

Comparison of Feelings of Inferiority among University Students with Autotelic, Average, and Nonautotelic Personalities

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Abstract

Background: Autotelic personality (AP) is known to have a positive effect on the quality of life. We hypothesized that inferiority feelings may be less pronounced in individuals with AP than in those with an average (AV) or a nonautotelic personality (NAP). **Aims:** This study aimed to compare inferiority feelings among three personality groups: An AP group, an AV group, and an NAP group. **Materials and Methods:** This study was a cross-sectional survey among 148 undergraduate students aged 18-24 undertaken in Okayama, Japan. Participants completed the Flow Experience Checklist and Inferiority Feelings Scale. **Results:** With the number of flow activities, participants were classified into three groups: 3+ for AP ($n = 28$, 18.9%), 1-2 for AV ($n = 72$, 48.6%), and 0 for NAP ($n = 48$, 32.4%). One-way analysis of variance showed significant differences among the three groups with respect to the Inferiority Feelings Scale. Multiple comparison analysis using Tukey's test showed that inferiority feelings in AP were significantly less pronounced than in the NAP group. **Conclusion:** The results of this study indicated that AP was lesser than NAP in association with pronounced inferiority feelings.

Keywords: Autotelic personality, Flow experience, Inferiority feelings, Mental health, Negative emotion

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Introduction

Inferiority feelings are experienced by everyone and are important to enhance the growth of individuals.^[1] However, inferiority feelings can limit daily life activities and are not necessarily good.^[1] One study showed that inferiority feelings are significantly associated with hostility, depression, and insomnia and are predictive of suicidal ideation.^[2] Previous studies have observed that inferiority feelings not only are risk factors for depression^[3] but also are significantly correlated with frustration in adolescents.^[4] In addition, it was shown that inferiority feelings increased pain experience; inferiority complexes were the predictors for sleep

disorders in survivors of war in northern Kosovo.^[5] Striving to avoid inferiority feelings was a significant predictor of psychopathology.^[6] The findings from these studies have shown that inferiority feelings deeply involve life, death, and the quality of life. Therefore, it is important to reduce inferiority feelings in everyday life. Moane reported the importance of transforming negative self-image and inferiority feelings associated with oppression and thus, building psychological strength.^[7] The "strength" is a term frequently used in the area of positive psychology.

"Flow" is the central concept of positive psychology. Flow experience is a condition "in which people are so involved in an activity that nothing else seems to be matter at the time, and the experience is so enjoyable that people will do it even at great cost, for the sheer sake of doing it".^[8] Our previous studies have demonstrated that flow experience is associated with the health-related quality of life, sense of coherence, reducing subjective stress, ambiguity tolerance, shyness, self-disgust, and guilt.^[9-14] Another study has suggested that flow experience is associated with well-being.^[15-18] In addition,

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the autotelic personality (AP) is defined as an individual who spends more time in the flow state.^[19]

Research shows that individuals with AP exhibit a better time management compared with those with non-AP (NAP).^[20] AP is shown to be associated with a better concentration and enjoyment, and a higher activity level and satisfaction compared with NAP.^[16,17] However, the influence of AP on inferiority feelings remains unclear. To the best of our knowledge, no report describing the relationship has been published. This study, therefore, compared inferiority feelings in the different three personality groups: AP, average (AV), and NAP.

Materials and Methods

Study design

This study was a cross-sectional survey. We compared the inferiority feelings between the AP, AV, and NAP groups.

Participants

One hundred and forty-eight undergraduate students aged 18-24 from Kibi International University completed the Flow Experience Checklist^[20] and Inferiority Feeling Scale.^[21] The study was conducted in compliance with the Declaration of Helsinki. All participants were assured of anonymity and provided with their written informed consent. This study was approved by the institutional review board of Kibi International University, Okayama, Japan.

Flow experience checklist

This checklist was used for extraction of AP. Participants were assessed ten items in the checklist to evaluate the elements of flow experience for each of the five activities. In addition, a group of variables was used for flow conditions, including the six items (two for “challenge to goals” and four for “confidence in skills”) related to the “balance between challenges and skills”, and the four items for measuring “positive emotions and total involvement”. Participants were required to evaluate the experiences on a seven-point scale (1 = very strongly disagree to 7 = very strongly agree). The reliability and validity of the Checklist have previously been established.^[20]

Inferiority feeling scale

This scale was a questionnaire of 50 items measuring inferiority feelings on a five-point scale. This scale comprised eight factors: Weakness in associating with the opposite sex, poor grades in school, low levels of home satisfaction, poor ability to make friends, poor performance in sports, “bad” personality, lack of social skills, and poor bodily attractiveness.

On this scale, higher score indicated stronger inferiority feeling. The reliability and validity of the scale have previously been established.^[21]

Procedure

Information sheets explaining the study and questionnaires were distributed to participants. The authors explained the questionnaire in detail to the participants, and the questionnaires were completed during the class periods.

Statistical analyses

Descriptive statistics were calculated for each variable. The χ^2 test, and one-way analysis of variance (ANOVA) was performed for the three groups using the dependent variables of age, sex (a dummy variable; female = 0; male = 1), score on the Inferiority Feeling Scale, and score of each subscale. Tukey’s test was used for multiple comparisons. Correlation analysis was used to assess the strength and direction of the relationships between variables. We employed Pearson’s partial correlation adjusted for the effects of age and sex. All tests were two-tailed; a *P* value of 0.05 was considered for statistical significance. Statistical Package for the Social Sciences (SPSS) software for Windows (v. 19; IBM) was employed for all analyses.

Results

Extraction of autotelic personality

Extraction of AP was based on the previously reported methods by Ishimura and Kodama.^[20] We extracted the number of flow experiences in each activity and determined these on the basis of the Flow Experience checklist: Criteria challenge to goals (mean = 8.25, SD = 3.67) and confidence in skills (mean = 18.74, SD = 4.73).

Based on the items’ mean values, the participants were classified into a flow group with a high level of challenge and a high level of skills, extracted from the number of activities involving flow experiences. Using the mean values with a margin of ± 1 SD (mean = 1.37, SD = 1.29) of the number of flow activities, three groups were classified according to AP characteristics. Participants were classified into these groups by the number of flow activities: 3+ for AP (*n* = 28, 18.9%), 1-2 for AV (*n* = 72, 48.6%), and 0 for NAP (*n* = 48, 32.4%).

The most important activities of daily living

The most important activities of daily living included sport (18.9%), art and music (4.7%), social activities (20.9%), intellectual activities (14.2%), relaxation and entertainment (37.2%), and other activities (4.1%).

Comparative analyses of the three groups

Demographic characteristics

Mean age of participants was 20.05 ± 1.24 years (male = 88 and female = 60). The demographic characteristics of participants are shown in Table 1. The results of χ^2 test and one-way ANOVA did not show significant difference among the three groups with respect to gender ($\chi^2 = 2.26$, $P = 0.32$) or age ($F(2,145) = 0.11$, $P = 0.89$).

Inferiority feelings scale scores

A comparison of the Inferiority Feelings Scale scores of participants was shown in Table 2. One-way ANOVA showed significant differences among the three groups with respect to bad personality ($F(2,145) = 3.53$, $P = 0.032$), poor skills at making friends ($F(2,145) = 5.46$, $P = 0.005$), lack of social skills ($F(2,145) = 4.77$, $P = 0.010$), poor bodily attractiveness ($F(2,145) = 3.27$, $P = 0.041$), and total average score ($F(2,145) = 4.65$, $P = 0.011$).

Multiple comparison analysis by Tukey's test showed that bad personality in the AP group was significantly lower than that in the NAP group (2.59 ± 1.20 vs. 3.18 ± 0.75 , $P = 0.038$). Poor skills at making friends in the AP group was significantly lower than that in the NAP group (1.99 ± 1.19 vs. 2.81 ± 1.08 , $P = 0.008$), but it was significantly lower in the AV group than that in the NAP group (2.27 ± 1.13 vs. 2.81 ± 1.08 , $P = 0.031$). Lack

of social skills in the AP group was significantly lower than that in the NAP group (2.48 ± 1.42 vs. 3.28 ± 1.00 , $P = 0.014$), but it was significantly lower in the AV group than that in the NAP group (2.75 ± 1.20 vs. 3.28 ± 1.00 , $P = 0.048$). Poor bodily attractiveness in the AP group was significantly lower than that in the NAP group (2.44 ± 1.21 vs. 3.01 ± 0.82 , $P = 0.047$). Total average score was significantly lower in the AP group than that in the NAP group (2.41 ± 0.91 vs. 2.92 ± 0.62 , $P = 0.014$).

Correlations between flow experience and inferiority feelings

Correlations between flow experience and inferiority feelings are shown in Table 3. A significant negative correlation was observed between the number of flow experiences and total inferiority score ($r = -0.23$; $P = 0.005$). A significant negative correlation was observed between the total flow score and total inferiority score ($r = -0.182$; $P = 0.028$).

Discussion

Our results show that inferiority feelings in the AP group were significantly lower than that in the NAP group among undergraduate students. Furthermore, there was a significant negative correlation of the total inferiority score with both the number of flow experiences and total flow score. These results suggest that inferiority feelings in those likely to experience the flow were lower than in those less likely to do so.

It is a well-known fact that the brain has selective resources with limited capacity. For situations in which flow is concentrated,^[19] APs may find it difficult to experience inferiority feelings. According to the study by Ishimura and Kodama,^[20] AP has a clear future time prospect and has the ability to systematically manage time. APs were presumed to be low in inferiority feelings because they can control their own goals. In addition, according to the study by Gilbert *et al.*,^[6] striving to avoid inferiority may be

Table 1: Comparison of the three groups: Demographic characteristics

Variable	NAP (n = 48)	AV (n = 72)	AP (n = 28)	χ^2/F	P value
Gender					
Male	26	42	20	2.26	0.32
Female	22	30	8		
Age (years)	20.1 ± 1.21	20.06 ± 1.27	19.96 ± 1.26	0.11	0.89

NAP = Non-autotelic personality group, AV = Average group, AP = Autotelic personality group, Data are shown as the number or mean \pm SD, Compared using the χ^2 test and one-way ANOVA

Table 2: Comparison of the three groups: Inferiority feeling scale score

Inferiority feeling scale	NAP (n = 48)	AV (n = 72)	AP (n = 28)	F	Multiple comparison
Weakness in associating with the opposite sex	2.81 ± 1.1	2.59 ± 1.11	2.42 ± 1.47	1.01	n.s.
Poor grades in school	3.6 ± 0.95	3.52 ± 1.08	3.43 ± 1.24	0.22	n.s.
Poor performance in sports	2.77 ± 1.13	2.52 ± 1.13	2.28 ± 1.19	1.73	n.s.
Low levels of home satisfaction	1.88 ± 0.76	1.65 ± 0.62	1.62 ± 0.63	2	n.s.
"Bad" personality	3.18 ± 0.75	2.81 ± 1.08	2.59 ± 1.20	3.53*	AP < NAP
Poor ability to make friends	2.81 ± 1.08	2.27 ± 1.13	1.99 ± 1.19	5.46**	AP, AV < NAP
Lack of social skills	3.28 ± 1.00	2.75 ± 1.20	2.48 ± 1.42	4.77*	AP, AV < NAP
Poor of bodily attractiveness	3.01 ± 0.82	2.65 ± 1.03	2.44 ± 1.21	3.27*	AP < NAP
Total average score	2.92 ± 0.62	2.59 ± 0.77	2.41 ± 0.91	4.65*	AP < NAP

Data are shown as the mean \pm SD. * $P < 0.05$, ** $P < 0.01$, NAP = Non-autotelic personality group, AV = Average group, AP = Autotelic personality group

Table 3: Correlations between flow experience and inferiority feelings

Inferiority feeling scale	Number of flow experiences	Total flow score
Weakness in associating with the opposite sex	-0.122	-0.091
Poor grades in school	0.017	-0.006
Poor performance in sports	-0.156	-0.156
Low levels of home satisfaction	-0.153	-0.095
“Bad” personality	-0.219**	-0.129
Poor ability to make friends	-0.245**	-0.23**
Lack of social skills	-0.237**	-0.172*
Poor of bodily attractiveness	-0.202*	-0.148
Total average score	-0.23**	-0.182*

We employed Pearson partial correlations, adjusted for age and sex. * $P < 0.05$; ** $P < 0.01$

an important element to depressive vulnerability, and a combination of striving and feeling inferior seems particularly to be linked to depression. In contrast, flow is an intrinsically rewarding experience of the activity; in such cases, often the end goal is just an excuse for the process.^[19] Therefore, flow may also have a positive impact on depression and inferiority feelings. Moreover, a previous study by Raúl^[22] reported that inferiority feelings induced a low level of serotonin, while AP potentially induced a high level of serotonin.

In the subscale of inferiority feelings, including bad personality, poor skills at making friends, lack of leadership, and poor bodily attractiveness, APs presented lower scores than NAPs did. These data support the previous findings reported by Ishimura and Kodama.^[20] Flow activities may help individuals with affirmation of their positive selves not their negative self-images.^[20] According to the study by Asakawa,^[15] autotelic Japanese college students paid more attention to or spent more psychic energy in activities compared to those non-autotelic Japanese college students, even though their activities were not generally considered as important and worthy of attention. This suggested that AP was such a characteristic in a person that even their surrounding friends could acknowledge their prowess. Thus, the AP interpersonal relationship is good and above all, considered to be positive. The most important activities of daily living include relaxation and entertainment (37.2%), social activities (20.9%), and sport (18.9%). One study showed somewhat different numbers for preferred activities of daily living: Sport (54%), relaxation and entertainment (24%), and social activities (2%) among university students.^[13] The participants in our present study tended to prefer the activities from static to dynamic (physical).

An interesting question is whether the features of flow for example, AP, can be learned. Flow occurs when a balance is achieved between strong abilities and a significant challenge. Therefore, flow (also in AP) can be learned if the skill or difficulty of a task is adjusted. Because our study did not prove that the relationship between AP and inferiority feelings is causal, it is unclear if acquisition of the features of flow (or AP) may decrease inferiority feelings.

Some limitations exist in the present study. This study is a cross-sectional survey that limits attributions about the direction of causality between variables. Therefore, a longitudinal study should be performed in the future. Because we focused on college students only, generalizing the results to other adolescent or young adult populations, or to patient populations may not be warranted, thus, a wider range of subjects should be investigated in future study.

Conclusion

The results from our present study involving undergraduate students indicated that AP was associated with less pronounced inferiority feelings compared with NAP.

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