Types of Smoking Temptation

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Background. In Seoul, Korea, 70% of all adult males are reported to be smokers, and guidelines to smoking cessation generally include ways to help smokers avoid situations of smoking temptation. However the phenomenon of smoking temptation has been scarcely studied. Therefore, it is critical to acquire a better understanding of smoking temptation for more effective nursing practice.

Aim. This study intends to analyze the subjectivity of smoking temptation.

Design. Q-methodology, which applies a scientific method to subjectivity, was utilized.

Findings. Five distinct smoking temptation modalities, on Q-types, emerged from the Q-sort: 1) Urge to facilitate interpersonal relation; 2) Psychological desire for tranquility; 3) Habituation in social life; 4) Habituation in daily life; and, 5) Nicotine craving combined with daily routine.

Conclusion. It is hoped that analysis of the five types of smoking temptation identified in this study will contribute to the body of knowledge and a better understanding of why smokers are addicted to smoking.

Key Words: Smoking temptation

INTRODUCTION

In Seoul, Korea, 70% of adult males are reported to be smokers (Nam et al., 1996). Therefore, establishing a comprehensive smoking cessation support service has become a health priority for Korea and the impetus for providing counseling to quit smoking has become an integral part of routine health care.

However, since smoking is strongly addictive, recent attention has been focused on the problem of smoking relapse (Ryan et al., 1989).

Studies which have asked smokers what they believe caused their relapse (Shiffman, 1982; Marlatt & Gordon, 1985) have generally not supported the view that withdrawal symptoms are the major cause of relapse; but rather, situational factors are most cited as precipitating

factors (West, Hajek & Belcher, 1989).

Persistence in abstinence is thought to require successful management of "relapse crises," avoiding high-risk situations in which individuals feel a desire to smoke which are known as smoking temptation (Marlatt & Gordon, 1985).

One of the guidelines of such self-control programs as smoking cessation intervention is suggested as teaching the techniques of stimulus control and focusing attention away from temptations (Strayhorn, 2002). Therefore, smoking temptation is thought to play an important role in maintaining regular smoking patterns in current smokers, and in leading to relapse in smokers attempting to quit. However, studies regarding smoking temptation have been scarcely found in nursing literature (Chang & Park, 2001).

Smoking temptation has generally been regarded as a

desire to smoke, therefore, is usually considered to be a subjective stimulus, in the sense that one must be aware of a desire in order to be tempted to smoke. Within the scientific community however, the terminology of smoking temptation is clouded in controversy because it has been used to describe tempting situations as well as the attributes of craving (O'Connell & Martin, 1987; Michael, 2000).

Hospitalized patients are often forced to be nicotine-free for a time because of hospital smoke-free policies. As a result, hospitalization for severe illness may be the ideal time to implement a smoking cessation intervention and encourage long-term abstinence (Tiffany, 2001). In an effort to identify interventions that can reliably influence smoking temptation, and assess the nexus between smoking temptation and smoking behavior, it is critical to have an understanding of smoking temptation for effective nursing practice.

This study is designed and carried out to classify and identify smoking temptation and to describe the essence of smoking temptation.

METHODS

Q-methodology, which was used to analyze the data, is a creative research method not only for understanding, explaining and exploring the richness of human subjectivity but also to broadly learn of the nature of the phenomena in a more scientific approach. Developed by William Stephenson, it is based on abductory logic, variously described as 'retroduction', 'presumption', 'augment hypothesis', 'guessing intrinsic thought process' and concerned with the invention or creation of hypotheses and proposing a theory. Abduction logic is concerned with explanation from the whole to an explanation (Mckeown & Thomas, 1988).

Smoking temptation has generally been regarded as a desire to smoke, therefore, is usually considered to be a subjective experience, so there are no external norms to describe the smoking temptation. Q-methodology deals with matters ipsative (of the self) rather than with matters normative. Q methodology induces the respondents to compare the Q-sample and decide the order of preference in order to identify the factors that are the cause of differences. Consequently, the method emphasizes the logic of abduction with a focus on the discovery or creation of a theory.

In this study, non-structured Q-samples were used, be-

cause there was no ready method to posit specific theoretical ideas related to smoking temptation.

Delineation of Q-population

The population delineated for this study is self-referent descriptions, descriptions of opinions, regarding smoking temptation. The concern in Q-methodology is always with matters of impression, of opinion, judgment, value, belief and the like, and not with matters of fact. The Q-population is the collection of items gathered for a study of Q-methodology. Therefore in this study, the objective in constructing the Q-population was to acquire every available statement relating to smoking temptation.

In collecting the statements to delineate the Q-population, the stages of change for smoking cessation, which were likely to be involved on smoking temptation (Velicer, DiClemente, Rossi, & Prochaska, 1990), were considered. A stage of change is one of the key constructs of the Transtheoretical Model, which has been used successfully to promote smoking cessation. Stages of change consist of 5 stages, namely precontemplation, contemplation, preparation, action and maintenance. Precontemplation is the stage in which a person does not intend to change their behavior in the foreseeable future, usually measured as the next 6 months. Contemplation is the stage in which a person plans to change in the next 6 month. Preparation is the stage in which a person intends to take action in the next month and have unsuccessfully taken action in the past. Action is the stage in which a person has overtly modified their risk behavior, in this case - smoking cessation within the past 6 months. Maintenance is the stage in which persons work to prevent relapse (Tiffany, 2000).

For delineating Q-population, smokers wrote their opinions as a statement form as to when they were tempted to smoke, how they had become a smoker, what they anticipate from smoking, and why they are continuing to smoke.

The statements were gathered from 207 smokers in all five stages of change for smoking cessation. As to a breakdown in terms of the particular stage of change for smoking cessation, fifty-three were in Precontemplation; ninety-nine in Contemplation; seventeen in Preparation; nineteen in Action; and, nineteen in Maintenance.

After summarizing the descriptions from open-ended structured questionnaires, two smokers were directly interviewed by the researcher to get in-depth descriptions about smoking temptation. Each interview with verbal

consent lasted 1-3 hours and was either tape-recorded and/or writing down the statements immediately after the interview by the researcher. Data from both open-ended structured questionnaire and interview were summarized and analyzed with 100 self-referent descriptions on smoking temptation.

Selection of Q-sample

Q sample is a selection of items taken from the Q-population. The objective in Q-sampling is to provide the individual with a selection of meaningful items that she/he can order in some way so as to provide a model of what she/he thinks. Characteristics of smoking temptation include emotion, attitude, values, and the interaction with specific situational variables. The researcher read through the 100 descriptions repeatedly, sorted and classified them into 4 categories according to inherent perspectives on which the statements are based: smoking temptation as a conditioned cue, smoking temptation as a biological desire, smoking temptation as a habitual behavior and smoking temptation as an occasion to cognitive process.

From the 100 self-referent descriptions, 43 descriptions were selected to be included in the Q-samples.

Selection of P-sample

P-sample is the selection taken from the collection of people available as subjects. Thirty smokers were selected as P-samples.

The P-samples consisted of twenty-three males and seven females. In terms of the stage of change for smoking cessation, ten were in Precontemplation; nine in Contemplation; one in Preparation; one inaction; and, nine in Maintenance.

Data Collection

Forty-three cards stating each of forty-three Q-samples as well as sorting instructions were prepared. The instruction given in figure 1 are for a Q-sample of size n=43, with the following 'forced' distribution of scores. The forced-distribution system, Q-sorting, outlined leads to an individual's dependency in the grading of the Q-samples. As shown in Figure 1, the forced-distribution model used in this research is based on a nine-tiered scale in the form of a quasi-normal distribution.

The P-sample were asked to sort the 43 Q-samples into 3 macro levels; agree, disagree and neutral and re-sort the items of agree, disagree, and neutral into the nine

specific agreement levels. After Q-sorting, data of the demographic, socio, and smoking-related attributes were recorded.

The researcher carried out in-depth interviews with every P-samples in relation to the Q-samples that each P-sample either strongly agreed or strongly disagreed in order to discover the rationale for such strong agreement or disagreement about selected Q-samples. All interviews were tape recorded with the consent of the subjects and transcribed for input of interpretation of Q-factors.

Analysis

The Z-score of Q-sort data were computed and principal components factor analysis were carried out by the use of the PC-QUANL Program.

In determining the number of types, lower correlation between factors and higher variance were considered.

Q-factors are operant combinations of P-samples, i.e. combinations of P-samples who have sorted the Q-samples in the similar ways. The P-samples are linked together by common beliefs, attitudes, and opinions. A Q-factor array represents a hypothetical attitude, the common attitude of the P-samples on the factor. The arrays are weighted according to each P-sample's loading on the factor.

RESULTS

Interpretation of Types

Q-factors are operant combinations of "people alike", i.e., combinations of people who have sorted items in similar, correlated ways. As for forming Q-types with the QUANL Program, negative items of factor I and factor III were extracted, made positive and formed into added Types IV and V. Therefore, Type IV was extracted from the factor I, producing Type I and Type IV, and Type V was extracted from factor III, producing Type III and V.

As such, they represent the characteristics of a double-edged knife. Five types of smoking temptation were classified from the 3 factors, which explain 48.45 percent of total variance. Factor I accounts for 32.33 %; factor II

Figure 1. Q-Sample Distribution (N=30)

Level	Strong agreement			Neutral	Strong disagreement			
Weight	9	8	7	6	5	4	3	2	1
Frequency	2	3	5	7	9	7	5	3	2

for 8.43 %; and factor III for 7.7 %. Each person's factor loadings, shown in Table 4, indicate the degree of association between that person's individual Q-sort and underlying opinion structure of factors. These types constitute the smoking temptation discourses this study attempts to identify. The Eigen value and variance are listed in Table 1 and correlation between referenced types is listed in Table 2.

The most faithful way to present the five Q-types is to let each type speak for itself, looking at the extreme scores for each type, checking the internal arrangement of Q-statements in a type, and comparing the scores that individual Q-statements receive from each type. A label and narrative are given to each type which represents the researcher's best interpretation of how each type constructs its own smoking temptation based on a shared set of assumptions. Data about the demographic and smoking-related attributes were considered in delineation of characteristics of smoking temptation of each type. The five types identified in this manner are as follows (the numbers within parentheses indicate the description number in Table 3).

Type I: Urge in need of facilitating interpersonal relation

Type I, consisting of 3 P-samples, was designated as "the Urge in need of facilitating interpersonal relation." P-samples in Type I were males with an average age of 23.3, and an average duration of smoking of 2.7 years. Those in Type I were characterized by being the youngest in mean age and shortest duration of smoking among the five types. As for the smoking characteristics, one of three stated he anticipate restfulness from smoking. While the other two stated they didn't have any kind of anticipation from smoking. The cue that evoke smoking temptation for them were boring situation, drinking with friends and engaging in games. As for the stage of change for smoking cessation, two of the three were in the Maintenance stage and the other was in Contemplation.

Type I reflects how smokers establish interpersonal re-

lation through smoking. They were accustomed to interpreting smoking as a lubricating behavior to promote quality of interpersonal relation.

The extreme scores for each factor, and scores of individual statements from each discourse of P-samples revealed that the main cues of temptation to smoke were events in which people had some sort of a relationship. They were not be tempted when they were alone but were tempted to smoke in the presence of somebody enjoying smoking and as one of the compositions of celebrating events (Referenced No of Q-sample in Table 3: 34, 4, 6). They considered that smoking could be charming or attractive behavior to others (37). Even in a "no smoking" place, they tended to attempt smoking if they could (33).

However, they disagreed about situations in which they may be tempted to smoke, such as when they were anxious and agitated, just after getting out of bed in the morning, over drinking or coffee and in the toilet (2, 22, 8, 24, 5).

They tend to smoke to enjoy situational factors such as events or meeting with friends.

Number 25 P-sample with the highest score of this type was a male high school student who started smoking at 15 years of age and smoking for 4 years. He stated the cue for smoking temptation is usually when he is bored in daily life. He started smoking under the influence of friends who smoked out of curiosity. He had been in abstinence from smoking since six months ago. He said the biggest barrier for smoking cessation was he himself. He had not experienced withdrawal symptoms from smoking cessation. Even as he is in abstinence of smoking, he is tempted to smoke whenever a friend asks him to join in smoking. He believes in the value of smoking cessation: the motivation and willingness not to smoke are very important factors. In his smoking experience, he said that he sometimes became rather irritable while smoking. As for health, he perceived his respiratory system is not in good condition.

Table 1. Eigen Value & Variance

	Factor I (Type I, Type IV)	Factor II (Type II)	Factor III (Type III, Type V)
Eigen Value	9.6977	2.5279	2.3102
Percentages of variance	.3233	.0843	.0770
Cumulative (%)	.3233	.4075	.4845

Table 2. Correlation between Reference Types

Type	I	II	III	IV	V
I	1.0000	.473	.564	-.033	-.029
II		1.0000	.357	.418	.492
III			1.0000	.424	.170
IV				1.0000	.713
V					1.0000

Table 3. Q-sample and Z-score by Type

No. of Q Sample	Q-Statements	Type Samples	Type I N=3	Type II N=12	Type III N=8	Type IV N=5	Type V N=2
1.	In hard times, I am tempted to smoke.		-.47	.69	.24	.80	1.00
2.	When I am anxious, I am tempted to smoke.		-2.07	-.18	-1.18	1.15	1.05
3.	I am tempted to smoke when I feel good.		.58	-1.14	-1.35	-.15	.34
4.	I am tempted to smoke whenever I see somebody smoking.		2.23	.59	1.32	-.09	-.22
5.	I feel like smoking when I enjoy a conversation with someone while having coffee.		-.27	.07	1.12	1.13	1.27
6.	I feel like smoking to gain a sense of pleasure.		1.35	-.38	-.22	-.91	-.05
7.	I feel like smoking in the presence of friends who smoke.		1.85	.75	2.01	.76	.61
8.	I feel like smoking over drinks with someone.		-.74	1.25	-.45	1.74	.83
9.	I want to smoke to get relief from stress.		.83	1.59	.10	.56	1.17
10.	I am tempted to smoke under the same circumstances I tended to smoke in my younger days.		.09	-.22	.50	-1.32	-.56
11.	I am tempted to smoke when my friend suggest a smoke.		1.88	.73	2.03	.88	-1.00
12.	I believe smoking temptation comes from nicotine dependency.		-.12	.26	.02	-.54	.27
13.	I do not experience withdrawal symptoms when I abstain from smoking.		.19	.32	1.57	-.89	-1.00
14.	I believe smoking after meals helps digestion.		.05	-.11	.52	2.27	1.56
15.	I am tempted to smoke when I need to make an important decision or to think seriously.		-.42	.23	.73	.57	.78
16.	I do not think the craving for tobacco has anything to do with nicotine dependency.		-.38	-1.23	.68	.00	-1.39
17.	I can't stop smoking because I become agitated and perspire whenever I abstain from smoking.		-1.30	-2.09	-2.02	-1.11	-.83
18.	I consider tobacco as a kind of food that satisfies my physiological needs.		.10	-1.40	-.91	-.36	-.44
19.	I enjoy feeling fuzzy while smoking.		-1.33	-.81	-1.14	-1.50	-1.39
20.	I smoke several cigarettes consecutively after not being able to smoke for several hours.		-.50	-.88	-1.92	-1.87	-.66
21.	I tend to eat more between meals due to a feeling of something lacking while not smoking.		-1.35	-.49	-1.00	.94	1.22
22.	I am tempted to smoke when I first get up in the morning.		-1.62	-.86	-.20	1.04	.50
23.	I don't think I enjoy the taste of cigarettes but I don't want to stop because smoking has already become a part of my life.		-1.52	-.74	-.34	-.45	-2.05
24.	I feel like smoking while I am sitting on the toilet for a bowel movement.		-.33	-.32	1.18	2.10	2.00
25.	I am tempted to smoke at those times I usually smoke.		.95	-.70	1.29	.35	.22
26.	When I am bored from ennui, I smoke to pass the time.		-.07	-.01	-.15	-.92	-.22
27.	I am tempted to smoke on a regular time interval basis in my daily routine.		.50	.98	.67	.60	1.00
28.	Habitual craving for cigarettes make it hard to abstain from smoking.		1.00	1.79	.36	-.45	1.17
29.	I am tempted to smoke whenever I have the time for a smoke.		-.88	.22	-.12	.16	-.17
30.	I smoke at those times when I need to think over something by myself.		.45	1.51	-.79	.81	.39
31.	Smoking has nothing to do with serenity of mind.		.28	-.57	-.62	-.82	.05
32.	I desire a cigarette with the anticipation of gaining serenity of mind.		-.57	-.33	.88	.40	.00
33.	I try to smoke even in no smoking areas.		-.40	-1.80	-1.09	-1.17	-2.44
34.	I do not feel the desire to smoke while I am alone.		1.69	-.96	1.63	-.19	-1.22
35.	I want to smoke to have the time to comfort myself.		.43	.98	.08	-.05	.66
36.	I believe smoking gets rid of my depressed feelings.		.59	.69	.15	.02	-.78
37.	I think the feature of a smoking person is impressive.		.00	-1.34	-1.36	-2.19	-1.56
38.	I anticipate peace of mind when I smoke.		.83	1.52	.03	.09	.05
39.	I smoke to rid bad feelings such as grief and negativity of mind.		-1.40	.22	-.36	.32	.88
40.	I smoke to have time to rest.		.78	1.46	-.18	.43	.00
41.	I smoke to arrange the process of thinking.		.43	1.26	.22	-.18	-.61
42.	Smoking gives me hope that something good will be happen in my future.		.81	1.01	-1.17	-.36	.61
43.	It is very hard for me to reduce the amount of smoking even when I am sick.		-.99	-1.56	-.72	1.59	-1.65

Type II: Psychological desire for tranquility

Type II, consisting of 12 P-samples among which four were females, was designated as "psychological desire for tranquility." The mean age of P-samples in Type II was 29, and the mean duration of smoking was 8.8 years. As for the smoking characteristics, eleven of twelve stated they had the intent of relieving stress, gaining tranquility and peace of mind by smoking while the other stated he anticipated good digestion after smoking. The cue that evoke smoking temptation for them were stress, the need to be alone to think and being with friends that enjoy smoking. As for the stage of change for smoking cessation, three were in Precontemplation; five in Contemplation; one in Action; and, three in Maintenance.

Type II reflects the cognitive aspect of smoking temptation explaining why smokers engage in smoking even though they are alone. They were accustomed to considering smoking as a way to get relief from stress or to concentrate better.

The extreme scores for each factor, and scores of individual statements from each discourse of P-samples revealed that the main tempting cues to smoke were occasions when time was needed to think alone (Referenced No of Q-sample in Table 3: 30). They considered smoking to aid in thinking more deeply because they had experienced a certain clarity of mind while smoking during complicated problem solving situations (41, 42). They admitted smoking as a habitual behavior but they had done it to seek psychological tranquility (28, 38).

They were not tempted to smoke on a regular basis during daytime or after meals. They did not consider smoking a habitual behavior such as eating (18, 14, 25).

Stress was the most frequently stated reason to smoke among the 5 groups. They expressed strong belief that smoking could be a good way to relieve stress especially in negative situations. They stated smoking became habitual combined with thinking and had given them a

Table 4. Type, Weight and Demographic & Smoking Characteristics of P-Samples

Type	Item no.	Factor weight score	Age	Sex	Duration of Smoking	Stage of change for smoking	Anticipation to engage in smoking	Cue/Situation of smoking temptation
Type 1	25	1.4142	19	M	4 years	Maintenance	–	Boring situation
	26	.2030	30	M	1 year	Maintenance	–	Drinking with friend
	28	.8962	21	M	3 years	Contemplation	Restful	Engaging in games
Type 2	1	.2821	24	F	2 years	Precontemplation	Good feeling	The feeling of despair
	11	.2743	27	M	2 years	Maintenance	Relieving stress	Stress
	13	.4039	25	M	10 years	Contemplation	Good digestion	After meal
	16	.5055	27	M	7 years	Contemplation	Emotional stability	Stress
	17	.1452	38	M	18 years	Action	Relieving suffocating	Friends asking to join smoking
	18	1.5970	28	F	8 years	Maintenance	Peace of mind	In the presence of friends
	21	.8339	21	M	4 years	Precontemplation	Tranquility	Thinking by oneself
	22	.5555	24	M	4 months	Contemplation	Tranquility	Alone
	23	1.5223	27	F	5 years	Precontemplation	Helping deliberation	Stress
	24	.9233	28	F	6 years	Maintenance	Security	Stress
	29	.7215	41	M	23 years	Maintenance	Helping deliberation	Friends asking to join smoking
	30	1.1468	38	M	20 years	Contemplation	Tranquility	Friends asking to join smoking
Type 3	4	.0736	30	M	years	Contemplation	Good relation with friend	Friends asking to join smoking
	5	.7365	24	F	5 years	Precontemplation	–	In the presence of other smoker
	6	.1254	50	M	20 years	Maintenance	–	––
	8	.1042	26	M	5 years	Precontemplation	Relieving stress	Stressful work load
	9	.2072	31	M	11 years	Precontemplation	Relieving stress	In need of rest
	12	.3208	45	M	27 years	Contemplation	Relieving stress	Stress
	15	.0724	29	M	11 years	Preparation	–	Stress
	19	.2045	48	M	5 years	Maintenance	–	Stress
Type 4	2	.8151	23	F	6 years	Precontemplation	Tranquility	Confronting a hard task
	3	.2887	22	M	7 years	Precontemplation	–	After meal
	7	.1279	26	M	7 years	Contemplation	–	After meal
	10	.2764	26	F	5 years	Contemplation	–	In toilet
	20	.3782	27	M	8 years	Precontemplation	Security	Stress
Type5	14	.7524	33	M	14 years	Precontemplation	Relieving stress	Excitement, In toilet
	27	.4276	25	M	3 years	Maintenance	Relieving stress	Stress

sense of relaxation.

P-sample No. 18, who had the highest loading score, was a housewife 28 years of age, who started smoking at the age of 20, smoking for 8 years. She is tempted to smoke in the presence of smokers. She stated that she anticipated a feeling of tranquility from smoking. She had experienced withdrawal symptoms such as thirst agitation whenever she attempted smoking cessation, and now she has been smoke-free for more than 6 months. She stated that even as she was in abstinence from smoking, she was tempted to smoke when she was alone and thinking about something. She admitted she was a little bit addicted but not very seriously.

Type III: Habituation in Social life

Type III, consisting of 8 P-samples with one female among them, was designated "habituation in social life." The mean of age was 35.4, and mean duration of smoking 11.5 years.

As for smoking characteristics, they anticipated relief from stress, tranquility and interaction with friends while smoking. They stated the cues for smoking temptation were stress, stressful workload and friends asking to join in smoking. As for the stage of change for smoking cessation, three were in Precontemplation; two in Contemplation; one in Preparation; and, two in Maintenance.

Type III reflects the function of smoking as a social behavior. And how smokers habituate smoking in social situation. They had incorporated smoking as a routine at every event of social life.

The extreme scores for each factor, and scores of individual statements from each discourse of P-samples revealed that the main tempting cues to smoke were being asking to smoke by colleagues at work because they were not accustomed to refuse such offer (Referenced No. of Q-sample in Table 3: 11). They did not agree that smoking was addicting because of withdrawal symptoms or effect of nicotine but they admitted smoking was so habitual for them that they were tempted to smoke at each particular time they smoked (13, 16, 25). They wanted to enjoy the sharing of smoking with friends in seeking relaxation (7. 32). But they did not chain smoke even after several hours' of abstinence (20). They got the *smoking cue from circumstances that were similar to the* early situation of smoking habituation of their life (10). However, they were not tempted when they were alone or contented (30, 3).

P-sample No. 5, an unmarried 24-year-old female university student, had been smoking for 5 years. She stated the cue for smoking temptation is usually when she was with a smoker or seeing a scene with smoking in a movie or TV. She started smoking under the influence of friends who smoked. She said the biggest barrier to quit smoking was the influence of friends who smoked. She did not experience withdrawal symptoms but could not refrain from smoking when she saw others smoke. She said it was very hard for her to say "no" if friends asked her to join them in smoking. For her, presence of meaningful companions were the main cue for smoking.

Type IV: Habituation in Daily Living

Type IV, consisting of 5 P-samples of whom 2 were females, with a mean age of 24.8 years and mean duration of smoking of 6.6 years, was designated as the type of "habituation in daily living." As for the smoking characteristics, they anticipated a feeling of tranquility from smoking. Situations or stimuli that evoked smoking temptation for them were after meals, in the toilet, and stress. As for the stage of change for smoking cessation, three were in Precontemplation and two in Contemplation.

Type IV reflects the function of smoking habit combined with daily rhythm for smokers and how smokers habituate smoking in daily living.

The extreme scores for each factor, and scores of individual statements from each discourse of P-samples revealed that the main tempting cues to smoke were after meals, getting out of bed and in the toilet (Referenced No of Q-sample in Table 3: 14, 22, 24). They were tempted to smoke when drinking with someone (8).

They did not get smoking cue from similar circumstances they tented to smoke in their early days of smoking (10). However, they were not tempted when they were contented (6).

They did not agree that smoking depended on a certain feeling or mood, seeking psychological tranquility, or that smoking behavior looked nice to others (28, 31, 37).

P-sample No 2, a 23-year-old female, smoked for 6 years. She started smoking under the influence of friends and her biggest barrier to quit smoking was the desire to smoke after every meal. She stated she was usually tempted to smoke whenever she was in the toilet, after meals, and before sleeping at night. She admitted she experienced withdrawal symptoms but not very

serious. The main symptom of withdrawal she experienced were urge to eat more between meals and becoming edgy. Therefore it was very hard for her to maintain abstinence for more than three days. She believed smoking after meals had a good effect on digestion and stated smoking soon after getting out of bed in the morning became habitual in her daily living.

Type V: Nicotine craving combined with daily routine

Type V, consisting of 2 male P-samples with a mean age of 29 years and mean duration of smoking of 8.5 years, was designated as the type of "nicotine craving combined with daily routine." As for the smoking characteristics, they anticipated smoking might relieve stress. The situations or cues for smoking temptation were being in the toilet and stress. As for the stage of change for smoking cessation, one was in Precontemplation and the other in Maintenance.

Type V reflects the effect of biological craving for smoking combined with daily routine and how smokers are addicted under the influence of nicotine in daily living.

The extreme scores for each factor, and scores of individual statements from each discourse of P-samples revealed that they agreed that people were addicted to smoking because of the effect of nicotine and they admitted smoking was so habitual that they were tempted to smoke at every smoking situation they saw others smoking (Referenced No of Q-sample in Table 3: 21, 17). Therefore, they wanted to smoke regardless of whether they were alone or with friends and whether they were depressed or content (3, 5, 27, 34). They became agitated if they abstained from smoking. From experience, they felt smoking had a positive effect on digestion if they smoked after meals, good bowel movements if they smoked in the toilet and peace of mind if they smoked when they were anxious. However, they tried to reduce or abstain from smoking when they were in no smoking areas (33).

P-sample No 14, a 33-year-old male veterinarian, smoked for 14 years. He stated the cues for smoking temptation were usually when he is in the toilet and feeling excitement. He started smoking because of curiosity about smoking. And he had been attempting to quit smoking on a monthly basis without success. He said the most difficult things for smoking cessation were to endure stressful events without smoking and to desire to eat spicy foods. He said he felt that smoking after meals and in the toilet had a good effect on digestion and bowel movements from experience.

Q-Descriptions in Consensus Among All groups

P-samples in the five groups showed consensus by disagreeing with three descriptions and agreeing with one among the 43 Q-samples. They disagreed with the three descriptions: "I believe smoking temptation comes from nicotine dependency", "When I am bored from ennui, I smoke to pass the time", and "It is very hard for me to reduce the amount of smoking even when I am sick". They agreed with "I don't think I enjoy the taste of cigarettes but I don't want to stop smoking because smoking has become a part of my daily living".

DISCUSSION

Five distinct smoking temptation modalities, on Q-types, emerged from the Q-sort and those were 1) Urge to facilitate interpersonal relation; 2) Psychological desire for tranquility; 3) Habituation in social life; 4) Habituation in daily life; and, 5) Nicotine craving combined with daily routine. Each type has been shown to have distinctive characteristics. The very distinctive difference of Type I group, apart from the other four types, can be summarized as that they are very tempted to smoke in interpersonal situation. O'Connell & Martin (1987) reported that lapses or temptations more often were associated with specific smoking cues such as the presence of alcohol or other smokers. In Korea, 70% of adult males in Seoul are reported as smokers (Nam, et al., 1996) and it is easy to see that that smoking is habituated for adult males in the process of being with good friends for adult males. Type I reflects how smokers establish interpersonal relationships through smoking. The distinctive characteristics of Type II group, can be summarized as that they are tempted to smoke in stressful situation. They considered smoking as a way to get relief from stress or to help concentration. Stress was the most frequently stated reason to smoke among the 5 types. Studies reported various situations of smoking temptation such that situations involving negative emotions were most frequent, followed by social pressure situations and then by interpersonal/conflict situations (Hall, Munoz, Reus, & Sees, 1993). Type II reflects individualized stress management intervention that should be involved in smoking cessation programs. The distinctive characteristics of the Type III group, apart from the other

four types, can be summarized as that they are tempted in social situations. They had gotten into a pattern of smoking as a routine at every event of social life. For the Type III group, regular and constant smoking cessation programs or campaigns at the workplace might be effective in lessening the degree of smoking temptation. The very distinctive difference of Type IV group, apart from the other four types, can be summarized as that they are very tempted to smoke in daily living situations. For them, smoking is an integral part of the daily rhythm. Therefore intervention for this group should be focused on techniques such as deep breathing, visualization and positive self statements (Tiffany, 2001) that smokers can conduct by themselves in daily living situations. For the Type V group, the characteristics can be summarized as that they are tempted to smoke because of nicotine craving. Smokers cite craving as an important reason for maintaining regular smoking patterns, and craving has been associated with smokers' failure to quit (West & Schneider, 1987; Killen & Fortman, 1997). In particular, craving increases systematically with duration of smoking abstinence (Schuh & Stizer, 1995) Craving for cigarettes also has been shown to be increased by smoking-related stimuli such as meals (Gilbert & Pope, 1982), and decreased by denicotinized cigarettes (Hasenfrantz, Baldinger, & Battig, 1993; Butschky, Bailey, Henningfield & Pickworth, 1994; Gross, Lee & Stitzer, 1997). Therefore, for those in the Type V group who are willing to quit smoking, nicotine replacement therapy should be encouraged to use as a therapeutic principle (Henningfield, Gopalan & Shiffman, 1998).

Regarding the consensus items, the current data offer suggestions for dimensions of smoking temptation that smokers do not place much weight on the effect of nicotine in continuing smoking behavior. To measure the degree of dependency to smoking, the Fagerstrom Tolerance Questionnaire has been mostly used. The Fagerstrom Tolerance Questionnaire, (Fagerstrom, 1978) is designed to measure physical dependence on nicotine. However, to measure the addiction to smoking, how smoking has become the part of smokers' daily living should be considered.

Results of the current study that show the stage of change for smoking cessation does not differentiate the type of smoking temptation suggest that people in every stage of change for smoking cessation are tempted to smoke depending on the way they are tempted. Consistent with prior studies (Baer, Kamarck, Lichten-

stein, & Ransom, 1989), the data of this study suggest that even for subjects already abstinent for an adequate length of time (6 months), smoking temptation remains a powerful factor for eventual relapse.

Smoking-cessation interventions should be tailored to the needs of the individual smoker. Smoking temptation is a dynamic process that occurs before, during, and after the person quits. Smoking temptation, which can occur years after the patient quits, may trigger relapse at any time. Different smoking cessation strategies are needed depending on the smoking characteristics of each smoker (American Society of Health - System Pharmacists Report, 1999).

The realistic approach for practitioners helping patients to quit smoking is to pay more attention to assess the unique type of smoking characteristics including smoking temptation for an individual. It is hoped that the outcome of this study could contribute in the development of specific assessment tools. The assessment of temptation in clinical and community settings should include both generic and individualized elements. The generic measures should include symptoms and signs of protracted abstinence. Situational temptation should be assessed through a detailed individual history, including the emotionally laden triggers rooted in the idiosyncratic meaning of people, places and events in the subject's life (Meyer, 2000). The five types of smoking temptation revealed in this study have led to a better understanding of patients in need of smoking cessation.

However, the five types accounted for only 48.45% of the total variance in the factor analysis. This means there might be other different types to explore in the area of smoking temptation. Further studies are needed to identify the nature of smoking temptation more clearly.

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