0.053	0.063	0.919
3.obedience to mother	0.861	-0.160	0.268
4.affectional bond with mother	0.410	0.678	-0.375
5.recognition of mother as an independent single person	-0.149	0.890	0.186
eigenvalue	1.788	1.196	1.112

Factor loadings after Varimax loading were shown.

In Factor I, 'the obedience to mother' and 'the favorable influence from mother' showed high factor loadings. Like Kotaka's findings, 'The affectional bond with mother' also showed the middle factor loading. It suggested that students who obeyed their mother seemed to have a favorable influence from their mother and felt an affectional bond with their mother. By Kotaka's data [22], 'the confrontation with parents' showed negative loading (-.515) in Factor I and was named 'the intimate relationship with parents', but this was not evident in our data. It means that obedience to their mother did not equal no-confrontation

with their mother. Therefore, this factor was interpreted as the factor showing 'the coordinative with their mother'.

In Factor II, 'the recognition of mother as an independent person' and 'affectional bond with mother' showed high factor loadings. Kotaka [22] thought that this factor showed the level of independence from parents. But unlike Kotaka's data [22], in this study the negative loading of 'obedience to mother' was not shown in this factor. So this factor was interpreted as the factor showing the students' level of 'autonomy'.

In Factor III, 'confrontation with mother' showed a high positive loading and 'favorable influence from mother' showed the negative loading. This factor was not found in Kotaka's study [22]. This was interpreted as the factor showing 'conflict'.

Discussion

Through the analysis of this data, some facts which seemed to relate to the psychological weaning process of late adolescents were found.

The students who had experience of a part time job, and/or sharing of the cost of living with parents, were independent and recognized their mother more as an independent person than the students who did not. Seki et al. [23] reported that 46 % of university students (n=500) first had the feeling of becoming independent from their parents when they began to do a part time job and recognized they might have been too protected by their parents, and concluded that the part time jobs taught them the necessity of earning money to live by themselves, and at the same time gave them some confidence to live in society without their parents' support. It was suggested that the students in this research who also had these experiences began to try to become independent from their mother and consequently it might make it easier for them to recognize their mother as an independent person.

The students who had not had any experience of a romantic relationship were more obedient to their mother, and the students who did not have dealings with the same romantic partner for more than one month were more confrontational to their mother than the students who enjoyed the romantic companionship with a steady partner for more than two years. Furthermore the students who enjoyed the romantic companionship for more than two years felt a stronger affectional bond with their mother than the students who did not. Some research [24-26] about adolescents in Western countries found that adults' and adolescents' secure attachment representations were related to rating more positive dyadic processing during an observed interaction with the romantic partner both concurrently and longitudinally and to secure representations of the relationship with romantic partners. This research also suggested that the state of mind with regard to attachment with the mother is associated with a close relationship with not only their friends, but also romantic partners.

Interestingly, the students whose mothers were their senior by more than 26 years felt a stronger affectional bond with their mother than the students whose mothers were their senior by 25 years or less. In general [27], it is said that the younger the mother's age is, the more negative the mother's attitude toward their children. This study could not clarify directly whether the age difference between the children and their mother affected their relationship, but further research may bring to light a corroborative relation between the mother's age at childbirth and the nature of the mother-child relationship.

The students who talked with their mother when they had troubles and/or who enjoyed spending time with their mother had a more favorable influence from their mother, were more obedient, and felt a stronger affectional bond with their mother than the students who had not had these experiences. Conversely, the students who did not talk with their mother when they had troubles and/or who had not enjoyed spending

time with their mother were more confrontational with their mother. Generally, these adolescents try to be independent from their mother and want to solve their problems by themselves. They prefer to choose their friends instead of their mother when they talk about their troubles [28].

In this generation, not choosing their mother as an advisor or as a friend to spend time with is generally considered to be 'normal'. However in this research, 77 % of students chose their mother as an advisor when they had trouble and 38% enjoyed spending time with their mother. Initially one may think that if the students want to spend time with their mother and get along with her as a full adult, then they must also recognize her as an independent person. However, the data showed that there was no such relation because there were no significant differences between the mean scores in factor 'recognition of mother as an independent person', between students who talked with their mother when they had troubles and those who did not, and students who enjoyed spending time with their mother and those who did not. This fact suggested that the relationship between the students and their mother was not as mature as was expected. To make clear the reason, the role of father in their family also has to be researched and discussed in the future.

The students who felt that they loved their mother, and/or they were loved by their mother, and/or they had a good relationship with their mother, and/or they respected their mother, and/or they hoped to live with their mother in the future, had a more favorable influence from their mother and felt a stronger affectional bond with their mother than the students who did not have these feelings. This result is supported by many previous studies [8-9]. Secure attachment early in life provides the adolescent with the necessary interjected parental images to encourage and support individual exploration and identity commitment [29]. However, the correlation of the support from a good relationship with one's mother and the increasing independence from one's mother was not confirmed from this data. On the contrary, the students who recognized that they had a bad relationship with their father/mother, and/or their parents had a bad relationship were more confrontational with their mother and recognized their mother as an independent person more than the students who did not. When the parents cannot fulfill their function as a protector, this may promote independence and separation from their mother in late adolescents [30]. However, independence based on the conviction of their parents' love, seemed to be different from independence resulting from the fear and anxiety towards parents [31-32]. In this point, clearly more research is needed.

One of the important findings of this research obtained from the factor analysis was the factor interpreted as 'conflict'. This factor was not found in Kotaka's secondary factors [21-22]. In a previous study about Japanese young people in 1980s, the conflict with parents was said to appear at about 12-years old when the children enter junior high school and the peak of confrontation appears when they are senior high school students [33]. Furthermore university students seemed to be similar to late adolescents who have already passed through such developmental process and clearly established their respect and gratitude to their parents [34]. But this research showed that there were university students who maintain the developmental theme of early adolescence.

Yoshida [3,5] reported that the character of the relationship with friends in some university students was similar to that of senior high school female students. Results from this research show that some university students exhibit psychological traits from early adolescence not only in the relationship with friends but also in that with their mother. This suggests that it is important to support and understand these students who grow up more slowly than we thought. If the maladjustment to school life is a symptom of the lack of maturity of these students, we need to support them to grown up, though it is not clear that this is a common trend in young people in this country. More research is expected to clarify this point.

Conclusion

We studied the relationship between the psychological weaning process and the internal and external aspects of university students' lives. The experiences of doing a part time job and maintaining romantic relationships were suggested to positively relate to the psychological weaning process. Compared with other research, some students seemed more obedient and dependent, and the factor interpreted as 'confrontation', was found. This factor was not found in Kotaka's study [21,22].

In conclusion, this research showed that there were university students who maintain the developmental theme of early adolescence. If such students who are less mature than we thought are expected to be independent psychologically and financially as a full adult as soon as possible after they graduate from university, this is a bigger challenge for them and we have to give understanding and support to educate them.

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