The Self-Esteem of People
with Attention Deficit Hyperactivity Disorder

Mari TANAKA

The purpose of this paper is to investigate studies about people with attention deficit hyperactivity disorder (ADHD) and to discuss how their self-esteem relates to developmental age, self-perception, and the effect of medicine. The main points are the following:

1) ADHD children did not rate themselves significantly worse than controls on global self-worth or most of the other self-perception subscales. This was explained as either positive illusion or positive delusion of their distorted perceptions and as an unhealthy, unrealistic reflection of their functioning.

2) Adolescents who had been diagnosed with ADHD in childhood reported lower self-esteem in adolescence than did matched controls. This suggests that their lower self-esteem may not be simply a consequence of current psychopathology.

3) A few children showed improvement in self-esteem as a result of taking medicine. More significant changes in self-concept could occur with longer-term pharmacotherapy.

This investigation indicates that early, prolonged, multiple clinical intervention is very important to prevent negative self-esteem in people with ADHD.

Key words: ADHD, self-esteem, self-perception, attributional style

Attention-deficit/hyperactivity disorder (ADHD) is a diagnostic term defined in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV: American Psychiatric Association, 1994). Children with ADHD are described as those who have problems with attention, are distracted impulsive, and overactive. Recently, treatment for children with ADHD has been given paid attention in Japan. Educational support for children with ADHD is treated as a serious issue for "children having a need for special educational support" in an ordinary class (Japan Department of Education

Associate Professor, Graduate School of Education, Tohoku University

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and Science, 2002).

It has been found that children with ADHD also have low self-esteem because they often receive negative self-image messages from teachers, parents, and classmates (McWilliams J. 1993, Barkley R.A.: 1995, Scilowitz M.: 1995). But is it true that people with ADHD in childhood, adolescence, and as adults have low self-esteem? Maintaining a positive self-esteem is a very important part of the foundation for healthy human interactions in all settings. This study discusses how self-esteem in people with ADHD relates to developmental age, self-perception, and the effect of medicine.

1. Self-esteem in children with ADHD: attributional style and adaptation

In my clinical experience, ADHD children give up easily. ADHD children are likely to give up on academic tasks, especially when the assigned task is particularly challenging. Despite adequate ability, ADHD children fail to complete tasks satisfactorily and display inconsistent academic performance. Do they believe that their ability is low and their achievement efforts are futile?

Hoza, Pelham, Milich, Pillow, and McBride (1993) examined the importance of cognitive-motivational variables in ADHD children. They compared ADHD children to control children in a measure of self-perceptions, attributions, and depression. Their objectives were: (1) to assess self-perceptions and to evaluate attributions using both a widely used but general measure and a domain-specific measure of social attributions. (2) to compare maladaptive attributional styles of ADHD children with control children using a standard index of childhood depressive symptomatology, and (3) to study the relationship among depressive symptomatology, attributional style, and self-worth in both the ADHD and control groups. The subjects were 27 boys diagnosed with ADHD and 25 non-referred boys. They ranged in age from 8.5 to 13 years.

The children completed the Self-Perception Profile for Children, the Peer Social Attribution Questionnaire, the Children's Attributional Style Questionnaire, and the Children's Depression Inventory. The Self-Perception Profile for Children was used to measure domain-specific self-perceptions. It was a 36-item instrument comprised of six subscales: scholastic competence, social acceptance, athletic competence, physical appearance, behavioral conduct, and global self-worth. The Peer Social Attribution Questionnaire was used to measure the reasons for both success and failure in eight peer social situations. These reasons had been selected to represent all possible combinations of the standard attribution dimensions typically studied: internal/external, stable/unstable, and global/specific. The Children's Attributional Style Questionnaire
was used to measure the children’s general attributional style assessing three dimensions separately for both good and bad outcomes. The Children’s Depression Inventory was used to measure the children’s depressive symptomatology.

The analysis of the comparison of the two groups on the Self-Perception Profile for Children showed that only on behavioral conduct controls scored significantly higher. The results for the Peer Social Attribution Questionnaire illustrated that ADHD boys were significantly more likely to attribute positive social outcomes to personal qualities about themselves than were control boys, and that ADHD boys were significantly less likely to attribute negative social outcomes to their abilities, their own personal qualities, and their own moods. The results for the Children’s Attributional Style Questionnaire showed that the ADHD boys were significantly more likely to make stable and global attributions for only negative events. The results for the Children’s Depression Inventory indicated that the ADHD boys produced total scores significantly greater than the control boys; however, they were no more likely to be depressed than controls when potentially confounding items: social, academic, and behavioral domains, were removed from the Children’s Depression Inventory.

These results showed that ADHD boys did not rate themselves significantly worse than controls on global self-worth or most of the other self-perception subscales. They also tended to make internal attributions for positive social outcomes, but they were less likely than controls to accept responsibility for negative social outcomes. Why are these results different from a clinical impression?

Hoza, et al. (1993) interpret this in terms of "positive illusion or positive delusion." They explain positive illusion or positive delusion in ADHD boys as their distorted perceptions and an unhealthy, unrealistic reflection of their functioning. When they make a more "accurate" self-perception, how will they respond emotionally? They claim that it may be too distressing and too debilitating for these children regarding future efforts to succeed. Therefore, positive illusion or positive delusion in ADHD boys serves as an ego-protective function.

Furthermore, their study used a questionnaire to measure the children’s self-perception and attributional style. However, the subjects' answers may have been cognitive rather than emotional responses to the questions. Aren’t their self-perceptions different when completing a questionnaire as opposed to their making actual social interaction? There is a need to examine an actual situation to study the relationships among behavior, affect, and cognitive-motivational states.

Hoza, Wachbursch, Pelham, Molina and Milich (2000) designed a study to consider
situational influences on behavior as well as on social-cognitive appraisals. Specifically, they manipulated both social success and social failure while controlling for partner influences using child confederates to study systematically the impact of situational factors on performance. They also considered the role of social-cognitive variables, as both self-evaluations of performance and attributions were systematically collected during the social success and failure experience. The subjects were 120 boys diagnosed with ADHD and 65 non-referred boys. They ranged in age from 7.4 to 12.7 years.

Each interaction session consisted of three actual dyadic interactions with child confederates. The boys were instructed to: (1) "try to get him to like you." and (2) "try to talk him into coming to camp here."

The subjects were asked three kinds of questions: expectancy, self-evaluation, and attributional. Expectancy questions were designed to assess performance expectancies: "How well do you think you will do getting him to like you?" and "How well do you think you will do talking him into coming to camp here?" Self-evaluation questions assessed the subject's own view of his performance with regard to the task's goals, his actual performance with regard to the two task goals, his prediction for future performance, his frustration level, and his liking of the other boy. Attributional questions assessed four possible explanations for having either succeeded or failed on the task: ability, task difficulty, effort, or luck.

The major finding was that in terms of self-reporting, ADHD boys rated themselves and confederates more favorably than did controls, and, in some instances, these differences were apparent following failure. This finding suggests that this tendency may be one way ADHD boys cope with failure.

The attributional patterns of ADHD and control boys differed in that ADHD boys were more likely than controls to attribute success to external, uncontrollable factors, such as, task ease or being lucky; control boys, on the other hand, were more likely than ADHD boys to attribute failure to not having tried hard enough. This finding illustrated that the ADHD boys gave little credit to themselves.

This result is in odds with Hoza et al. (1993), who reported a self-serving pattern of internal attributions for success and external attributions for failure; however, their study administered a cognitive task, while Hoza et al. (2000), on the other hand, actually administered a social task. Do ADHD boys view positive social outcomes as generally being out of their control or not? Is this different finding between Hoza et al. (1993) and Hoza et al. (2000) attributed to an artifact of the methodology employed? To resolve this
issue, further investigation was conducted.

Hoza, Pelham, Waschbusch and Kipp (2001) examined the pretask expectancies, behavioral performances, self-evaluations, and attributions of normal-achieving ADHD and comparison boys on the find-a-word puzzle task. The subjects were 66 boys diagnosed with ADHD and 83 nonreferred boys and. They ranged in age from 7.4 to 12.7 years. By using an estimation from either the WISC-R or WISC-III Block Design and Vocabulary subtests, and using statistically-appropriate procedures, subjects with scores of less than 78 were excluded from the study.

The study employed a repeated-measures design in which a laboratory find-a-word puzzle task was used in such a way that each boy participated under both success and failure conditions administered on different days. The children answered a question designed to evaluate performance expectancies: “How well do you think you will do on these puzzles?” After the pretask questionnaire was completed, the find-a-word task was conducted. The success and failure conditions were administered in different testing sessions. Immediately after completing the first eight puzzles, the children were asked a series of performance-evaluation questions to measure the degree to which they thought they did well, were frustrated, expected to do well if they did the task again, and liked the puzzles. The boys rated four possible reasons for having either succeeded or failed on the task: ability, task difficulty, effort, or luck.

ADHD boys’ pretask expectancies were not significantly higher than those of controls. However, the fact that ADHD boys’ expectancies were not significantly different from the expectancies of comparison boys suggests that ADHD boys’ expectancies were not commensurate with their performance. On the ADHD boys’ performance self-evaluations, all boys liked the task more and expected to do better should they do the task again following success as compared to failure, and all boys who experienced failure first, evaluated their overall performance better than those who experienced success first. On attributional style, the results showed that ADHD boys attributed success to the external attribution of luck more than controls did, and that ADHD boys denied that their own lack of effort was responsible for their failures.

How should we consider the meaning of these attributional findings for the adaptive functioning and treatment of ADHD children? What is an adaptive attributional style for ADHD children? If ADHD children attribute their failure to poor effort, and their failure results in depression or low self-esteem, that attributional style may not be adaptive. On the other hand, if ADHD children attribute their failure to poor effort, and on the next challenge they more effort to succeed, that attributional style may be adaptive. If
positive illusion or positive delusion (Hoza et al.;1993) protects ADHD children's low self-esteem, this style may be adaptive. It is important to examine the relation between different degrees of self-esteem and attributional styles of ADHD children.

In Hoza et al.(1993,2000,2001) all of the subjects ranged in age from 7.4 to 13 years. It is not clear how degrees of self-esteem and positive illusion or positive delusion are reflected in the attributional styles of ADHD in adolescents and adults as they have been in children. How do adolescents and adults with ADHD recognize themselves?

2. Self-esteem in adolescents and adults with ADHD

Barkley(1986) discusses some follow-up studies of hyperactive adolescents and adults that have addressed the question of self-esteem and social skills. In one study, the following questions were investigated: (a) Do various self-esteem tests distinguish hyperactive young adults from matched controls and thus support the clinical findings of a lower self-esteem in these young people? (b) What aspects of social skills are deficient in the hyperactive group when compared to controls matched for age, sex, IQ and socioeconomic status? The subjects were 18 matched pairs of hyperactive young male adults and normal controls. The mean age of the hyperactive males was 22 years 2 months, and the mean age of the controls was 21 years 10 months.

To measure self-esteem, the subjects completed the Davidson and Lang Checklist, the Ziller Self-Other Test, and the Area Test developed by Elizabeth Hoy. The Davidson and Lang Checklist found that the hyperactive young men rated themselves significantly worse on 8 of the 30 adjectives listed. Only on the "sad-happy" item did the hyperactive subjects score themselves higher than the controls. The Ziller Self-Other Test showed that the hyperactive males placed themselves significantly more closely to someone who was cruel, and that they tended to place themselves near someone who was unhappy. The Area Test failed to differentiate the two groups.

On the Davidson and Lang Checklist, the hyperactive subjects rated themselves as "happy", but, on the Ziller test, they rated themselves as "unhappy". Why is this finding different? Is it possible that they recognize themselves as unhappy in relation to other people, but do not feel unhappy themselves? To be clear about this finding, it is important to clarify the meaning of "happy".

Barkley repeated the self-esteem and social-skills measures at both a 10-year and 15-year follow-up. Subjects included 58 hyperactive adults and 39 controls and matched for age (mean age 25 years), sex, and socioeconomic status. Both the Davidson and Lang Checklist and the Area Test showed that the hyperactive subjects scored significantly
worse on self-esteem than their matched normal controls. This measure was worse for the hyperactive adults when compared to controls than it was at the 10-year follow-up. These follow-up results indicate that early, prolonged multiple intervention is very important to prevent negative self-esteem in hyperactive adults.

Slomkowski, Klein, & Mannuzza (1995) pursued the following objective: (a) to determine whether self-esteem in adolescence is independent of mental status in previously-diagnosed hyperactive children, (b) to determine whether low self-esteem is associated with relatively poor adjustment in basic functions in adolescence, (c) to test the positive illusory bias hypothesis. Their hypothesis was that if the positive illusory bias is correct, self-esteem should not correlate materially with measures of adjustment in a hyperactive cohort. The subjects were 60 males, ages 16 to 23, whom cross-situational hyperactivity had been diagnosed in between the ages of 6 and 12 years.

To achieve the first objective, the participants were free of psychosis and neurological disorder and antisocial behavior. They completed an 11-item questionnaire which listed domains of self-esteem that included physical appearance, health, intelligence, creative ability, athletic ability, and social ability. Group contrast in self-esteem was conducted using a t-test.

Individuals who had been diagnosed as hyperactive in childhood reported lower self-esteem in adolescence than matched controls. This result suggests that lower self-esteem in this population may not be simply a consequence of current psychopathology. Self-esteem in adolescence was positively correlated with psychosocial adjustment in adolescence, and negatively correlated with self-rated ADHD symptoms in adolescence. Adolescents with high self-esteem rated themselves as having fewer ADHD symptoms.

Why are these findings at odds with Hoza et al (1993)? Slomkowski et al. noted a difference in the age of the subjects in the studies: 8.5 to 13 years in Hoza et al. versus 16 to 23 years in theirs, and also found that damage to self-esteem had taken its toll by adolescence. However, another possibility is that attributional style for good outcomes is not equal to high self-esteem. If their developmental interpretation is correct, we need to address self-esteem issues during the adolescent developmental period so as not to compromise the quality of life of hyperactive children.

Slomkowski et al. (1995) studied self-esteem in adolescence. Clearly, the labeling of a child, or a young adult, as ADHD and/or the experience of being "different" from other children and the presence of ADHD symptoms affect self-esteem. Do adolescents and college students with a childhood history of ADHD have a difference in self-esteem compared to the subjects in their study? The group of young adults who do attend
college in spite of their ADHD background is an important group to study because they have proven successful in, at least, the educational arena.

Dooling-Liffin and Rosen (1997) examined two main points. First, they determined if differences in self-esteem existed between college students who reported that they had been labeled ADHD in childhood and a control group of college students who reported no such labeling. Second, they investigated factors that contributed to positive self-esteem among the college students who had been labeled ADHD in childhood. Five factors were examined: social skills, achievement/talent, treatment, a special supportive person in their lives, and current symptoms. The subjects were 86 undergraduate college students who had been identified as ADHD in childhood (mean age was 19.53 yrs.) and 477 undergraduate college students who had not been identified as ADHD (mean age was 19.42 yrs.).

The Rosenberg Self-Esteem Scale, consisting of ten Likert-type items, was used to measure positive or negative attitudes toward oneself. As a measure of social skills, the Dating and Assertion Questionnaire consisting of 18 items designed to measure social competence, was used. To measure achievement, participants reported their high school grade point average. To measure talent, subjects answered the question, "As you were growing up, did you have any talents or abilities that you felt good about and/or got recognition for? " To measure for a special supportive person, participants answered the question, "Has there been a special person in your life, such as a mentor who has believed in you encouraged you? " As a measure of treatment, subjects reported the kinds of treatment they had received by placing a check next to all such treatments on a given list.

Analyses of variance (ANOVAs) were performed to examine whether the "labeled" subjects differed from the control subjects in the measure of self-esteem. The results showed that the labeled group had significantly lower self-esteem than the control group. A multiple regression was performed on the data from the labeled group. The factors of social skills and current symptomatology were significant predictors of self-esteem. Achievement/talent, having a mentor or special person, and treatment history were not associated with self-esteem in college students with an ADHD history. These results suggest the importance of treatment for social skills.

Khalsa's (1996) Group Exercises for Social Skills and Self-Esteem is a collection of activities and therapeutic exercises to assist psychotherapists, occupational and recreational therapists, teachers, and other group leaders to be more creative and effective when interacting with ADHD people. These exercises were designed to
encourage the development of the types of prosocial skills that ultimately enhance a feeling of well-being and positive self-esteem. Khalsa claims that they can help people give up negative self-messages and develop positive ones. His exercises rely heavily upon the expressive mediums of writing, drawing, painting, sculpting, and role-playing to facilitate changes in social skills and self-concept.

The collection is composed of 60 exercises which include 16 that might be especially effective for groups with participants displaying ADHD. For example, the "My Own Uniqueness" exercise has three purposes: to recognize personal unique qualities, to increase awareness of other group members' unique and similar qualities, and to develop an appreciation of others' uniqueness. Members of the group are given a copy of the "Uniqueness" activity sheet and complete the 'I' statements and complete each sentence. When the leader of the group is talking about uniqueness, the exercise is designed to include: "No one else is exactly like you-you are unique. Part of what makes you unique is the way you express yourself, the way you think and communicate." In this session, the group leader is designed to help highlight the personal qualities expressed by each member.

It is important to clarify the process of enhancing social skills and self-esteem. But, no one has experimentally manipulated both social success and failure using the same children. What has to be examined is how ADHD children actually respond to well-controlled social success and failure conditions.

3. **Medicine's effect on self-esteem in children with ADHD**

Research has shown that stimulant medication has both profound and beneficial effects upon the behavior of children with ADHD(Hechman, Weise & Pearman, 1984; Ichikawa, 1999). Do stimulants improve self-esteem in children with ADHD?

Frankel, Dennis, Cantwell, Myatt & Feinberg (1999) examined the self-esteem of children with ADHD who were medicated with stimulants versus those who were unmedicated. The subjects were 39 boys and 17 girls between the ages of 7 and 12 years. Of the 56 ADHD children, 28 were diagnosed with ADHD alone, and 28 were diagnosed with ADHD and Oppositional Defiant Disorder (ODD), rated for DSM-III-R criteria. Their hypotheses were: (a) children on ADHD-prescribed stimulant medication would have higher self-esteem than those not on prescribed stimulants, (b) the level of reported self-esteem would correlate with the dosage of medication, and (c) subjects with comorbid ODD would have higher self-esteem than subjects with ADHD alone.

To measure their self-esteem, participants completed the Piers-Harris Self-Concept
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scale (PHS). The PHS scale is an 80-item yes/no self-report measure. Piers (1984) provided factor scores on the 6 subscales: behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction.

The $2 \times 2$ (Medication status $\times$ Diagnosis) fixed-effects ANOVAs were performed for each PHS subscale. Four of the six subscales showed significantly greater self-esteem for the medicated group. Only two main effects were significant for diagnosis. Subjects with ADHD + ODD reported significantly higher self-esteem than subjects with ADHD alone on both the intellect and physical appearance subscales. Medication status $\times$ diagnosis interactions were significant for the behavior subscale. The medication was associated with increased scores on the behavior subscale for subjects in the ADHD + ODD group, but not subjects in the ADHD only group. Significant correlations between the PHS scale and total daily dosages were obtained from the behavior, intellect, physical appearance, and popularity subscales.

They realized two possible interpretations based on these findings. The first interpretation was that subjects on prescribed stimulants reported higher self-esteem because they perceived that their behavior was under better control. The second interpretation was that the dose-response correlations reflected stronger internal sensations caused by the stimulants at greater doses and perhaps a greater hope for positive social outcomes. However, are the relationships complex?

It was not explored whether improved behavior caused higher self-esteem in social and academic functioning and in positive performance on cognitive tasks or not. It's quite plausible that self-esteem could have increased regardless of behavioral improvement. Moreover, as for the subjects, even if their actual improved behavior was accompanied by higher self-esteem, we don't know whether they would attribute their improvement to pills rather or to their own abilities? The implications of these relationships are unclear.

Frankel et al. (1999) compared the self-esteem of a medicated and unmedicated group of ADHD children and studied the correlation between dosages of medication. However, it is also important to compare the self-esteem of a pre-medicated and post-medicated child. Even if a child shows a lower self-esteem than other children when post-medicated, it is possible that the child may show a higher self-esteem than when pre-medicated. In this case, we could suggest that stimulants improve self-esteem. In order to demonstrate a causal relationship between stimulants and self-esteem, a within-subject design should be used.

DuPaul, Anastopoulos, Kwasnik, Barkley, and McMurray (1996) examined the
effects of three different doses of methylphenidate (MPH) on the self-reported ratings of a sample of children with ADHD. They hypothesized that (a) children would report significantly fewer symptoms of ADHD with MPH treatment, and (b) MPH would have positive effects on the children’s self-esteem. In order to test these hypotheses, they investigated in the context of a double-blind, placebo-controlled, crossover design using multiple measures of drug response. The participants were 19 boys and 15 girls between the ages of 9 and 15 years. Five of the children were also diagnosed as having ODD, while two subjects were diagnosed as having Conduct Disorder. Each child completed a rating scale consisting of the 14 DSM-III-R symptoms of ADHD and the Piers-Harris Self-Concept scale when receiving a placebo, low dose, moderate dose, and high dose of MPH. Parents and teachers also completed a packet of ratings.

Two separate 3(Respondent) × 4(MPH Dose) ANOVAs, with repeated measures across the latter factor, were conducted. On the first, significant main effects for Respondent were obtained for the total scores on the ADHD rating scale. Self-reported scores on the ADHD rating scale were significantly lower than either parent or teacher ratings. The second ANOVA was conducted for the number of significant symptoms on the ADHD rating scale. As was the first case for the total scores, significant main effects for respondent were obtained. The children reported significantly fewer ADHD symptoms than did parents or teachers. In spite of this, their self-reported data showed the same relative change with treatment as did parent and teacher ratings. Self-reported ratings were sensitive to medication effects. These results indicate that children can monitor their behavior.

A series of one-way ANOVAs, with repeated measures across the MPH dose, was conducted for the total scores and each of the six subscales of the Piers-Harris. A significant MPH effect was obtained for the behavior subscale. The low dose of MPH led to significant increases in the behavior T-score relative to the placebo. A marginally significant MPH dose effect was obtained for the anxiety subscale, with higher scores evident for the three MPH conditions. A few children showed improvement in self-esteem as a function of MPH with only one or two participants evidencing deterioration in their self-esteem rating with treatment. Why does MPH exert very little effect on self-esteem with either improvement or deterioration occurring in only a few cases?

DuPaul et al. claim that it is possible that more significant changes in self-concept could occur with longer-term pharmacotherapy, and that more significant findings would have occurred if a three-point or five-point Likert scale had been employed. Isn’t it possible that the medicine improved their behavior but that they didn’t feel quite
The self-esteem of people with attention deficit hyperactivity disorder themselves after treatment as before the treatment, and that this feeling of a lack of continuity may develop low self-esteem? To resolve this issue, further study should be conducted.

This study discussed how self-esteem in people with ADHD relates to developmental age, self-perception, and the effect of medicine. Self-esteem or self-concept is derived, to a large extent, from interactions with significant others. The quality of the parent/child relationship may be predictive of subsequent self-esteem or self-concept. Therefore, it is also important to examine these factors, effect on self-esteem. Low self-esteem in children or adolescents with ADHD may compromise their quality of life as they develop into adults. These young people have a need for psychological intervention, including treatment for social skills. I wish to work toward developing needed interventions.

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Mari TANAKA
Associate Professor, Graduate School of Educatiion, Tohoku University

ADHD児・者の自己意識の発達について、先行研究による知見をもとに①自己評価に対する原因帰属スタイルと心理的適応との関連、②青年期・成人期において特徴的にみられる自己評価の特性、③薬物療法による自己評価の変容、という点から検討した。児童期のADHD児は、必ずしも自己評価が低いとはいえない。また、肯定的結果に対してはその原因を自分の特性に求めるといった帰属スタイルを示し、「肯定的錯覚バイアス」が示されてきたが、これは同時に、自尊心の傷つきを防ぐための自己防衛として機能していることが考えられた。さらに、かつて児童期にADHDの診断をされた青年・成人における自己評価の低さについては、その要因として社会的スキルとの関連が示唆された。また、薬物療法によって必ずしも自己評価が高くなるとは限らないという先行研究の結果をふまえ、発達過程のなかで恒常的に体験してきた自己評価の低さに対しては、社会的的心理的援助が必要であることを指摘した。

キーワード：注意欠陥／多動性障害、自己評価、自己意識、帰属スタイル