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Original Paper

# Encouragement from Friends after Failures and Recipients' Subsequent Feelings and Goal Achievement Motivation

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Key words: encouragement, goal achievement motivation, experience of failure, closeness with friends, social support

#### Abstract

Casual encouragements given after a negative experience sometimes hurt the recipients of the encouragement. This study examined whether light encouragement from close friends after experiencing a failure have positive or negative effects. Female university students (N=99) participated in the study. They read a scenario in which a student fails an important exam and is lightly encouraged by a close friend or an acquaintance of the same gender. Participants then described their feelings about the encouragement, causal attribution, and subsequent goal achievement behaviors. Results indicated no differences in the mean values of feelings, based on the closeness of the friend giving encouragement. However, unpleasant feelings following encouragement from an acquaintance were attributed to lack of consideration and escaping from the goal, whereas unpleasant feelings after encouragement by a close friend did not have such attributions, and rather, resulted in trying to reach the goal again. These results suggest that encouragement from a close person sometimes causes negative feelings, whereas at other times, it facilitates future behaviors directed at goal achievement.

#### 1. Introduction

We often encourage and console others when they are feeling down and in despair. Although encouragements and consolations can sometimes take non-verbal forms, such as hugging or just being at the side of the person, people often verbally encourage others. The intention of encouragements is to heal wounds and initiate recovery. Consolations mainly heal feelings while encouragements dominantly recover feelings. However, consolations and encouragements are often interchangeable and indistinguishable<sup>1)</sup>. When encouragements and consolations coexist, encouragements follow as an extension of consolations. Therefore, we mainly addressed the issue of encouragement in the present study.

Conventional studies in psychology have considered encouragements and consolations as prosocial behaviors related to social supports. In particular, in giving social support, benefits to the recipient of encouragements and consolations are considered important. Of numerous kinds of social support, encouragements and consolations are considered to be emotional support<sup>2)</sup>, which is an interpersonal

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interaction that decreases negative emotions felt by those that had stressful experiences. Encouragements and consolations are the central components of emotional support.

However, encouragements and consolations, as well as other major emotional support, do not necessarily elicit the appropriate effects<sup>3)</sup>. Based on a qualitative analysis of narrative data from university students, Kikushima<sup>4)</sup> suggested that providing support in the case of failures caused by a lack of ability could decrease self-esteem of support recipients and encouraging and consoling recipients could lead to them realizing their lack of ability. Developmental studies of causal attribution have indicated that individuals strongly sympathize when they see someone that cannot overcome difficulties<sup>5)</sup>. Therefore, people that receive consolations and encouragements feel that they are receiving sympathy, because of their lack of ability, which hurt their self-esteem<sup>6)</sup>. Particularly in academic matters such as exams, individuals often compare themselves with close friends<sup>7)</sup>, and receiving encouragements and consolations for their failures can emphasize the consciousness about differences between themselves and others, hurt their self-esteem, and trigger negative emotions<sup>1)</sup>.

Is it a problem that failures due to the lack of ability cause a reduction in self-esteem? It is known that a decrease in self-esteem could trigger negative emotions, such as depression<sup>6</sup>. The discouragement from failing an exam increases with the importance of the exam. In order to reduce such discouragement in the long term, it is essential to attempt passing the exam again and achieving the goal. This suggests that negative emotions occasionally have adaptive properties that promote certain positive behaviors, which serve as a motivation to achieve goals.

Encouragements and consolations are reciprocated among close friends, and such behaviors reflect the closeness of a relationship<sup>1)</sup>. Individuals expect to obtain support from close relationships, and obtaining support could relieve them from psychological pain<sup>8)</sup>. Ogawa<sup>9)</sup> reported that sympathy from close friends, when compared to sympathy from those who are not close, leads to joyful feelings and reduces discouragement. Of course, being encouraged by others, even by close friends about a failure can signify differences between the self and others and cause negative feelings. However, such emotional triggers promote emotional recovery in the long term and lead to achieving goals.

The present study examined the effects of encouragement from friends after experiencing failures by using specific interpersonal situations. In particular, a scenario was developed in which a person fails at an important certification exam and receives light encouragement from a best friend, and from an acquaintance that has passed the same exam. Furthermore, we asked participants about the emotions and motivations of the protagonist in the scenario and about the protagonist's subsequent motivation to achieve goals. We tested the following hypothesis using this method.

Hypothesis 1: Encouragement from the best friend or an acquaintance after failure would elicit negative emotions in the recipient.

Hypothesis 2: Negative emotions triggered by encouragement after a failure would be related to the recipient's negative causal attributions about the encouragement.

Hypothesis 3: Negative emotions and negative causal attributions of encouragement after a failure would have negative effects on goal achievement, when encouragement is from an acquaintance that is less close. On the other hand, encouragement from the best friend would diminish negative consequences and positively promote goal achievement.

#### 2. Methods

# 2.1 Participants

The participants of the present study were 99 female university students (M = 21.03 years old, SD = 0.72). Forty-two participants were juniors, and 57 were seniors in the university. We recruited juniors and seniors because of the context of the cover story that will be mentioned below.

#### 2.2 Materials

Two types of identical questionnaires were developed with two different cover stories attached to them. Both questionnaires were printed on A4 sized paper, and folded, such that they consisted of a four-page booklet comprising three parts. On the first page, the purpose of the study was explained. On the next page, the cover story and questions about the cover story were described. On the fourth page, there were questions regarding the context of the cover story and participants' characteristics.

#### 2.2.1 The cover story about encouragements after a failure

A scenario was developed from the perspective of the protagonist "I". The Best-friend A doing the same major as "me" studied for a certification exam with me, or an Acquaintance B, who "I" knew was studying for the same exam, had passed the exam while "I" found out that "I" have failed that exam. After finding out the results, "I" bump into A or B, and they gave "me" light encouragement (Table 1). The cover stories were identical except for Person A who had been studying together, or Person B who "I" just know. The participants received one of the two types of questionnaires and responded to the following questions.

#### 2.2.2 Questions based on the content of the cover story

Participants imagined how "I," described in the cover story, would feel and responded to the following questions. These were originally constructed by the authors but a few items among them were created by reference to Ogawa<sup>9</sup>.

- (1) Emotions after being encouraged. Participants responded how they would feel after being encouraged as described in the story. The questions consisted of 18 items, including "I would get angry at myself," "I would get angry at that person." The participants responded using a four-point scale ranging from 1 (I would not feel so) to 4 (I would most likely feel so).
- (2) Causal attribution for encouragements. Participants indicated the reason why that person gave encouragements. The questions consisted of 14 items including, "She tried to console me," or "She wanted to show off her success." Participants responded using a four-point scale ranging from 1 (completely disagree) to 4 (completely agree).
- (3) Effects on future goal achieving behavior. Participants responded to questions about support from friends by indicating how they would feel if they were the protagonist in the story ("I" who did not pass the exam). The questions consisted of 14 items including "I would want to make as much effort as possible" and "I would give up." The participants responded using a four-point scale ranging from 1 (*I completely disagree*) to 4 (*I totally agree*).

#### 2.2.3 Questions about the validity of the cover story

After the questions related to the content of the cover story, participants responded to the following questions on the last page about the validity of the cover story itself.

- (1) If the described context was imaginable. Participants responded whether they could clearly imagine the situation by reading the cover story using a three-point scale ranging from 1 (*I could imagine it clearly*) to 3 (*I could not imagine it well*).
- (2) The degree of closeness between the person giving encouragements and "I" in the story. Participants responded to the extent to which they thought the Best-friend A or the Acquaintance B in the story are close to "me," using a seven-point scale ranging from 1 (not close at all) to 7 (very close).
- (3) Degree of previous support from the person that encouraged me. Participants imagined the characters of Best-friend A and Acquaintance B and indicated the kind of people they had previously been for "me." They responded to the following five questions: "She calms me down and makes me relax," "She accepts my feeling and listens to me," "She can let me talk it over," "She gives me good advice," and "She understands me and accepts me." Participants responded using a five-point scale ranging from 1 (completely disagree) to 5 (completely agree).

- (4) If participants had a similar experience of failure as "me" in the story. Participants responded if they had similar experiences to the protagonist in the story, "me," in which they tried to do something with their friends and failed to achieve their goals when friends succeeded in achieving their goals. Participants responded using a three-point scale, ranging from 1 (*I have had a similar experiences*) to 3 (*I haven't had such experiences at all*).
- (5) If they did not have such an experience, have they received similar statements from their friends.

#### Table 1 Cover story, the Best-friend A (top), the Acquaintance B (bottom)

Please read the following story carefully, and then answer the questions in the subsequent pages.

Please imagine the situation as if you were the protagonist "I" in the story.

I am a senior in the university. I am about to start hunting for a job.

The other day, I received the results of a certain certification exam which stated that I failed.

Though it is not a national license, it looks good on the resume when hunting for a job. Not only that, it is related with actual work, and therefore it was a very important exam. I had prepared for the exam for many months, reading textbooks and solving practice problems. I tried my best. I took the practice exam, and the results were quite affirmative that I could pass, even though I could not be optimistic. I was expecting to pass that exam… I was quite shocked.

Some people in my department also took this exam. We all knew who took this exam. I often studied with my close friend A after school. Several students in my department passed the exam, and A was one of them. I heard she was very happy.

After finding out the results, I met A, and she said this while smiling.

"I am sorry to here that, but you tried hard so you will pass next time".

I tried to say something back to her, but she soon started chatting with other people who had also passed the exam and had smiling faces. I tried to appear calm and did not cause any drama.

After going back home, I was thinking about myself while recalling the interaction with A.

I have one more chance to take that exam before graduation. But it seems too late for job hunting. I have to think about my future.

I am a senior in the university. I am about to start hunting for a job.

The other day, I received the results of a certain certification exam to find that I have failed.

Though it is not a national license, it looks good on the resume when hunting for a job. Not only that, it is related with actual work, and therefore it was a very important exam. I had prepared for the exam for many months, reading textbooks and solving practice problems. I tried my best. I took the practice exam, and the results were quite affirmative that I could pass, even though I could not be optimistic. I was expecting to pass that exam… I was quite shocked.

Although it was not common to study in cooperation with each other, people in my department also took this exam, and we all knew who took this exam.

Several students from my department passed the exam, and my acquaintance B was one of them. I had not had many interactions with her in the department; we have spoken once and encouraged each other.

After finding out the results, I met B, and she said this with a little smile.

"I am sorry for that, but you tried hard so you will pass next time".

I tried to say something back to her, but she soon started chatting with other people who had also passed the exam and had smiling faces. I tried to appear calm and did not cause any drama.

After going back home, I was thinking about myself, recalling the interaction with B.

I have one more chance to take that exam before graduation. But it seems too late for job hunting. I have to think about my future.

Participants that had responded, "I have had similar experiences" or "I have had somewhat similar experiences" to question (4), were asked if their friends had given them similar encouragements. Participants responded using a four-point scale, ranging from 1 (definitely happened) to 4 (did not happen). (6) Possibility of experiencing something similar to the story in the future. Participants responded if they believed that they would experience similar situations described in the story in actual life. A similar experience would be if they had tried hard to do something and failed, whereas their friends had succeeded. Participants responded using a four-point scale ranging from 1 (I would probably experience it) to 4 (I would not experience it).

#### 2.2.4 Participants' characteristics

At the end of the questionnaire, the participants indicated their major, year, and age.

#### 2.3 Procedures

After obtaining agreement of the faculty concerned, the questionnaires were distributed to students at the end of a guidance course for the new fall semester in junior and senior classes. The study was explained to the students, and those who gave their consent for participation responded to the questionnaire. In order to distribute the two cover stories evenly to the participants, the questionnaires with the two stories were stacked alternatively and distributed. The questionnaire was anonymous, and students left the room after they finished filling out the questionnaire.

#### 2.4 Ethical considerations

The participants were told that their participation was completely voluntarily, and no disadvantages would be caused to them for not responding, that the survey is anonymous, and that the the data would be aggregated when conducting statistical analyses and would not be used for any other purposes. Furthermore, participants were told to respond to the questions and return the questionnaire only after they gave their consent to participate. The institutional review board at the author's affiliated department and the dean of the department approved the present study.

Table 2 Degree of reality of the cover story

Variables (Overtion contents)	Choices	The Be	est-friend A	The Acq	The Acquaintance B		
Variables (Question contents)	Choices	N	%	N	%	Statistics	
Whether the participants	I couldn't imagine well	0	0.0	0	0.0	·· 2(1)=9.91	
could imagine the situation	I could imagine somewhat	23	43.4	27	58.7	$\chi^{2}(1)=2.31$	
described in the cover story	I could imagine clearly	30	56.6	19	41.3	n.s.	
Whether the participants had	no experience at all	11	22.0	9	22.0	χ²(2)=0.31 n.s.	
had the similar experience in	certain similar experiences	28	56.0	21	51.2		
the past	experienced similar situations	11	22.0	11	26.8		
Whathan the neuticinents	none at all	7	17.9	7	21.9		
Whether the participants	may have happened	16	41.0	11	34.4	$\chi^{2}(3)=0.48$	
have gotten similar comments from their friends	probably happened	13	33.3	12	37.5	n.s.	
from their friends	certainly happened	3	7.7	2	6.3		
Whathau the neuticinents think	probably not	1	2.0	4	9.1		
Whether the participants think that they would experience	probably yes	10	20.4	8	18.2	$\chi^{2}(3)=3.50$	
	likely yes	24	49.0	16	36.4	n.s.	
a similar situation	definitely yes	14	28.6	16	36.4		

#### 3. Results

# 3.1 The number of respondents for questionnaires

The questionnaires were randomly distributed and participants read cover stories either about Best-friend A, or Acquaintance B and responded to questions. Among students in the junior year, 23 read about Best-friend A and 19 read about Acquaintance B. Among seniors, 30 students read about Best-friend A and 27 read about Acquaintance B. No significant difference was observed in direct appearance probability, p = 0.842.

#### 3.2 Settings of cover stories

As shown in Table 2, all the participants indicated that they could "somewhat" or "clearly" imagine

Table 3 Relationship between "I" in the story and the Best-friend A or the Acquaintance B

•	•		•				
Variables	T., J	The Best	The Best-friend A		The Acquaintance B		
variables	Index	Mean	SD	Mean	SD	Statistics	
Closeness with "me"	7-point scale (1~7)	4.17	1.23	2.85	1.26	t(96)=5.25 p<.001	
Degree of previous support	5 items total ( $\alpha = 0.95$ )	15.00	4.72	11.57	4.98	t(96)=3.50 p<.001	

Table 4 Factor analysis of emotions after the encouragement

Factor name	Item contents	Factor 1	Factor 2	Factor 3	Communalities
	I do not understand why she says it like that	.92	14	.14	.69
Unnlaggent	How she says it annoys me	.86	.00	02	.75
Unpleasant	I do not want to see her because she seems happy	.81	.02	.05	.64
feelings towards friends	I get angry at her	.80	.07	15	.81
menus	It was not what I expected, and I was surprised	.67	10	.16	.35
	I am frustrated to hear that	.62	.21	25	.73
	I am disappointed at myself	21	.87	23	.73
	I feel sorry	04	.80	13	.66
Na gativa faalinga	I feel angry at myself	10	.77	.05	.54
Negative feelings	I think that I have to work harder	06	.68	.13	.44
towards self	I get angry at myself when talked to like that	.30	.59	.04	.55
	I am ashamed of myself	.22	.54	.23	.40
	I cannot do anything	.02	.52	.23	.30
	I feel positive	.25	.10	.84	.60
Positive	I am thankful	14	.07	.83	.80
emotions	It relieves me	.10	03	.70	.45
	I am glad to hear that	34	.10	.62	.64
	initial eigenvalues	5.48	2.86	1.71	
	contribution of the eigenvalues (%)	32.22	16.83	10.08	
	sum of squares of loadings after rotation	4.86	3.93	3.25	
	intercorrelations among factors	1	.35	41	
		.35	1	13	
		41	13	1	

the story, and approximately 80% indicated that they have had similar experiences in the past. Moreover, approximately 90% of participants indicated that they might experience a similar situation in the future. These differences were not significant between participants reading about Best-friend A and Acquaintance B. Furthermore, as shown in Table 3, participants' rating of the degree of closeness between "me" and Best-friend A or Acquaintance B indicated that rating for Best-friend A was significantly higher. Also, previous support for "me" from Best-friend A was also significantly higher than that from Acquaintance B. These results confirmed the validity of the cover story.

# 3.3 Effects for emotions, causal attributions, goal achieving behaviors following encouragement 3.3.1 Scales

Factor analysis with promax rotation and principal component analysis was used to examine the factor structure of emotions, causal attributions and goal achieving behaviors after encouragement. Based on the transition of eigenvalues (6.07, 2.87, 1.72, 1.09, 1.00, 0.92····), it was decided that a three-factor solution was appropriate for emotions after the encouragement. One item, "I would feel miserable" was excluded because it did not fit any of the categories. The three factors were named: "Unpleasant feelings towards friends", "Negative feeling towards self", and "Positive feelings" (see Table 4). The Cronbach's a coefficients were 0.89, 0.81, and 0.77, respectively. A two-factor solution was used for causal attribution of encouragements: "Selfish motivation of friends" and "Consideration for me" (Table 5), because the factor structure after the rotation from three factors for eigenvalues larger than 1 indicated a two-factors solution. The Cronbach's a coefficients were 0.86 and 0.84, respectively. The effects on goal achieving behavior indicated a two-factor solution: "Trying to reach the goal again" and "Escape from the goal" (Table 6), because the factor structure after rotation from three factors for eigenvalues larger than 1 indicated a two-factor solution. The Cronbach's a coefficients were 0.87 and 0.79 respectively.

Table 5 Factor analysis of causal attributions for encouragement

Factor name	Item contents	Factor 1	Factor 2	Communalities
	She wanted to show off her success	.78	03	.62
	I did not think the exam was that hard for her		.11	.59
	She felt superior by seeing me fail		22	.70
Selfish motivation	She was just in the good mood to say that without thinking much	.76	15	.63
of friends	She thought I didn't try hard enough	.72	.14	.51
of friends	She wanted to appeal to me how hard she tried	.72	.15	.50
	She wanted to finish the conversation so that she could	.68	09	.49
	talk with other friends who had passed the exam	.00	09	.49
	She felt sorry for me	.50	.20	.25
	She tried to cheer me up	13	.83	.73
	She was concerned that I was feeling down		.78	.60
Consideration for	She was going to encourage me		.77	.60
the listener	She was trying to console me	.12	.76	.56
	She tried to tell me that she is counting on me	.03	.69	.48
	She said so on purpose so that I would try my best	.11	.63	.38
	initial eigenvalues	4.42	3.22	
	contribution of the eigenvalues (%)	31.55	23.01	
	sum of squares of loadings after rotation	4.22	3.58	
	intercorrelations among factors	1	16	-
	<u> </u>	16	1	

Table 6 Factor analysis of future goal achievement

Factor name	Item contents	Factor 1	Factor 2	Communalities
	I want to manage to pass the exam	.84	22	.72
	I think positive thoughts when I pass the exam	.82	.02	.68
	Although it would be too late for job hunting, it is		19	.63
Trying to reach	good for me to try my best now	.78	.19	.03
the goal again	I want to think through what to prepare	.76	03	.57
	I want to seek revenge on those who passed the exam	.74	.01	.55
	I want to have a good feeling like the person who passed the exam	.65	.30	.54
	There should be some other people who are trying hard	.61	.27	.46
	I get depressed when I think about my future	.07	.80	.65
	I don't feel like doing it at least for now	11	.79	.63
Essans from the	I think this certification may not be a good fit for me	04	.76	.57
Escape from the	I feel left out	.14	.72	.55
goal	I am thinking of giving up	31	.66	.51
	I decided to think about it after I am done with job hunting	.09	.46	.22
	I try to think I am not the only one who has failed the exam	.37	.41	.32
	initial eigenvalues	4.30	3.32	
	contribution of the eigenvalues (%)	30.70	23.70	
	sum of squares of loadings after rotation	4.21	3.45	
	intercorrelations among factors	1	.06	
	<u> </u>	.06	1	

Table 7 Descriptive statistics of scale scores

V(C1)	The Best-friend A			The Acquaintance B			. 1 #
Variables (Scales)	N	Mean	SD	N	Mean	SD	t-value <sup>#</sup>
Emotions after being encouraged							
(1) Unpleasant feelings towards friends	53	15.00	4.41	46	14.59	5.59	0.40
(2) Negative emotions towards self	53	18.45	4.11	45	16.93	5.17	1.62
(3) Positive emotions	53	6.04	2.03	46	6.07	2.32	-0.06
Causal attributions for encouragement							
(4) Selfish motivation of friend	52	13.98	4.82	46	14.63	5.08	-0.65
(5) Consideration for me	52	13.23	3.57	44	12.32	4.08	1.17
Effects of goal achievement behavior							
(6) Trying to reach the goal again	53	19.74	5.11	45	18.91	4.81	0.82
(7) Escape from the goal	53	16.19	3.90	45	17.13	4.63	-1.10

<sup>\*</sup>n.s. for all the variables

# 3.3.2 Comparison of scale scores

We simply added the rated scale values that constituted each factor and calculated the total scale score of participants for Best-friend A and Acquaintance B. As shown in Table 7, t-tests indicated no significant differences between any of the indices.

3.4 Relationship between emotions after encouragement, causal attribution for encouragement, and goal achieving behaviors Correlation coefficients between scores, emotions after encouragement, causal attributions, and future

goal achieving behaviors were calculated for Best-friend A and Acquaintance B. The results are shown in Table 8.

#### 3.4.1 Relationship between emotions after encouragement and causal attributions

The stronger the unpleasant feelings toward the friends, the more participants assumed selfish motives of friends. This tendency was observed for both Best-friend A and Acquaintance B, with the association being stronger for Acquaintance B than for Best-friend A (r = .36, r = .73). Acquaintance B also showed a significant relationship with other factors, including Unpleasant feelings of me that was related to Lack of consideration.

#### 3.4.2 Relationship between emotions after encouragement and the future goal achieving behaviors

A positive significant correlation was observed for Best-friend A between both Unpleasant feelings towards friends and Negative feeling towards self, and Trying to achieve the goals again. However, other correlations were not significant (Negative feelings towards self and Escape from the goal had a tendency for a correlation at a 10% significance level). For Acquaintance B on the other hand, Unpleasant feelings towards friends and Escape from the goal had a significant positive correlation, and Negative feelings towards self showed a significant, positive correlation with Trying to achieve goals again and Escaping from goals. Moreover, a significant negative correlation was observed for Acquaintance B between Positive feelings and Escape from the goal.

#### 3.4.3 The relationship between the future goal achievement and emotions after encouragement

No significant correlation was observed for Best-friend A, however, a positive correlation between Trying to reach the goal again and Escape from the goals was significant at the 10% level for Selfish motivation of the friends. A significant, positive correlation was observed for Acquaintance B between Estimated selfish motivation of the giver and Escape from goals.

#### 4. Discussion

We developed a story in which "I" in the story failed an important certification. Then, we examined relationships between emotions, causal attributions, and goal achieving behaviors, after being casually encouraged by a best friend, or an acquaintance. In particular, we focused on whether negative effects from

Table 8 Correlation between the measures (bottom left: the Best-friend A, upper right: the Acquaintance B)

	Emotions after being encouraged			Causal attributions for encouragement		Effects of goal achievement behavior	
V:-1-1 (C1)							
Variables (Scales)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Emotions after being encouraged							
(1) Unpleasant feelings towards friends	_	.47 **	47 **	.73 **	48 **	.25	.53 **
(2) Negative emotions towards self	.19	_	22	.27 +	.03	.54 **	.54 **
(3) Positive emotions	33 *	.22	_	30 *	.56 **	.18	39 **
Causal attributions for encouragement							
(4) Selfish motivation of friend	.36 **	.20	.16	_	47 **	.15	.40 **
(5) Consideration for me	.07	.25 +	.17	.24 +		.15	11
Effects of goal achievement behavior							
(6) Trying to reach the goal again	.35 **	.46 **	03	.24 +	.11		.14
(7) Escape from the goal	.16	.27 +	09	.27 +	.14	.17	

<sup>+</sup>p<.10 \*p<.05 \*\*p<.01

encouragement could lead to goal achievement behaviors and motivation, which had rarely been focused on conventional studies of encouragement, consolation, or emotional support. The context of the scenario in our study was considered valid based on the results of the analysis reported in section 3.2, above.

Hypothesis 1 of the present study was related to negative emotions triggered by receiving encouragement after experiencing a failure. As shown in Table 7, emotions after a failure did not differ significantly if encouragement was given by the best friend or an acquaintance, which supported our hypothesis. However, neither emotions, causal attributions, nor goal achieving behaviors showed a significant difference between the best friend and the acquaintance. This suggests the possibility that the two cover stories were not different. We utilized a between participants design in the present study, such that each participant read only one type of scenario. It is suggested that future studies should assess discriminability using a within participants design and have the participants read both stories.

Hypothesis 2 of the present study concerned the relationship between negative emotions triggered by encouragement after failures and causal attribution for the encouragement. As shown in Table 8, unpleasant feelings towards the friends and selfish motivation of the friends showed a significant positive correlation, regardless of being the best friend or the acquaintance, which supported our hypothesis. However, the correlation was larger for the acquaintance than for the best friend. Moreover, in the case of an acquaintance, stronger unpleasant feelings resulted in a higher rating for lack of consideration. Overall, the relationship was stronger for emotions triggered by encouragement and causal attribution for the acquaintance. The closeness with the person giving encouragement might serve as a buffer, weakening the connection between emotions triggered by encouragement and cognition.

Hypothesis 3 of the present study concerned the relationship between negative feelings and causal attribution for encouragement after a failure, and goal achievement behavior and motivation. As shown in Table 8, negative feelings and causal attribution triggered by encouragement from the acquaintance was significantly correlated with escape from the goal. On the other hand, these tendencies were strong for the best friend, but had a slightly significant tendency. On the other hand, unpleasant feelings triggered by encouragement and negative feelings towards the self showed a significant positive correlation with trying to achieve the goal again. These results as a whole supported Hypothesis 3. Moreover, encouragement given by the best friend could trigger temporary negative feelings and causal attributions, but it could also promote goal achievement behaviors. Moreover, when the encouragement was given by the acquaintance, negative feelings towards the self were positively correlated with trying to achieve the goals again. The scenario in the present study concerned a failure in a certification exam, which could be taken again. It is suggested that knowing that there was another opportunity to try again would lead to higher motivation to try again as a way of recovering decreased self-esteem.

As discussed above, the results of this study indicated that although encouragement from the best friend could trigger negative feelings and a loss of self-esteem, it could also lead to goal achievement behaviors to recover the self-esteem. However, the lack of any significant differences between mean emotion values, causal attributions and goal achievement behaviors between the story about a best friend and the story about an acquaintance needs careful consideration. The mean closeness score to the best friend was 4.17, which was significantly different from that of the acquaintance. However, 4.17 is merely the mid point of a seven-point scale. Participants might not have felt close to the person described as very good Friend A in the story. In addition, the encouragement given was casual, and therefore, it could be interpreted as not based on true feelings. For example, studies on social support have indicated problems in the visualization of support<sup>10</sup>. Encouragements in the present study might not be clearly classified as support, but as a result, we might have observed the promoting effects of goal achieving behavior observed in the present study. It is suggested that further comparisons with encouragement from closer people is essential to clarify this point.

#### Limitations and future research

The present study utilized specific interpersonal situations without directly taking actual interactional effects into consideration. Although the context of the story was highly realistic for the participants in the present study, only one situation was used. Thus, it is unclear if the present results can be generalized to other situations of failures. Moreover, the participants in the present study were all female university students. Furthermore, we developed only two types of people giving encouragement: the best friend and the acquaintance, using only one type of encouragement. Results of the present study suggested the possibility that negative feelings triggered by encouragements after failures could promote future goal achievement when the encouragement is given by the best friend. However, applications of these positive effects remain unknown. It is suggested that the accumulation of studies examining various situations, relationships and behaviors is required in the future.

#### Conflict of interest

The authors declare that they have no conflict of interest regarding the findings of this study.

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