

Effects of Information on User's Personal Norm and Rule-Violating Behavior in a Recreation Setting¹

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休養地域에서 利用者の 個人規範과 規則違反 行爲에 미치는 情報의 效果¹

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ABSTRACT

This study was conducted to find out whether information based on norm activation theory affects personal norm and rule-violating behavior in a recreation setting, using the data collected from the *Second Campground* in Chiri-Mountain National Park in 1994. Of the total 280 questionnaires distributed, 253(90.4%) were usable for data analysis. Results showed that information did not increase awareness of consequences(AC) of their actions or ascription of responsibility(AR) for acts and consequences to themselves, and did not directly decrease the quiet time rule-violating behavior. However, it was found that respondents with high ACR(combination of AC and AR) or personal norms less violated the rule. Management implications of these findings were discussed.

Key words: information, personal norms, depreciative behavior, recreation setting, norm activation theory.

요 약

본 연구는 1994년 지리산 국립공원의 제2야영장에서 수집된 정보를 이용하여 규범 활성화 이론을 토대로 한 정보가 휴양지에서 어떻게 개인적 규범과 규칙위반 행위에 영향을 미치는지를 알아보기 위해 실시되었다. 배부된 총 280부 설문지 중 253부(90.4%)가 본 연구의 분석에 이용되었다. 본 연구의 결과에 의하면, 정보는 각 개인이 본인 행위의 결과에 대한 자각의 정도 또는 본인에게 본인의 행위와 결과에 대한 책임을 전가시키는 정도를 증가시키지 않았으며 직접적으로 소음 금지시간 규칙 위반행위를 감소시키지 않았다. 하지만, 행위의 결과에 대한 자각과 책임전가의 정도가 높은 응답자나 높은 정도의 개인적 규범을 가진 사람들은 소음 금지시간 규칙을 덜 위반하는 것으로 나타났다. 이러한 연구결과에 기초한 관리방안에 대해 토의한다.

INTRODUCTION

Depreciative behavior such as nuisance behavior, vandalism, littering, and violation of rules or regulations in recreation settings is a major chal-

lenge for resource managers. Depreciative behavior causes user conflict problems, environmental impacts and physical damage, and requires expensive maintenance costs. At the same time, it also destroys the quality of other users' recreation experiences.

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Many previous studies have evaluated the effectiveness of information or education programs in reducing management problems in recreation settings. In many cases, researches have shown that information or education is effective in changing user behavior(LaHart & Bailey, 1975; Muth & Clark, 1978; Roggenbuck & Berrier, 1982; Krumpe & Brown, 1982; Christensen & Clark, 1983; Ham, 1984; Oliver, Roggenbuck & Watson, 1985; Vander Stoep & Gramann, 1987). These studies have also shown how information can be used effectively in practical applications. However, as indicated by Vander Stoep et al.(1987), most studies of indirect management lack the theoretical bases necessary for generalization from specific contextual information.

Theory-based studies have applied social-psychological concepts, mostly prosocial behavior theory, to explain why people behave in undesirable ways and how negative behaviors might be reduced in recreation settings(Christensen & Clark, 1983; Vander Stoep & Gramann, 1987; Kim, 1990). Prosocial behavior is defined as a behavior which is intended to benefit other people(Michener, DeLamater & Schwartz, 1990). Michener et al. (1990) described three major factors on prosocial behavior: 1)gaining social and material rewards, 2)normative explanations(social norms and personal norms), and 3)arousal of emotion(e.g., empathy). These motivations can occur simultaneously or individually, depending on specific situations(Michener, DeLamater & Schwartz, 1990). Cost-reward motivation is based on the assumption that people are motivated to act in ways that maximize rewards and minimize costs. Social norms specify expected group member behavior under given situations. Widely shared social norms have been considered to be important indicators to predict prosocial behaviors(Michener, DeLamater & Schwartz, 1990).

There has been some criticism, however, of external reward theory for its explanation of altruistic behaviors which involve self-sacrifice(Schwartz, 1977), and of social norm theory for its explanation of individual differences in helping behavior, which are thought to be catalyzed by internalized, personal norms(Lantane & Darley,

1970; Schwartz, 1977). Criticisms regarding social norm theory have contributed to the development of personal norm theory, which provides more complete explanations of helping behavior(Schwartz, 1977; Schwartz & Howard, 1981). Personal norms are defined as feelings of moral obligation for specific actions that are derived from an individual's internalized value system(Schwartz, 1977; Michener, DeLamater & Schwartz, 1990). The strength of this theory is that it explains not only the conditions under which norms are likely to prompt helping behavior, but also individual differences in helping behavior within particular situations(Michener, DeLamater & Schwartz, 1990).

According to the model, correspondents between people's norms and their behaviors can be predicted only when norms are activated in a particular situation. Schwartz(1968) identified two necessary preconditions for correspondence: 1)individual awareness that potential acts may have consequences to others' welfare(AC); and 2)ascription of responsibility for acts and consequences to self(AR). Helping behaviors are more likely to occur when these two preconditions activate personal norms. Personal norm theory has been empirically supported by research on various kinds of helping situations, such as bone marrow donation(Schwartz, 1970), reading texts for blind children(Schwartz & Howard, 1980), working for increased welfare payments for the elderly(Schwartz & Fleishman, 1978), and donating blood(Pomazal, 1974).

Norm activation model has been applied to other environmental behaviors such as littering(Heberlein, 1971, 1974), lead-free gasoline purchasing behavior(Heberlein & Black, 1974), yard burning(Van Lier & Dunlap, 1978), and recycling behavior(Hopper & Nielsen, 1991). It has also been applied to depreciative behaviors(Vander Stoep & Gramann, 1987; Gramann, Stewart & Kim, 1989; Kim, 1990), and to management practices in recreation settings(Noe, Hull & Wellman, 1982).

These studies suggest that the norm activation model is effective in changing depreciative behavior in recreation settings. Most studies, however,

found a direct relationship between information treatments and behaviors, operating under the assumption that AC or AR information would activate personal norms, thereby changing behaviors or behavioral intentions. These studies didn't examine whether or not AC or AR message actually changed the AC, AR or personal norms of users, which subsequently would influence the users' depreciative behaviors. More studies are needed on a variety of issues and situations to obtain more understanding and better practical applications in recreation settings.

This study was conducted to find out whether information based on Schwartz's norm activation model actually works, using the quiet time rule-violating behavior at a campground. Specific questions of this study are: 1) Are there differences in AC, AR, personal norms, or rule-violating behavior(i.e., singing after 10 p.m.) among different information treatment groups? 2) Is there a relationship between AC or AR and personal norms for quiet time rule? 3) Is there a relationship between AC or AR and rule-violating behavior? and 4) Is there a relationship between personal norms and rule-violating behavior?

METHODS

Study Site

This study was conducted in 1994 at a developed campground, *Second Campground*, located within the Chiri-Mountain National Park(CMNP) in Korea. *Second Campground* is located at the entrance of the northern part of the CMNP, which belongs to Chollabukdo Province.

Sampling

The subjects for the study were obtained from on-site visitors at the *Second Campground* during August, 1994. The respondents were composed of all individual campground users over 17 years old. Of the total 280 questionnaires distributed, 253(90.4%) were usable for data analysis after excluding under 17-year old respondents or unreliable responses.

Information Treatments

Information was given three ways: 1) on the front page of the questionnaire, 2) in a brochure, and 3) through the brochure plus instruction. For the brochure and brochure plus instruction, the surveyor posed as a park employee and visited every tent, distributing brochure from 6 to 8 p.m.(the time most campers arrived at the campground). Brochure was written under the name of Chiri-Mountain National Park.

Seven treatments including the control group which got no information were given to respondents. The content of the information was constructed on the basis of Schwartz's norm activation model(Schwartz, 1968). Information treatment groups were as follows:

1. Control group: No information was given.
2. Treatment group I: Without Awareness of Consequences and Ascribing Responsibility (WACAR) group. This group received directive information as has been frequently used in recreation settings: "Please don't make noise by singing from 10 p.m. to 7 a.m. in this campground."
3. Treatment group II: Awareness of Consequences(AC) group. This group was given information explaining the consequences to other campers of their singing behavior at night: "Please don't make noise by singing from 10 to 7 a.m.. Many campers in this campground say that they came to this place to enjoy a quiet and peaceful atmosphere. Only one person's inconsiderate singing during this time not only interferes with their sleeping, but also seriously destroys the whole atmosphere of this campground and many others' camping experience."
4. Treatment group III: Ascription of Responsibility(AR) group. The information for this group was designed so that respondents would ascribe responsibility for their actions to themselves: "Please don't make noise by singing between 10 p.m. and 7 a.m.. The whole atmosphere and many others' camping experiences depend on how you behave in this campground."
5. Treatment group IV: Awareness of Conse-

quences and Ascription of Responsibility (AC +AR) group. The combined information for both AC and AR was given: "Please don't make noise by singing from 10 p.m. to 7 a.m.. Many campers in this campground say that they come to this place to enjoy a quiet and peaceful atmosphere. Only one person's inconsiderate singing during this time not only interferes with their sleeping, but also seriously destroys the whole atmosphere of this campground and many others' camping experiences. The whole atmosphere and many others' camping experiences depend on how you behave in this campground."

6. Treatment group V: Brochure(BR) group. The brochure was written with exactly the same content of information as that of Treatment group IV.
7. Treatment group VI(BR+Instruction) group: This group involved distributing brochures used in Treatment group V and telling campers, "Please don't make noise by singing after 10 p.m. in this campground. Please read through this brochure."

Procedures

Data were collected by administering an on-site survey questionnaire. Surveyors camped at *Second Campground* during the surveying period. Because many campers left the campground early in the morning, surveyors got up about 5:30 a.m., and distributed questionnaires by visiting tents as campers got up.

Measures

To measure rule-violating behavior for quiet time, respondents were first asked if they had participated in any singing activity between 6 p.m. yesterday to 6 a.m. this morning. If they answered "yes," they were asked, "What is the latest time period that you were singing?" They were asked to fill in the space, "about from ____ to ____ o'clock."

Awareness of consequences was measured by two items which asked participants to rate the influence of their singing after 10 p.m. on other people's camping experiences and sleeping at

night. Two specific statements were: 1) "Singing after 10 p.m. will destroy the camping experiences of many others who want to have a quiet and calm atmosphere in this campground," and 2) "Singing after 10 p.m. will interfere with many other campers' sleeping in this campground." Responses were given on five point scales ranging from "strongly disagree" to "strongly agree."

To measure the respondent's ascription of responsibility(AR), respondents were asked how much they agreed with the following statements: 1) "Singing after 10 p.m. in this campground is OK, because singing in the campground is very common and many other campers also take singing in the campground for granted," and 2) "If other campers in this campground sing after 10 p.m., my singing after 10 o'clock in this campground is OK, because even if I sing after that time, there are not many additional impacts to other campers."

The measure of users' norms toward singing activity is partly patterned after the measurement of personal norms by Schwartz(1968) and Cialdini et al.(1991). Three hypothetical incidents were given. Respondents were asked to reflect upon each incident and answer the question, "How much do you feel a personal obligation not to sing after 10 p.m. in this campground when...?" The following are the three specific hypothetical incidents:

1. "...when your group members are singing after 10 o'clock at night."
2. "...when many other campers in this campground are singing after 10 o'clock at night."
3. "...when there are no managers or officials to control or supervise this campground."

The response scale for personal norms ranged from 1(feel no obligation) to 5(feel extremely strong obligation).

RESULTS

Information Treatments and Rule-Violation Behavior

It was hypothesized that information treatments could directly decrease the user's rule-violating behavior. Respondents who didn't sing

or participate in a singing activity after 10 p.m. were regarded as "no violation," while respondents who participated in singing after 10 p.m. were regarded as "violation." Overall, 31% participated in singing activities and 12% violated the 10 p.m. quiet time rule.

There were no significant relationship between information treatments and violation of quiet time. About 9% of the BR+Instruction group, 11% of the BR group, and 13% of the control group violated the quiet time rule.

Information Treatments and Users' AC, AR, and Personal Norms

It was hypothesized that respondents who received AC or AR messages would have higher degrees of AC or AR than those who didn't receive any messages. It was also hypothesized that there would be a difference in effectiveness of information on AC and AR, depending on the type of information treatment.

The results showed that there were no significantly different effects of information treatments on users' AC and AR. There were also no significant effects of information on personal norms regarding quiet time.

AC, AR, and Personal Norms

It was predicted that respondents who had high degrees of AC and AR would show stronger personal norms regarding quiet time. For the analysis, AC and AR were divided into "high"

and "low" categories at approximately the median point(i.e., 3.5). Results showed that respondents who were categorized as "high" in both AC and AR showed significantly stronger personal norms than respondents who were categorized as "low" in both AC and AR, as shown in Table 1. Only the subgroup which was categorized as "high" in both AC and AR showed statistically stronger personal norms than the other subgroups, including AC(Low) & AR(Low), AC(Low) & AR(High), and AC(High) & AR(Low). There were no statistical differences in personal norms among subgroups, AC(Low) & AR(Low), AC(Low) & AR(High), and AC(High) & AR(Low)(Table 1).

AC, AR, and Personal Norms, and Rule-Violation

There was a significant relationship between combinations of AC and AR and rule-violating behavior. Only 2% of AC(High) & AR(High) violated the quiet time rule, compared to 19% of AC(Low) & AR(High), 18% of AC(High) & AR(Low), 33% of AC(Low) & AR(Low)(Table 2).

There was also a significant relationship between personal norms and rule-violating behavior. For the analysis, the three measures of personal norms were combined(correlations of all combinations ranged from 0.69-0.79) and personal norms were divided into two categories at approximately the median(three or less on the 5-point scale was categorized as "low," over 3 was categorized as "high"). About 7% of those who rated "high"

Table 1. The relationship between combinations(ACR) of users' degree of awareness of consequences (AC) by quiet time violation and ascription of responsibility(AR), and users' degree of personal norms.

ACR	N	Mean	SD	Mean Rank
AC(Low)&AR(Low)1	6	2.4	0.8	70.1
AC(Low)&AR(High)2	36	2.8	0.8	107.1
AC(High)&AR(Low)3	106	2.6	0.6	94.4
AC(High)&AR(High)4	94	3.5	0.9	160.9

Kruskal-Wallis Test: CHISQ=51.485 Df=3 Prob>CHISQ=0.0001

1 * 2 Wilcoxon 2-Sample Test: Z=-1.4452 Prob> |Z|=0.1484

1 * 3 Wilcoxon 2-Sample Test: Z=-1.0075 Prob> |Z|=0.3137

1 * 4 Wilcoxon 2-Sample Test: Z=-2.7939 Prob> |Z|=0.0052

2 * 3 Wilcoxon 2-Sample Test: Z=1.0509 Prob> |Z|=0.2933

2 * 4 Wilcoxon 2-Sample Test: Z=-4.1002 Prob> |Z|=0.0001

3 * 4 Wilcoxon 2-Sample Test: Z=6.7499 Prob> |Z|=0.0001

Table 2. The relationship between combinations(ACR) of users' degree of awareness of consequences (AC) by quiet time violation and ascription of responsibility(AR), and the quiet time rule-violation.

ACR	Quiet time rule-violation		
	No	Yes	Total
AC(Low)&AR(Low)	4(66.6)	2(33.3)	6(2.4)
AC(Low)&AR(High)	29(80.6)	7(19.4)	36(14.2)
AC(High)&AR(Low)	94(82.5)	20(17.5)	114(45.1)
AC(High)&AR(High)	95(97.9)	2(2.1)	97(38.3)
Total	222(87.8)	31(12.3)	253(100.0)

Fisher's Exact Test(2-Tail) P-value=0.0001

Table 3. The relationship between users' personal norms and the quiet time rule-violation.

Personal Norms	Quiet time rule-violation		
	No	Yes	Total
Low	99(81.8)	22(18.2)	121(47.8)
High	123(93.2)	9(6.8)	132(52.2)
Total	222(87.8)	31(12.3)	253(100.0)

Fisher's Exact Test(2-Tail) P-value=0.0069

on personal norms violated the quiet time rule, compared to 18% of those who rated "low"(Table 3).

DISCUSSION

This study examined whether the information based on the norm activation model might increase the awareness of consequences(AC), ascription of responsibility(AR), or personal norms, and thereby reduce depreciative behavior in a recreation setting. While this study supported the findings of previous studies—that high AC and AR could activate norms and subsequently influence individual's behavior(Schwartz, 1968, 1970),—use of information in this study failed to support the findings of other studies that information could directly change behaviors(Oliver, Roggenbuck & Watson, 1985; Vander Stoep & Gramann, 1987).

The Effects of Information on Degree of AC, AR, Personal Norms, and Rule-Violating Behavior

Several possible reasons explain why information distribution in this study didn't decrease rule-violating behavior. First, many respondents didn't read or remember the information. Only 52% of

information groups had correct knowledge about the rule for quiet time. This may have reduced the effectiveness of information in increasing AC, AR, and personal norms, and accordingly, in decreasing rule-violating behavior. Of the information groups which were given information on the front of the questionnaire, many didn't know or gave incorrect answers about the quiet time rule.

Second, AC or AR information might failed to increase because respondents might have answered the questions for AC, AR, and personal norms on the basis of their previous night's experiences. At the time of this survey, 13% of the campground users had been singing after 10 p.m., and many people had not gone to sleep even after 10 p.m.. This might have reduced the effectiveness of the information by decreasing the salience of consequences and the responsibility for their behavior. The seriousness of other peoples' need and the salience of consequences and responsibility are important factors in activating personal norms and behaviors(Schwartz, 1968, 1970). Similarly, the campground situation in which many users participated in singing after 10 p.m. might have diffused responsibility to be quiet out of respect for others' experiences(Latane

& Darley, 1970; Schwartz & Clausen, 1970). Based on this inference, responses to the questions on AC, AR, and personal norms could be more influenced by present conditions in the campground, than by the content of the information.

Third, another explanation could be the general content of the AC or AR messages and the familiarity of the recipients with the messages. Schwartz(1970) found that the personal norms of groups with higher salience of consequences and responsibilities were generally more activated and that these groups tended to be of more help to others in need. If AC or AR messages used in this study did not make additional changes in AC or AR, personal norms of users might not have been activated. AC or AR information might be most effective with people who are not aware of consequences of their behaviors, or who have little responsibility for their actions.

Fourth, singing in the recreation setting is a group activity rather than an individual activity. Therefore, the influence of group members is likely to be an important factor in determining rule-violating behaviors. Although individuals might have personal norms and correct knowledge, their behaviors might be influenced by other group members' norms and knowledge. Based on the data in this study, only about 3% of the total respondents were alone, while 31% were in a group of 2-3, 34% were in 4-5, and 32% were in a group of over 5 persons. This implies that most users in the campground were involved in complex social interaction and group decision making processes. Most studies which have found the use of information to effectively reduce depreciative behaviors have studied individual behaviors. These include littering and tree cutting (Oliver, Roggenbuck & Watson, 1985), touching cave formations(Gramann, Stewart & Kim, 1989), damaging cultural objects(Vander Stoep & Gramann, 1987), bone marrow transplant donation(Schwartz, 1970), and volunteering for welfare for elderly people(Schwartz & Fleishman, 1978).

Finally, the quiet time rule was 10 p.m.. However, campers' established normative standards and expectations from past experience or other information sources tended toward later time.

These factors might have more strongly influenced their AC, AR, and personal norms than the information provided to them by this study, which might have reduced the effectiveness of the information.

MANAGEMENT IMPLICATIONS

Although norm activation theory was supported by findings in this study, the failure of information use to activate personal norms and reduce rule-violation led to some suggestions for more effective use of information and further studies.

First, information(e.g., brochure) might have been designed for greater interest, in order to increase the number of readers. In addition, the use of a greater variety of communication channels and resources might have helped to increase knowledge and retention of information(Roggenbuck & Berrier, 1982).

Second, managers could investigate the primary reasons for depreciative behaviors and the degree of awareness of consequences and responsibility before using information or education programs as management tools. The content of information or education programs might be better designed on the basis of this collected information. For example, if investigation shows that many people are not aware of the problems and consequences of their actions, the content of information should be designed to increase the awareness of consequences of impact behaviors. However, if most people are aware of the consequences of their behaviors and the depreciative problems still persist, managers could add other content to increase the salience of AC and AR. It might be worth future research to investigate how information designed on the basis of different levels of the salience of AC or AR could influence personal norms and behaviors in recreation settings.

Third, some previous studies found that only simple AC messages can reduce depreciative behaviors(Oliver, Roggenbuck & Watson, 1985; Vander Stoep & Gramann, 1987). However, the results of this study suggest that information should be designed to increase both AC and AR

in order to reduce depreciative behavior.

Fourth, another important notion in this study is that along with use of information, controlling present conditions may be important. There is a similar example in littering behavior; if there are a lot of existing littering problems in a certain area, additional people are more likely to also litter in that place. This could be due to reduced personal obligation caused by the decreased salience of awareness of consequences and increased denial of responsibility. For a place like the study site, in which user groups are widely exposed to one another, information for AC and AR might not be so effective because personal norms could be influenced by each other's behaviors and present conditions.

Finally, the effectiveness of information based on norm activation theory doesn't seem to be effective for group activity. Considering many recreation activities are group activity, more research on group behaviors could provide more comprehensive understanding of the effects of information on user behavior in recreation settings.

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