

Factoring in the Correct Answers Ratio in a Psycho-Educational Program

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Abstract

Introduction: Various prevention programs fall short when it comes to practical application of learned skills. Students should be able to grasp and easily apply these skills in real life. Our psycho-educational program uses familiar conflict scenarios, where students are encouraged to answer assertively. Many students' high/low correct answers ratio varies with the scenarios. We believe the correct answers ratio shed some light on difficulties faced in real life or understanding of students in the scenarios. This study focuses on the correct answers ratio, examines the scenario's factors through a high/low ratio, and gives suggestions on developing an effective program.

Method: Participants were junior high school students ($n = 697$). Seven bully-related scenarios were used.

Results: Two of the seven scenarios, "Your funny-face picture was uploaded to a friend's blog without your permission." and "An e-mail in which you spoke ill of others was sent to other classmates without your permission" had the lowest correct answers ratio (37.5% and 26.9%, respectively). Many of the wrong answers showed direct signs of aggression. The correct answer ratio was significantly low compared with the other five scenarios ($\chi^2 = 77.4, p < .01$ and $\chi^2 = 46.8, p < .01$, respectively). The highest correct answers ratio was 84.3%. The scenario had minimal harm (emotional or otherwise). Students appear to be more uncontrollable when the harm is greater, because of the stronger students' aggression, and as a result, their answers are not assertive. The correct answers ratio suggests that the timing and manner in which each scenario is presented should be carefully considered.

Introduction

Bullying is a serious problem in schools. According to the Ministry of Education, Culture, Sports, Science and Technology (2012), the number of bullying cases was higher than the previous year in each stage of education. In elementary schools, for example, there were 88,132 cases, an increase of 166% from the previous year. In junior high schools, 42,751 cases were reported (an increase of 39% from the previous year), and in high schools, 12,574 cases (an increase of 109% from the previous year). To reduce bullying, attention has shifted to preventive measures through education in schools and, consequently, a number of programs are being implemented (see Heydenberk, Heydenberk, and Tzenova, 2006; Tsuda, Katsuma, and Yamasaki, 2011).

The increasing influence of the Internet and cell phone usage and students' greater accessibility to both poses a new challenge. Schools must now address bullying that occurs over the Internet, or cyberbullying. There are a number of definitions for cyberbullying (Vandesbosch and Cleemput, 2009), for example, Patchin and Hinduja (2006) define cyberbullying as "willful and repeated harm inflicted through the medium of electronic text" (p.152). To prevent cyberbullying, programs are being developed that warn children of the dangers of the Internet, ways to respond, and helpful social skills to employ (Nakasato, Kubota, and Hasegawa, 2011; NTT Docomo, 2004).

Yet, the effectiveness of programs that aim to prevent bullying and cyberbullying has been questioned. The types of skills learned in the programs, for instance, are not actually used in real-life situations. In other words, it is not certain whether the programs' contents can be extrapolated to students in general (Okada, Goto, and Ueno, 2005; Shigeyoshi and Otsuka, 2010). Applying learned skills to daily life is challenging because controlling emotions, such as aggression or anxiety, is difficult in real-life situations (Watanabe, Harada, Saito, 2009); moreover, the contents of the program do not correspond with the developmental stage of the students (Harada, 2012). To resolve these issues, the program should contain materials with clear objectives to facilitate students' learning.

We have conducted a psychological education program that teaches interpersonal skills in schools (Nakane, Ito, and Suzuki, 2010). This program creates scenarios of conflict focused on school life that students will be able to relate to and then includes an exercise in which students are asked to think of assertive phrases to use in such scenarios. When assertive responses were designated as the correct answers, the scenarios used in the program contained answers some students could answer correctly and others could not. A scenario for which the percentage of correct answers is too high indicates the scenario may be too easy. When the correct answer ratio is too low,

the scenario may be inappropriate to introduce as exercise material. An examination of the characteristics of scenarios with a low correct answer ratio should offer hints as to which scenarios are difficult for students to apply in their daily lives.

Therefore, this study focuses on the correct answer ratio in the program's exercises, examines the contents of scenarios with a high or low correct answer ratio, and discusses the difficulty level of the program's contents. Accordingly, this study aims to obtain insight into preparing more effective learning materials for psychological education. It should be noted that the scenarios discussed in this report are scenarios relating to bullying and cyberbullying.

Method

Participants

The study participants were 697 public junior high school students in Tokyo. The students were in the first and second grades and were between 13 and 14 years of age. The 2008–2012 survey results were used.

Program

The program was designed using the win-win resolution (Littlefield *et al.*, 1993) because it is easy to run, easy to understand, and easy to apply to the scenarios concerning conflicts over interpersonal relationships that junior high school students face in their daily lives. The program aims to teach students assertive communication that can create a win-win situation. The definition of win-win is "both of the parties involved in the conflict end up with pleasant feelings." Each scenario had three possible patterns: (1) win-win, (2) failure to convey feelings to the other party and subdue oneself, and (3) express what one wants to convey aggressively to other party making him/her feel unpleasant. With patterns (2) and (3), one or both parties end up losing. Students were presented with possible responses relating to these three patterns and were asked to select the win-win response. Then, they were asked to think of a win-win response by themselves and write it down. The flow of the program was as follows: (1) instruction; (2) students learned about how to respond to given scenarios through puppet-based role-play and then responded to each scenario; and (3) students freely wrote their personal reflections on feedback sheets. The program was run chiefly by us and graduate students specializing in psychology. Teachers in charge also participated in the classes as observers.

Procedure

This report targeted seven of the scenarios (hereunder scenarios 1–7) concerning

bullying and cyberbullying used in the program.

The contents of each scenario are outlined below. For each scenario, the students were asked to describe a way of communicating that would achieve a win-win.

Scenario 1: "Your friend lends your comic book to another person without your permission." In this scenario, the student had lent his/her comic to his/her friend, and the friend then lent it to someone else. The student conveys that the friend should ask for permission when he/she lends something borrowed to someone else and should return the comic immediately. Scenario 2: "Your group members speak ill of a classmate." In this scenario, the student conveys that he/she does not want to participate in the badmouthing of someone else. Scenario 3: "You are ignored by your friend suddenly." In this scenario, the student asks the reason why he/she has suddenly been ignored by the friend he/she had previously been on good terms with. Scenario 4: "You gain an insulting nickname by a friend." In this scenario, the student's friend addresses him/her by an insulting nickname. The student conveys to the friend that he/she must stop using such a nickname. Scenario 5: "Your friend uses your textbook without permission." In this scenario, the student's friend has borrowed his/her textbook without permission. The student conveys to his/her friend either that he/she does not want to lend his/her textbook or that the friend should at least ask before borrowing it. Scenario 6: "Your funny-face picture was uploaded to a friend's blog without your permission." In this scenario, a photo taken of the student being silly and making a funny face is uploaded on a friend's blog without permission. The student conveys that he/she must remove the photo. Scenario 7: "An e-mail in which you spoke ill of others was sent to other classmates without your permission." In this scenario, the student sent an e-mail to one of his/her friends, and the friend then forwarded it without permission. The student asks the reason why and conveys that it is unacceptable.

The students wrote down responses to these scenarios freely. Responses thought to achieve a win-win situation were classified as correct answers, while all other responses were classified as incorrect answers. The number of correct answers in all the responses for each scenario was calculated as the correct answer ratio.

Correct Answer Ratios

Regarding the scenarios with a high correct answer ratio, the scenario with the highest correct answer ratio was scenario 1 (Your friend lends your comic book to another person) and scenario 5 (Your friend uses your textbook without permission). The correct answer ratios were 84.3% and 79.8%, respectively. As scenarios 1 and 5 had higher correct answer ratios in comparison to other scenarios, they were categorized as the high ratio group.

The following scenarios of correct answer ratios were that scenario 4 (You gain an insulting nickname by a friend) were 79.0%, scenario 2 (Your group members speak ill of a classmate) were 77.7%, and scenario 3 (You are ignored by your friend suddenly) were 69.5%. The correct answer ratio of scenario 3 was significantly lower than that of scenario 1 ($\chi^2 = 14.8, p < .01$). Thus, scenario 2, 3, and 4 were categorized as the middle ratio group.

The scenarios with the lowest correct answer ratios were scenario 6 (Your funny-face picture was uploaded to a friend's blog without your permission) and scenario 7 (An e-mail in which you spoke ill of others was simultaneously sent to other classmates without your permission). The correct answer ratios, which were no higher than 37.5% and 26.9%, respectively, were significantly lower compared to that of other scenarios (each scenario $\chi^2 = 77.4, p < .01, \chi^2 = 46.8, p < .01$). As scenarios 6 and 7 had lower correct answer ratios in comparison to other scenarios, they were categorized as the low ratio group.

Scenarios were classified into three categories by the correct answers ratio. The major correct or incorrect answers described by students were as follows (Table 1). The following is an examination of the characteristics of each scenario in the high, middle, and low ratio groups.

Table 1 Situation of each scenarios, correct answers ratio, and examples of correct and incorrect answers

Group	No. Situation	Correct answers ratio (%)	Correct answers written by students	Incorrect answers written by students
High ratio	1 Your friend lends your comic book to another person.	84.3	Can you give it back to me as soon as your brother's finished reading it?"	Give it back to me immediately!"
	5 Your friend uses your textbook without your permission.	79.8	I was surprised when you used my textbook, so next time could you tell me before using it?"	Don't do that"
Middle ratio	4 You gain an insulting nickname by a friend.	79.0	I really want you to stop calling me that because I find it offensive. How would you feel if I called you that?"	If you're going to call me that, then I'll call you..."
	2 Your group members speak ill of a classmate.	77.7	Maybe you're right, but shall we talk about something more interesting?"	say nothing
	3 You are ignored by your friend suddenly.	69.5	Are you trying to avoid me? Is there something I'm doing wrong? Please tell me."	Stop ignoring me."
Low ratio	6 Your funny face picture was uploaded to a friend's bbg without your permission.	37.5	Why did you upload my photo to your bbg without permission? You should have asked me first"	What the hell do you think you're doing?"
	7 An e-mail in which you spoke ill of others was sent to other classmates without your permission.	26.9	I was also wrong to have sent such a nasty e-mail but you shouldn't have forwarded it"	Sorry."

Correct and incorrect answers" mean the examples described by students in the program. Each scenarios was classified into three categories depending on correct answer's ratio.

Characteristics of the Correct Answer Ratios and the Students' Written Responses

Characteristics of the Scenarios in the High Ratio Group

In the characteristics of the scenarios in the high ratio group and, specifically, in scenario 1 (Your friend lends your comic book to another person), the example of a correct answer written by students (hereunder correct answers) was "Can you give it back to me as soon as your brother's finished reading it?" The examples of incorrect answers (hereunder incorrect answers) were "Give it back to me immediately!" and "Don't lend things you've borrowed without permission." The correct answer conveys both the need for the comic to be returned soon and the expected time it should be returned. The incorrect answers aggressively convey the need for the comic to be returned and merely blame the classmate. Some students felt anger toward the friend who lent someone else the comic book without asking permission. However, many

students saw that they were not harmed in any major way by such an act and thus found nothing to get upset about, provided the comic book was returned. Such students managed to remain calm and write down the correct answer.

For scenario 5 (Your friend uses your textbook without permission), the correct answers were “I was surprised when you used my textbook, so next time could you tell me before using it?” and “You’d be upset if someone used your textbook without permission, right? So, next time, can you ask me first?” The incorrect answers were “Don’t do that.” and “Why didn’t you ask? Don’t you have any common sense?” The correct answers expressed what the students wanted their classmate to do next time. In many of the incorrect answers, however, the classmate was blamed. What was characteristic about this scenario were the students who did not mind their textbook being used without permission. These students could calmly convey what they wanted the classmate to do next time, and so it was easy to provide the correct answer. The students who did mind were upset and, consequently, provided an angry answer; still, the hurt feelings could be managed if the other person’s behavior improved. From these findings, the characteristics of the high ratio group are that the other’s action may change, the problem may improve, and the problem is limited to the object, so that damage is limited to students themselves, and aggression may not be out of temper. As the characters in scenarios are limited to two persons, the situation is simple.

Characteristics of the Scenarios in the Middle Ratio Group

Concerning the characteristics of the scenarios in the middle ratio group, which had a correct answer ratio of 60%–70%, and specifically in scenario 4 (You gain an insulting nickname by a friend), the correct answer was “I really want you to stop calling me that because I find it offensive. How would you feel if I called you that?” The incorrect answers were “Stop calling me that.” and “If you’re going to call me that, then I’ll call you....” The correct answer, which makes it clear that the student finds the nickname very offensive, encourages the classmate to empathize with the situation, while the incorrect answers aggressively conveyed the student’s offense at the nickname and gave him/her an insulting nickname in return. Because the sense of damage from an insulting nickname varies between individuals, some could respond calmly while others could not. This scenario has the characteristics of a simple situation because the characters in scenarios are limited to two persons.

For scenario 2 (Your group members speak ill of a classmate), the correct answers were “Maybe you’re right, but shall we talk about something more interesting?” and “You shouldn’t say that. How would you feel if someone said that about you?” The incorrect answers were “Stop it.” and “I won’t say anything.” Students who considered it morally important to stop the group members’ speaking ill of a classmate and felt inclined to speak up gave rather aggressive responses. On the other hand, the responses

also revealed that there were some students who remained silent, letting the remark pass, and others who felt it safest to go along with the flow of the group. The characters in scenarios are three or more, so the situation becomes somewhat complex.

For scenario 3 (You are ignored by your friend suddenly), the correct answers were “Are you trying to avoid me? Is there something I’m doing wrong? Please tell me.” and “Why have you been ignoring me? If I’m doing something wrong, I’ll try and correct it.” The incorrect answers were “Stop ignoring me.” and “I’ll ignore you back.” Although the situation is simple because the characters consist of two persons, to be ignored suddenly shocks students and causes a considerable sense of damage. Regarding the middle ratio group’s characteristics, these findings suggest that in scenarios with two or more characters, the situation becomes complex, and the target that suffers damage is not limited to an object, such as the relationship between friends.

Characteristics of the Scenarios in the Low Ratio Group

The correct answers for scenario 6 (Your funny-face picture was uploaded to a friend’s blog without your permission) were “Why did you upload my photo to your blog without permission? You should have asked me first.” and “I made that silly face because I was among friends. How would you like it if someone uploaded your photo without permission? I want you to remove it.” The incorrect answers were “What the hell do you think you’re doing?” and “Get rid of it at once!” In the correct answers, the student asks why the friend behaved in such a way and conveys what the friend should do from now on. Many incorrect answers, on the other hand, exemplify the student merely blaming the friend. Uploading someone’s funny-face picture may give anyone who views the photo a negative impression of that person, which can invoke a considerable sense of damage. As a result, it is much easier to adopt an approach where one simply vents anger by blaming the person.

For scenario 7 (An e-mail in which you spoke ill of others was sent to other classmates without your permission), the correct answers were “I was also wrong to have sent such a nasty e-mail, but you shouldn’t have forwarded it.” and “I know I shouldn’t have sent that nasty e-mail, but you should not have forwarded it.” The incorrect examples were “Don’t do that.” and “Sorry.” In the correct answers, the student acknowledges his/her own fault while also conveying his/her disapproval at the friend’s behavior. The incorrect answers blamed the friend or acknowledged personal fault and apologized. Many of the responses involved merely apologizing probably because the students felt at fault as well for writing the negative e-mail, and so they had no other recourse but to apologize. When a student writes something negative about someone, and it is discovered by a third party without his/her permission, the sense of damage is considerable. From these findings, the low ratio group’s characteristics comprise a complex situation in which many persons are involved. Because the

problem may not be resolved, students experience great shock and a considerable sense of damage.

Conclusion

Characteristics of High, Middle, and Low Ratio Scenarios

As illustrated in the scenarios of the high ratio groups, when the problem may be resolved, and the situation is limited to two persons, students have time to assess the situation calmly and consider a response that can achieve the desired win-win, which would benefit both parties. As illustrated in the scenarios of the middle ratio groups, the situation becomes complex, and the suffered target is not limited to an object, but the relationship instead. Students find it difficult to think of a win-win resolution. As illustrated in the scenarios of the low ratio groups, in complex situations, many persons are involve, and the difficulties in problem solving evoke anger because students want to defend themselves. As a result, the feeling of anger spirals out of control, students become more upset, and it becomes harder to reach a win-win. The results of this study suggest that damage to one's self invokes a strong sense of anger, makes it hard to suppress aggressive feelings toward the perpetrator, and increases the student's emotional turbulence.

Implications for Effective Learning Materials for Psychological Education

In order for students to realize the program's objectives and to teach students the skills they can use in real life, it is important that the program's materials have clear objectives that students can easily understand. The low ratio scenarios include situations that are hard to deal with or that evoke a feeling of anger. These scenarios are better suited for the exercise scenario applicable to daily life. However, when using scenarios with an extremely low correct answer ratio, it is necessary to give careful support, for example, to teach students strategies to resolve conflicts and regain composure, to make time for discussion.

As the complexity of situations makes it difficult for students to learn key points of the win-win, scenarios with a low correct answers ratio are inappropriate when introducing the program. On the other hand, Scenarios for which many students can provide correct answers, such as those in the high ratio group, may be considered easy scenarios. So, scenarios with a high correct answer ratio are considered appropriate for teaching students win-win responses, they should be used when introducing the program.

Toda and Watanabe's (2012) findings on the relationship between sense of damage and anger showed that during the stage of the first grade of junior high school, when students suffer damage in ambiguous conditions in which they cannot understand the

other party's intentions, they often assume the other party harbors hostile feelings, and negative feelings are easily stirred up. Crick and Dodge (1994) developed the Social Information Processing Model (hereunder SIP) in which six steps determine how people in interpersonal interaction settings perceive and judge information and their subsequent behavior: (1) taking in information (encoding of cues), (2) making sense of this information (interpretation of cues), (3) clarification of goals, (4) response search, (5) response decision, and (6) behavioral enactment. In presenting the scenarios in which students easily produce the win-win response, it is also essential to have in place strategies that reduce ambiguities that affect "encoding of cues" and "interpretation of cues," to clarify the behavior of the other party and to prevent an unnecessary sense of damage or resentment in the student who responds.

During the "clarification of goals," the student will clarify whether he/she should maintain a positive relationship with the other party or prioritize his/her profit as the situation currently stands. If the student wishes to maintain a positive relationship with the other party, he/she may still feel anger; however, he/she will be mindful of avoiding an aggressive response. Therefore, when presenting these scenarios, it is essential to relate them to "the clarification of goals," clearly depict how the character in the scenario relates to the student, and thereby reduce the student's confusion due to ambiguities.

The above findings suggest that in order for students to be given scenarios for which they can easily identify the program's objectives, it is crucial to have strategies in place, depending on the situation. For example, during the introductory stage, it is a good idea to use simplified scenarios. To clarify the behavioral intentions of the other party in the scenario and to describe the relationship between the other party and the student is ideal. On the other hand, for students to learn skills that can be used in daily life, it is important that scenarios include considerable damage to self. When using these scenarios, it is necessary for students to adopt a strategy to reduce their aggressive feelings, such as pausing for a moment to regain composure. Future studies should examine whether using scenarios in which simple situations are described in detail result in any difference in the students' comprehension; they should also examine whether students will be able to apply learned skills to their real lives by using scenarios in which the situation is complex and difficult.

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