Basic Research on the Development of Kit and Program for Fashion Psychotherapy

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Abstract

This study is a basic research to develop kit and program for fashion psychotherapy, a new genre of therapy. Symptom checklist, self-esteem evaluation, interpersonal relationship problem evaluation and fashion preference evaluation were conducted on 159 college students in Seoul. The results were analyzed with t-test and one-way ANOVA. The result showed that first, warm color preference was significantly high in interpersonal problem among psychological problems. Second, smooth material preference was significantly high in paranoia among psychological problems. Third, differences in design preferences by psychological problems were not significant. Fourth, differences in design preferences between abnormal range and normal range of psychological problems were significant in line shape, with depression abnormal group showing significantly high straight line preference. Additionally, complex shape preference was significant in complexity in somatization and phobia abnormal groups. This study can be utilized in kit development for a new field, fashion psychotherapy. This study is significant as practical basic data in constructing fashion psychotherapy program.

Key words : fashion psychotherapy, symptom checklist-90-revision, interpersonal relationship, self-esteem, fashion preferences.

Ⅰ. Preface

The society is paying more attention to suicides due to a series of recent celebrity suicides and suicidal attempts are recently spreading to all levels and corners of the society. Statistics show that psychological disorders such as depression seriously impacts suicides and the voice is increasing to respond to it.

According to data analyzed by The Ministry for Health, Welfare and Family on suicide status and motives to establish counteraction to suicides, suicide death rate of Korea is 24.8 per 100,000 population and is over double the OECD nations average of 11.2. Suicide deaths is increasing rapidly from 10th in year 1992 to 4th in year 2007. According to National Statistical Office statistics on suicide motives, the number of average annual suicides during the 3 year period from 2005 is 10,000 of which over 5,000 is due to direct or indirect effects of depression.

According to *Online Research Statistics on Teenager Health Behaviors* (2007) conducted by e Korea Center for Disease Control and Prevention Chronic Disease Research Team, suicide attempts by teenagers are shown to be increasing from 4.5% in 2005 to 5.5% in 2007 and suicide related counselings are showing a rapidly increasing trend. According to *Report on Counsel-*

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ing Performance by Korea Counseling Center for Teenagers and Nationwide Teenager (Counseling) Support Center (2007), suicide related counseling showed drastically increasing trend from 57 in 2003 to 1,419 in 2007.

Meanwhile, a study result by University of Verona researchers published in Canadian Medical Journal shows that commonly used serotonin blocking class of depression treatment drugs such as Paxil or Prozac are known to reduce the suicide risk of adults over 50 by over 40% but such drugs can greatly increase the suicide risk of children.

As the result of many counseling experts to decrease the side effects and the dependency of the drug treatment and maximize the effectiveness of the counseling therapies, expressive arts therapies such as art therapy, music therapy, dance therapy and recreation therapy and diet therapies are developed and being actively applied to the counseling therapies. However, the reality is that more comprehensive and consistent counseling therapies are required as these therapies can be episodic and temporary.

Fashion psychotherapy is a psychological therapy with comprehensiveness and consistency that can satisfy basic human desire for clothing which is one of the three basic components of human life. Researches on the programs, new kits for their management and the methods of approach are desperately required. Prior studies related to clothing and personal psychology until now suggested in one form or another necessities to understand the clothing behavior characteristics of people with mental disorder such as depression and anxiety, treat them and assist in their rehabilitation by actively using clothing. However, it has been pointed out that these studies are focused on the image transformations of the subjects before and after, the self-esteem and the correlation of emotional transformation.

On the contrary, the purpose of this study is to provide basic data which can be used to develop counseling programs capable of improving the effectiveness of therapies by using colors, designs and materials of clothing as psychotherapy kits with the purpose of psychological and emotional transformation and treatment of the subjects.

Ⅱ. Theoretical Background

1. Domestic and International Status of Psychotherapy Related Researches

1) Expressive Arts Therapy

Expressive arts therapy is a special field in psychotherapy in which all art genres are used for the purpose of growth, transformation and healing. It is an integration of psychotherapy and expressive arts conducting the preexisting psychotherapies through creative artistic media such as images, acting, sounds and movements (Kim, 2001; Trina, 2003). Expressive arts therapy as an internal therapy focuses on that a work of art is a product of the living creation process rooted in an individual's mind rather than a description of external situation.

In this chapter, art therapy and dance/movement therapy among various expressive arts therapies will be investigated which can be used for fashion psychotherapy program development. Factors that can be used for this study will be attempted to be extracted.

(1) Art Therapy

Art therapy is a method of psychotherapy that assists in living well-rounded and creative lives by relieving psychological and mental conflicts through creations. While the interviewees' are sincerely listened to, they are guided to the treatments or mitigation of the symptoms using the right creative methods in the right time.

Because paintings are good medium to reveal one's internal world and can carry one's various emotions through colors, they are one of good psychotherapies capable of enabling the experience of catharsis including the painting process up to their completion and sublimating suppressed emotions (Eun, 2000). Naumberg, who can be called the founder of the art therapy, said that the therapeutic component is to discover symbols through creation along with making the

unconscious conscious through the process of painting one's body or fantasies into paintings and feeling freedom. Art materials play huge roles in art therapies. It is because what materials the interviewee chooses and prefers is an important clue in conducting art therapy. Art therapies mostly belong to two categories. One category is that a therapeutic capability is innate in the creative process of art and this viewpoint views the process of creating art works to have intrinsic therapeutic effects. The second category is symbolism of art. The theory is that, as a psychoanalytic art therapy, interviewees are expressing their issues using the paintings as a tool and the paintings each symbolizes a specific meaning. Such expression and healing of the inner side is a difference between the art therapy and the ordinary art (Eun, 2000).

If art therapy can achieve therapeutic effects by self expression through colors and lines, the fashion therapy can be explored into a genre of psychotherapy using the clothing which is inseparable from the everyday life, assisting the wearers' psychological stability by expressing their inner world through fashion coordination activities during the fashion therapy process using the three components of clothing which are the color, the silhouette which is the line of the clothing, and the texture.

(2) Dance/Movement Therapy

Dance/movement therapy is *the psychotherapeutic use of movement to promote emotional, cognitive, social and physical integration of individuals* (American Dance Therapy Association, 2003). In dance where the language is the movement itself, empathy and expression is not simply the rhythm of the body but also contains ideological, emotional and symbolic meanings. The goal of dance/movement therapy is to seek correct idea of body and psychological stability from human psychological anxiety and distortion. It plays the role of rehabilitating the subjects into the society by reducing the negative notions, depression and anxiety of the mentally handicapped and enabling them to have balanced and spontaneous experience through anticipation of physical and psychological integration and stimulation of expressive and creative motions (Park, 1996). The methodology of dance/movement therapy can integrate the body and the mind through the use of behavioral technique and projective psychological method and the accompaniment of the body and the muscles in the psychotherapy process enlightens the emotions by forming a deep relationship with subconscious psychological components and structures the insight of psychological components (Bernstein, 1972). Additionally, itis achieving harmonious integration through creative expression activities and the body and the movements are direct ways of expressing human thoughts or emotional state in the dance/movement therapy. Such expressive media can give one a positive conception of one's self and promote individual functions in personal and social aspect (Kim, 1999).

Expressive arts therapy utilizing art or dance/movement is being actively researched in counseling psychology field and applied to clinic but as it can be episodic, it is necessary to expand the region through clothing which can be considered the second skin. In fashion psychotherapy, one can be guided to healing by relieving psychological and mental anxiety and revealing inner desires not describable with wordsthrough exercises to create styles one wants by combining their own preferred colors, designs and materials like art therapy. In addition, the fact that one directly wears their preferred clothing and live in it is in the same context as dance/movement therapy. Therefore, fashion psychotherapy is capable of developing into a new genre of treatment supplementing the limitations of art therapy and dance/movement therapy and its usage is believed to be greater than any other therapeutic methods.

2) Mental Disorder and Clothing Behavior

Rapidly changing social structure, rapid changes in value systems or standards of life, or diversity are increasing troubles and difficulties in modern day people and as the result, inner confu-

sion and conflict are increasing.

According to the studies by Fisher (1973), Worrell (1977), Johnson (1979) and Dubler & Gurel (1984), people experiencing depression mood have heavy psychological dependency on clothing and low satisfaction in clothing behaviors. These results supports that clothing can be means to heighten the self-notion and the value of oneself, be utilized as a tool to relieve depression and mitigate depression mood through clothing. That is, the reaction formations occur against the depression symptoms through clothing because the clothing is used as one of defense mechanisms to resolve and defend against the uncomfortable emotion (depression mood). It is believed that the lowered self satisfaction from the depression mood can be lifted through relevant fashion therapy as the depression mood lowers the satisfaction of the clothing, the appearance of oneself in the clothing and choosing the clothing.

Horn & Gurel (1981) recognized the necessities of appropriate clothing capable of mitigating depressing emotions in hospitalized patients with no opportunity for clothing behavior by satisfying psychological needs through the colors, materials and forms of the clothing and changing the sentiment. Additionally, Comton (1962) or Thompson (1962) also emphasized the therapeutic effect of clothing by saying that it is helpful in overcoming depression symptoms by lifting the lowered self-satisfaction if proper assistance is provided to the clothing behavior. The view of Hissa (1983) also shows the importance of clothing, which states that comfort, self-acceptance and sentimental stability are acquired by people with mental disorders unsatisfactory with the clothing by reducing the dissatisfaction of clothing and fulfilling aesthetic satisfaction through fashion-therapy because they have low self-esteem and cannot adapt well due to sentimental instability. The study by Rayn (1966) on satisfaction of clothing and efficiency with female college students as the subjects showed that 88% of the subject answered that work efficiency increased when clothing matched well and 97% responded that the self-esteem could be increased by wearing well-fitting clothing. The result also showed that their emotional happiness and stability are largely affected in 95%. Such result suggests that the clothing behaviors have great effects not only on the mental disorders but also on the clothing wearers' efficiency, self-esteem and emotional happiness and stability.

However, studies up to now are mostly examinations on differences inpreferences of clothing color or clothing design with people with mental disorders (patients) as subjects and the only fashion therapy related study is the study by Sin (1999) on the effects of the transformation of the self-appearance images of the people with mental disorders through fashion therapy on self-esteem and sentiment. However, the study by Sin (1999) was also simply a comparison of the effectiveness of fashion therapy for the people with mental disorders and a clinical treatment program for them was not developed. Therefore, the development of a program to apply fashion psychotherapy consistently to clinic and improve it is urgent.

3) Clothing Components and Human Behavior

(1) Clothing Color

Colors are used as a communication method as theyaffect all human thoughts, feelings and behaviors and possess expression along with shapes. Birren (1968) stated that colors are the first component people strongly respond to when looking at certain clothing, move people and arouse certain moods. Many psychologists also stated that responses to colors are more impulsive and emotional than those to shapes. Through these, it can be seen that the colors must be visited in a study of clothing components and emotional mutual effects of humans (Koo, 2007).

In a study on color preferences by personality characteristics of male and female college students, Yoon (2006) discovered differences by comparing male and female students with stable personality and unstable personality and the different levels offalseness and strength. In other studies, differences were shown between normal

people and people with mental disorders, higher the depression points of normal people the more they preferred dark colors (Sin, 1987) and significant differences were shown in the people with mental disorders by levels of depression. Therefore, it can be seen that clothing color preferences are affected by the levels of depression (Lee, 2001).

Above studies show that the colors mutually affect humans emotionally and sentimentally and they play an important role in human activities as a communication medium by each individual interpreting and accepting colors through subjective experiences and judgments. Therefore, colors will be utilized as a component in fashion psychotherapy in this study.

(2) Clothing Material

Unlike the colors in paintings, colors in fashion not only exist simply in the images of the colors but are also expressed in the images correlated with the textures of the materials. In the effects of color andmaterial variables which are components of fashion materials on the images, the effects of the textures were shown significantly in elegant, comfortable, characteristic, light and simple images. Especially in the characteristic images, the effects of materials were shown to be greater than those of the images of the colors (Choo, 2000). That is, not only the colors of the clothing but the images of the textures are also important variables in the image expression. Son (2002) stated that the aspectsof textures used in fashion can be categorized into tactile aspect and visual aspect and the image formation stages by clothing components affecting the formation of the texture image and the essence of the texture images can show in various ways. He also stated that tactile texture and visual texture need to be considered in order to extract adjective vocabularies for such texture images (Son, 2002). However, Kim (1996) who analyzed the images by the visual texture and the tactile texture of fabrics stated that little difference existed between the visual and the tactile textures and the visual texture was shown to be more important.

Therefore, a part that must be considered with colors in fashion psychotherapy is the texture of the clothing materials. Therefore, textures of the materials will be included along with the colors as a factor in programs in this study.

(3) Clothing Design

In the result of a study on the correlations between depressions and clothing design preferences in normal people and people with mental disorders, differences in clothing design preferences existed between the people with mental disorders and the normal people. While the normal people showed differences in high, middle and low levels according to the levels of depression, the people with mental disorders showed no difference in the factors except colors and patterns. However, the people with mental disorders were shown to prefer tender and feminine design components (Sin, 1987). Additionally, positive correlation existed between anxiety and clothing behaviors and groups with high anxiety levels showed higher aesthetics characteristic and higher desire to achieve beauty through decorations, color sense or designs in choosing and wearing clothing than groups with low anxiety levels (Choi, 1987). In clothing shape preferences by high and low stress level groups, low stress groups preferred clothing with masculine straight lines while high stress groups preferred clothing with feminine curve (Lee, 1987), and low stress female groups preferred mini styles which are trendy clothing more than high stress female groups (Lee & Lee, 1996).

From the above previous studies, it can be verified that positive and inverse correlations exist between anxiety levels, depressiontendency and stress and clothing components. Therefore, questionnaires will be written using colors, materials and design components of clothing and online fashion psychotherapy program models will be proposed as well as developing fashion psychotherapy actual kits and programs based on the information from the questionnaire results in this study.

Ⅲ. Research Content and Method

1. Research Problem

The detailed research contents are as follows.

First, differences will exist in preferred colors by psychological problem symptoms.

Second, differences will exist in preferred textures by psychological problem symptoms.

Third, differences will exist in preferred designs by psychological problem symptoms.

Fourth, differences will exist in preferred colors, textures and designs between abnormal range and normal range groups by psychological problem symptoms.

2. Measurement Tools and Analysis Method

1) Measurement Tools

(1) Symptom Checklist (SCL-90-R)

Questionnaire developed by Derogatis and the colleagues and translated and published to Korean edition by Kim et al. (1984) is used for symptom checklist. SCL-90-R is 5 point Likert scale in which one answers between *Not at all* which is 1 point and *Very much* which is 5 points. It consists of total of 9 subcategories which are somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism and higher score signifies more serious symptoms. Cronbach's α is shown to be overall 0.98 in this study.

(2) Self-Esteem Scale

Scale developed by Rosenberg (1979) and adapted to Korean edition by Won (1984) is used for the self-esteem scale. Self-esteem scale consists of five positive self-esteem questions and five negative self-esteem questions, total of ten questions. Each questions is 4 point Likert scale in which one answers between *Not at all* which is 1 point and *Very much* which is 4 points. The five questions of negative self-esteem in this scale are inverse graded and the higher score signifies the higher self-esteem. Cronbach's α is shown to be overall 0.87 in this study.

(3) Inventory of Interpersonal Problems-Circumplex Scale; IIP-C

From the inventory of interpersonal problems-circumplex scale reorganized by Alden and his colleagues (1990) adapted by Lim (1996), six questions each from eight subcategories, total of 48 questions were extracted, simplified and used. Each question is 5 point Likert scale in which one answers between *Not at all* which is 1 point and *Very much* which is 5 points. Higher score signifies more serious interpersonal problems. Cronbach's α is shown to be overall 0.94 in this study.

(4) Fashion Preference

Fashion preferences are categorized into three parts which are color preference, texture preference and design preference. First, in the color preference, color nouns were presented based on the study by Meng (2008), which were categorized into warm colors, cold colors and achromatic colors in this study. Next, in the texture preference, adjectiveswere presented by the researchers and chosen based on the studies by Kim (1999), Hong (1994), Sin(1999), Choo (2001), Bae (2002), Kim (1993). It includes surface characteristics, weight sensation, moisture characteristics, temperature sensation, rigidity and droopiness. In this study is used two part categorization which are rough and hard texture and smooth and soft texture. Lastly, in the design preference, stylization was presented and chosen based on the studies by Sin (1987) and Lee (1987), which were categorized into three parts, line shape, complexity and shape in this study.

2) Analysis Method

Frequency analysis, *t*-test and ANOVA are performed as the data analysis in this study using SPSS WIN 12.0 program.

3. Research Subject

A survey was conducted for the research on 200 college students in Seoul. 159 questionnaires were used from the returned questionnaires ex-

cluding insincere respond questionnaires. Composition showed 54 males (34.0%) and 105 females (66.0%). Grade distribution was 42 freshmen (26.4%), 26 sophomores (16.4%), 37 juniors (23.3%) and 54 seniors (34.0%).

Ⅳ. Research Result

1. Differences in Preferred Colors by Psychological Problem Symptoms

Psychological problem symptoms were inves-

<Table 1> Differences in Preferred Colors by Psychological Problem Symptoms

	Preferred Color	Average (Standard Deviation)	*F*	Scheffé
Somatization	Warm Color	22.03 (8.93)	0.054	
	Cold Color	22.18 (8.94)		
	Achromatic Color	21.64 (8.64)		
Obsessive-Compulsive	Warm Color	23.84 (7.39)	0.542	
	Cold Color	21.96 (7.10)		
	Achromatic Color	23.31 (7.20)		
Interpersonal Sensitivity	Warm Color	19.58 (6.82)	1.041	
	Cold Color	18.00 (6.48)		
	Achromatic Color	17.76 (5.87)		
Depression	Warm Color	28.13 (10.92)	0.809	
	Cold Color	25.07 (10.31)		
	Achromatic Color	25.99 (9.27)		
Anxiety	Warm Color	18.87 (8.02)	0.970	
	Cold Color	17.57 (8.10)		
	Achromatic Color	16.97 (5.70)		
Hostility	Warm Color	10.97 (4.12)	0.440	
	Cold Color	9.93 (3.85)		
	Achromatic Color	10.43 (4.40)		
Phobic Anxiety	Warm Color	10.06 (4.34)	0.487	
	Cold Color	9.64 (3.58)		
	Achromatic Color	9.37 (3.11)		
Paranoid Ideation	Warm Color	10.97 (3.69)	0.539	
	Cold Color	9.82 (4.47)		
	Achromatic Color	10.53 (4.39)		
Psychoticism	Warm Color	16.48 (6.20)	0.114	
	Cold Color	15.71 (7.19)		
	Achromatic Color	16.23 (6.13)		
Interpersonal Relationship Problem	Warm Color	121.97 (25.71)	4.342*	a>b, c
	Cold Color	102.92 (29.76)		
	Achromatic Color	107.25 (27.26)		
Self-Esteem	Warm Color	29.10 (4.66)	1.645	
	Cold Color	31.04 (4.91)		
	Achromatic Color	30.68 (4.60)		

* $p<0.05$, a: warm color, b: cold color, c: achromatic color.

tigated with the nine subcategories of the symptom checklist, interpersonal relationship problem and self-esteem. That is, one-way ANOVA was conducted to investigate whether differences exist in preferred colors by psychological problem symptoms and Schefféepost-hoc test was conducted to investigate what groups the differences exist between. The results are shown in 〈Table 1〉.

The result of the analysis on the differences in preferred colors by psychological problem symptoms show that warm color preference (121.97) was shown the highest in preferred color by interpersonal relationship problems and it was analyzed to be statistically significant (F (2,158)= 4.34, p<0.05). The Scheffé post-hoc test result to investigate between what groups the differences exist showed that significant differences were shown in warm color - cold color (p<0.05) and warm color - achromatic color (p<0.05).

No statistically significant difference was shown for preferred colors in other areas of psychological problem symptoms.

2. Differences in Preferred Textures by Psychological Problem Symptoms

Psychological problem symptoms were investigated with the nine subcategories of the symptom checklist, interpersonal relationship problem and self-esteem. A few contents were categorized in the preferred textures. They were categorized into two categories by categorizing rough and cold textures into rough texture and categorizing smooth, soft and warm textures into smooth texture. T-test was conducted to investigate whether differences exist in preferred textures by psychological problem symptoms and the results

〈Table 2〉 Differences in Preferred Textures by Psychological Problem Symptoms

	Preferred Texture	Average (Standard Deviation)	t
Somatization	Rough	21.41 (8.64)	−0.581
	Smooth	22.22 (8.79)	
Obsessive-Compulsive	Rough	23.30 (7.27)	0.218
	Smooth	23.05 (7.17)	
Interpersonal Sensitivity	Rough	17.88 (6.38)	−0.579
	Smooth	18.44 (5.98)	
Depression	Rough	26.09 (10.05)	−0.204
	Smooth	26.41 (9.55)	
Anxiety	Rough	17.49 (7.23)	0.078
	Smooth	17.41 (6.07)	
Hostility	Rough	10.06 (4.07)	−1.150
	Smooth	10.84 (4.40)	
Phobic Anxiety	Rough	9.14 (3.03)	−1.582
	Smooth	9.99 (3.80)	
Paranoid Ideation	Rough	9.68 (3.78)	−2.463*
	Smooth	11.32 (4.59)	
Psychoticism	Rough	15.41 (5.75)	−1.569
	Smooth	16.97 (6.77)	
Interpersonal Relationship Problem	Rough	108.26 (28.39)	−0.496
	Smooth	110.47 (27.73)	
Self-Esteem	Rough	30.30 (4.70)	−0.362
	Smooth	30.57 (4.69)	

* p<0.05.

are shown in 〈Table 2〉.

The result of the analysis on the differences in preferred textures by psychological problem symptoms show that smoothtexture preference (11.32) was shown higher than rough texture (9.68) and it was analyzed to be statistically significant (t= −2.463, p<0.05). No statistically significant difference was shown for preferred textures in other areas of psychological problem symptoms.

3. Differences in Preferred Designs by Psychological Problem Symptoms

Psychological problem symptoms were investigated with the nine subcategories of the symptom checklist, interpersonal relationship problem and self-esteem. Preferred designs were categorized into two categories, which were line shape and shape. T-test was conducted to investigate whether differences exist in preferred designs by psychological problem symptoms and the results are shown in 〈Table 3〉.

The result of the analysis on the differences in preferred designs by psychological problem symptoms showed that no statistically significant

〈Table 3〉 Differences in Preferred Designs by Psychological Problem Symptoms

	Preferred Design		Average (Standard Deviation)	t
Somatization	Line Shape	Curve	21.78 (8.22)	−0.057
		Straight Line	21.86 (9.42)	
	Shape	Formal	21.40 (8.54)	
		Sporty	23.40 (9.24)	
Obsessive-Compulsive	Line Shape	Curve	23.46 (6.65)	0.611
		Straight Line	22.75 (7.98)	
	Shape	Formal	22.98 (7.23)	
		Sporty	23.94 (7.13)	
Interpersonal Sensitivity	Line Shape	Curve	18.31 (6.02)	0.3689
		Straight Line	17.94 (6.43)	
	Shape	Formal	17.81 (5.90)	
		Sporty	19.48 (7.05)	
Depression	Line Shape	Curve	26.31 (9.82)	0.094
		Straight Line	26.16 (9.80)	
	Shape	Formal	25.87 (9.63)	
		Sporty	27.67 (10.34)	
Anxiety	Line Shape	Curve	17.48 (6.37)	0.087
		Straight Line	17.39 (7.11)	
	Shape	Formal	17.12 (6.44)	
		Sporty	18.70 (7.42)	
Hostility	Line Shape	Curve	10.17 (3.89)	−1.007
		Straight Line	10.86 (4.72)	
	Shape	Formal	10.37 (4.16)	
		Sporty	10.76 (4.58)	
Phobic Anxiety	Line Shape	Curve	9.52 (3.23)	−0.167
		Straight Line	9.61 (3.78)	
	Shape	Formal	9.41 (3.34)	
		Sporty	10.09 (3.84)	

〈Table 3〉 Continued

	Preferred Design		Average (Standard Deviation)	t
Paranoid Ideation	Line Shape	Curve	10.39 (4.22)	−0.363
		Straight Line	10.65 (4.38)	
	Shape	Formal	10.39 (4.40)	
		Sporty	10.88 (3.76)	
Psychoticism	Line Shape	Curve	15.60 (5.74)	−1.439
		Straight Line	17.06 (7.03)	
	Shape	Formal	16.13 (6.21)	
		Sporty	16.40 (6.76)	
Interpersonal Relationship Problem	Line Shape	Curve	110.52 (28.19)	0.634
		Straight Line	107.64 (27.84)	
	Shape	Formal	108.48 (28.43)	
		Sporty	112.70 (26.43)	
Self-Esteem	Line Shape	Curve	30.19 (4.81)	−0.801
		Straight Line	30.80 (4.51)	
	Shape	Formal	30.40 (4.73)	
		Sporty	30.55 (4.56)	

* $p<0.05$.

difference existed in preferred designs in each category.

4. Differences in Preferred Textures and Designs between Abnormal Range and Normal Range Groups in Psychological Problem Symptoms

Nine subcategories of the symptom checklist which measures psychological problem symptoms were divided into top 25% as abnormal range group and the rest 75% as normal range group. It was investigated whether differences in preferred textures and designs existed by the groups. T-test was conducted in order to do this and the result is presented in the below 〈Table 4〉.

The result of the analysis on the differences in preferred textures between abnormal range and normal range groups in psychological problem symptoms showed no statistically significant difference. The result of the analysis on the differences in preferred design-line shape between abnormal range and normal range groups in psychological problem symptoms showed that the abnormal group (6.74) was higher in the depression than the normal group (5.70) and it was analyzed to be statistically significant ($t=-2.445$, $p<0.05$). That is, it can be seen that the group higher in depression prefers straight line shape to curved line shape compared to the normal group.

The result of the analysis on the differences in preferred design-complexity between abnormal range and normal range groups in psychological problem symptoms showed that the abnormal group (7.81) was higher in the somatization than the normal group (6.90) and it was analyzed to be statistically significant ($t=-2.759$, $p<0.01$). That is, it can be seen that the group higher in somatization prefers simple shapes to complex shapes compared to the normal group. Additionally, abnormal group (7.59) was higher in the phobic anxiety than the normal group (6.95) and it was analyzed to be statistically significant ($t=-1.987$, $p<0.05$). That is, it can be seen that the group higher in phobic anxiety symptom prefers simple shapes in complexity to complex shapes compared to the normal group.

〈Table 4〉 Differences in Preferred Colors, Textures and Designs between Abnormal Range/Normal Range Groups in Psychological Problem Symptoms

	Psychological Problem Symptom	Group (N)	Average (Standard Deviation)	t
Texture	Somatization	Normal (123)	11.64 (3.02)	−0.359
		Abnormal (36)	11.86 (3.82)	
	Obsessive-Compulsive	Normal (127)	11.67 (3.09)	−0.176
		Abnormal (32)	11.78 (3.71)	
	Interpersonal Sensitivity	Normal (121)	11.64 (3.00)	−0.330
		Abnormal (38)	11.84 (3.85)	
	Depression	Normal (121)	11.54 (3.01)	−1.085
		Abnormal (38)	12.18 (3.78)	
	Anxiety	Normal (120)	11.74 (2.93)	0.342
		Abnormal (39)	11.54 (3.99)	
	Hostility	Normal (127)	11.61 (2.84)	−0.606
		Abnormal (32)	12.00 (4.42)	
	Phobic Anxiety	Normal (120)	11.63 (2.98)	−0.402
		Abnormal (39)	11.87 (3.88)	
	Paranoid Ideation	Normal (123)	11.59 (3.05)	−0.772
		Abnormal (36)	12.06 (3.74)	
	Psychoticism	Normal (123)	11.54 (2.98)	−1.069
		Abnormal (36)	12.19 (3.91)	
Design-Line Shape	Somatization	Normal (123)	5.88 (2.27)	−0.722
		Abnormal (36)	6.19 (2.46)	
	Obsessive-Compulsive	Normal (127)	5.95 (2.27)	0.033
		Abnormal (32)	5.94 (2.50)	
	Interpersonal Sensitivity	Normal (121)	5.85 (2.30)	−0.958
		Abnormal (38)	6.26 (2.34)	
	Depression	Normal (121)	5.70 (2.28)	−2.445*
		Abnormal (38)	6.74 (2.25)	
	Anxiety	Normal (120)	5.86 (2.30)	−0.874
		Abnormal (39)	6.23 (2.34)	
	Hostility	Normal (127)	5.83 (2.32)	−1.340
		Abnormal (32)	6.44 (2.23)	
	Phobic Anxiety	Normal (120)	5.97 (2.29)	0.162
		Abnormal (39)	5.90 (2.41)	
	Paranoid Ideation	Normal (123)	5.89 (2.31)	−0.552
		Abnormal (36)	6.17 (2.35)	
	Psychoticism	Normal (123)	5.80 (2.36)	−1.466
		Abnormal (36)	6.44 (2.08)	

<Table 4> Continued

	Psychological Problem Symptom	Group (N)	Average (Standard Deviation)	t
Design-Complexity	Somatization	Normal (123)	6.90 (1.83)	−2.759**
		Abnormal (36)	7.81 (1.31)	
	Obsessive-Compulsive	Normal (127)	7.06 (1.74)	−0.737
		Abnormal (32)	7.31 (1.87)	
	Interpersonal Sensitivity	Normal (121)	7.12 (1.77)	0.112
		Abnormal (38)	7.08 (1.78)	
	Depression	Normal (121)	11.54 (3.01)	−0.520
		Abnormal (38)	12.18 (3.78)	
	Anxiety	Normal (120)	6.96 (1.79)	−1.879
		Abnormal (39)	7.56 (1.62)	
	Hostility	Normal (127)	7.08 (1.78)	−0.400
		Abnormal (32)	7.22 (1.70)	
	Phobic Anxiety	Normal (120)	6.95 (1.82)	−1.987*
		Abnormal (39)	7.59 (1.48)	
	Paranoid Ideation	Normal (123)	7.07 (1.78)	−0.552
		Abnormal (36)	7.25 (1.71)	
	Psychoticism	Normal (123)	7.01 (1.83)	−1.309
		Abnormal (36)	7.44 (1.48)	
Design-Shape	Somatization	Normal (123)	5.31 (1.68)	−1.426
		Abnormal (36)	5.78 (1.90)	
	Obsessive-Compulsive	Normal (127)	5.31 (1.67)	−1.566
		Abnormal (32)	5.84 (1.95)	
	Interpersonal Sensitivity	Normal (121)	5.31 (1.68)	−1.418
		Abnormal (38)	5.76 (1.90)	
	Depression	Normal (123)	11.64 (3.02)	−1.201
		Abnormal (39)	11.86 (3.82)	
	Anxiety	Normal (120)	5.25 (1.69)	−2.12*
		Abnormal (39)	5.92 (1.83)	
	Hostility	Normal (127)	5.23 (1.68)	−2.033*
		Abnormal (32)	5.97 (1.87)	
	Phobic Anxiety	Normal (120)	5.36 (1.66)	−0.720
		Abnormal (39)	5.59 (1.98)	
	Paranoid Ideation	Normal (123)	5.30 (1.73)	−1.537
		Abnormal (36)	5.81 (1.75)	
	Psychoticism	Normal (123)	5.32 (1.71)	−1.316
		Abnormal (36)	5.75 (1.83)	

* $p<0.05$, **$p<0.01$.

The result of the analysis on the differences in preferred design-shape between abnormal range and normal range groups in psychological problem symptoms showed that the abnormal group (5.92) was higher in the anxiety than the normal group (5.25) and it was analyzed to be statistically significant ($t=-2.12$, $p<0.05$). That is, it can be seen that the group higher in anxiety symptom prefers sporty shapes to formal wears compared to the normal group. Additionally, abnormal group (5.97) was higher in the hostility than the normal group (5.23) and it was analyzed to be statistically significant ($t=-2.033$, $p<0.05$). That is, it can be seen that the group higher in hostility symptom prefers sporty shapes in shapes to formal wears compared to the normal group.

V. Conclusion

The result of the study shows that among various psychological problem symptoms, interpersonal relationship problems show differences in clothing colors and paranoid idcation shows differences in clothing textures. That is, the group experiencing more difficulties in interpersonal relationship problems showed the higher trend of preferring warm colors to cold colors or achromatic colors in clothing colors and the group with high paranoid ideation was shown to prefer smooth ones to rough ones for clothing textures. It isconsidered that useful help can be given when counseling those who are experiencing each problem symptom if programs are constructed actually using various materials and kits in clothing colors or materials. However, other psychological problem symptom areas did not show statistically significant differences in the preferences related to clothing colors and textures and it would be necessary to analyze the cause and present more various results with more in-depth follow-up studies. Additionally, none of psychological problem symptom areas showed statistically significant result in the differences in the preferences related to clothing designs. It is necessary to further specify more in-depth analysis with follow-up studies on it.

Between abnormal range and normal range groups of psychological problem symptoms, it was shown that the group with higher depression symptom in the depression category preferred straight lines to curved lines in clothing design compared to the normal group and the group with higher somatization symptom and the group with higher phobic anxiety preferred simple designs compared to the normal groups.

It was also shown that the groups with higher anxiety symptom and hostility symptom preferred comfortable casual sports type clothing compared to the normal groups.

Above study results prove the potential of utilizing fashion as the counseling kit in psychological counseling. Therefore, it is believed that the result of this study can be utilized for the development of the kits which arebasic data to be used in the new field of fashion psychotherapy and can function as practical basic data in constructing fashion psychotherapy programs. Even though the field of fashion psychotherapy is unfamiliar and unexplored field in Korea, the meaning of this study can be found in the academic integration of fashion and counseling psychology through the results of this study and the follow-up studies based on these results and being the cornerstone of creating useful and creative kits and programs that can be used in actual counseling scenarios.

However, even with numerous meaningful and leading meanings, a few limitations and suggestions for follow-up studies are as follows.

First, data in limited areas were used to conduct research problems hypothesized by the author as this study was basic research for the development of programs for fashion psychotherapy. That is, in regards to psychological problem symptom areas, nine separate areas were investigated using the symptom checklist (SCL-R-90) but many symptoms were not displayed as it was applied to ordinary college students. Specific comparison analysis through comparison studies with ordinary college students and people diagnosed with actual problem symptoms as the subjects is necessary for more systematic research.

Second, influences from seasonal factors on preferred colors in clothing colors need to be pointed out. Therefore, it is necessary to compare at least to study results by seasons and analyze it in order to exclude the effects of seasonal preferences and compare the differences in preferences by objective psychological problem symptoms.

Third, it is necessary to present the questionnaires in format that is more familiar and capable of clear distinctions as the discrimination capacity of the questions regarding clothing designs included in the questionnaires may be reduced with the ordinary people not knowledgeable with precise design terms.

Fourth, it is considered that more useful results for the development and the application of actual fashion psychotherapy can be acquired by collecting and analyzing broader data from various groups as the subjects such as college students, children and senior citizens since the purpose of this study, developing fashion psychotherapy programs is not targeting only college students.

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