

## Original Article

## The Evaluation of Methods Used to Cope with Infertility Stress of Infertile Couples in Turkey

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### Abstract

**Aim:** The present study was planned to evaluate the methods used to cope with the stress experienced by couples having infertility treatment in Turkey.

**Methodology:** The study was conducted a cross-sectional and descriptive type of study carried out with 412 participants (206 married couples) having infertility treatment in Turkey. In the collection of the data, Descriptive Information Form, The Copenhagen Multi-centre Psychosocial Infertility Fertility Problem Stress Scales and Coping Strategy Scales were used.

**Results:** According to the results collected by infertility stress scale, stress in personal domain was higher in women than men ( $p < 0.05$ ). There was not significant difference between women and men in marital and social domains ( $p > 0.05$ ). It was determined that women used the active-avoidance, active-confronting and passive-avoidance coping methods more than men ( $p < 0.05$ ). There was not a significant difference between women and men in terms of the use of meaning-based coping method ( $p > 0.05$ ).

**Conclusion:** Women experience more stress and use more coping method in than men.

**Key words:** coping skills, female, infertility, infertile couples, male, nursing, stress

### Introduction

Infertility is described as the inability of the woman to get pregnant despite the orderly sexual intercourse of the couple for at least one year without the use of a contraceptive method (Kizilkaya Beji, 2001; Guz, Ozkan, Sarisoy, Yanik, & Yanik, 2003; Jose-Miller, Boyden, & A. Frey, 2007; Karlidere et al., 2007). According to this description 15% of the married couples are infertile (Guz et al., 2003). It is estimated that there are 1.5-2 million infertile couples in Turkey (Oguz, 2004). In developed countries 8-10% of the couples are infertile (T.R. Ministry of Health, 2000). In USA it is estimated that 10-15% of couples are infertile (Jose Miller et al., 2007). Infertility is an experience, which brings up medical, psychiatric, psychological and social problems, has cultural, spiritual and denominational sides, is individual, causes to

face unaccepted stressors, ends up with social effects, causes the feelings of unsuccessfulness, insufficiency about sexual life and it changes life (Guz et al., 2003; Peterson, Newton, Rosen, & Skaggs, 2006).

Infertility, which is accepted as a situation of crises, forces the couples' methods to cope with and their resources of social support (Ak, 2002; Schmidt, Christensen, & Holstein, 2005a). This situation ends up with sexual dysfunction, social drop down, cease in self-respect, loss of hope for the future, corruption in the relationship between couples, depression, anxiety, anger, stress, grief and feeling guilty by consuming the couples' physical and emotional energy (Guz et al., 2003; Karlidere et al., 2007; Jose Miller et al., 2007).

Couples give different reactions to infertility. These reactions might change due to the

woman or man being responsible for the reason of infertility. Emotional problems like anxiety and depressive symptoms might be the reason or result of infertility (Karlidere et al., 2007).

The aim of infertility consultation is to help the couple to decide for the convenient alternative among the ones presented to them, evaluating the methods to cope with the difficulties they are experiencing and to help them to find new methods to cope with (Gribben, 2002; Ozcelik, Karamustafalioglu, & Ozcelik, 2007). The use of different methods to cope with infertility by infertile women and men has a significant role in their coping with infertility process (Peterson et al., 2006). It is expected from the medical personnel, who are treating infertile couples, to have satisfactory knowledge about infertility, to know the methods to cope with problems and to consult on these subjects (Oguz, 2004).

The present study was planned to determine the infertility stress of infertile couples and the methods they use to cope with infertility stress. It is significant to identify stress of infertile couples and methods they use to cope with infertility stress in planning and applying the education given by the nurse during infertility treatment.

## METHODOLOGY

This study was a cross-sectional and descriptive type study. The study was carried out by 412 participants (206 married couples), who attended to Istanbul University Istanbul Medical School, Department of Reproductive Endocrinology and Infertility between January 2010-January 2011, had no child, had the ability to understand and fill the scales and accepted to take part in the study. After giving information about the study to the couples, who attended the infertility clinic, the ones who accepted to take part in the study signed the attendance acceptance form. The Demonstrative Information Form about infertile couples was filled by the couples. The two scales were filled by women and men separately.

## Measurements

The socio-demographic and infertility characteristics of couples were reported by the

Demonstrative Information Form about Infertile Couples which had 19 questions and was developed by the researcher in the light of the references. The infertility stress experienced by the couples and the methods to cope with infertility were determined by The COMPI Fertility Problem Stress Scales and The COMPI Coping Strategy Scales developed by Schmidt (2006) and adapted to Turkish by Yilmaz (2012).

The COMPI Fertility Problem Stress Scales, which is used to evaluate the stress experienced by infertile couples, was developed by Schmidt (2006). Schmidt (2006) got the use of two references in developing the scale. These are; the results of the data collected by Schmidt (2006) in qualitative interviews about infertility and the items about individual, marital and social-domain in The Fertility Problem Stress Inventory developed by Abbey, Andrews, & Halman (1991). The COMPI Fertility Problem Stress Scales have three subscales which have 14 items and can be applied to both women and men. Subscales of the scale are personal-domain (e.g. how much stress the individuals felt in their lives as a result of childlessness) in six items (items 1,2,11,12,13,14), marital-domain (e.g. how much stress the childlessness placed on marriage and sexual relationship) in four items (items 3,4,5,6) and social-domain (e.g. how much stress the fertility problem placed on relationship with family, friends and workmates) in four items (items 7,8,9,10). In answering The COMPI Fertility Problem Stress Scales in terms of 1,2,3,4 five item (1= strongly disagree - 5= strongly agree) and for 5,6,7,8,9,10,11,12,13,14 four item (1= none at all - 4= a great deal) Likert format was used. The three subscales can be used in both women and men. When the scores of the subscales are high it means that the stress is increasing and the stress is decreasing when the scores are low. The scale was adapted to Turkish by Yilmaz (2012).

The COMPI Coping Strategy Scales, which is used to evaluate the coping of the experienced stress of infertile couples, was developed by Schmidt (2006). Schmidt (2006) got the use of three references in developing the scale. These are; five items from the results of qualitative interview by Schmidt (2006), nine items from

the Ways of Coping Questionnaire developed by Lazarus and Folkman (1984) and five items from the revised form of Ways of Coping Questionnaire developed by Folkman (1997). The COMPI Coping Strategy Scales is a 19 item scale which has four subscales and can be applied to both women and men: active-avoidance (e.g. I avoid being with pregnant women or children) in four items (items 1,2,3,4), active-confronting (e.g. I ask other childless people for advice) in seven items (items 5,6,7,8,9,18,19), passive-avoidance (e.g. I try to forget everything about our childlessness) in three items (items 10,11,12) and meaning-based coping (e.g. I find other life goals) in five items (items 13,14,15,16,17). In answering The COMPI Coping Strategy Scales four item (1= not used - 4= used a great deal) Likert is used for 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 and 17 items and three item (1= not used - 3= used) Likert is used for 18,19. The four subscales can be applied to both women and men.

When the scores of the subscales are high it means that the coping methods are being highly used in that subscale and the coping methods are being used lower when the scores are low. The scale was adapted to Turkish by Yilmaz (2012).

### Data analysis

In the analyses of the data collected in the study, SPSS for Windows (Statistical Package for Social Science for Windows, version 21.0) program was used and the analyses of digit, percentage, means, standard deviation, chi-square test, student t-test in independent groups, one-way ANOVA in independent groups and Pearson correlation were used.

### Ethics

Ethics approval was granted by the Ethical Committee of Istanbul University (No: 22463). The research conforms to the provisions of the Declaration of Helsinki. Participants in the study were informed and their written approvals were collected. Permission was taken from the administration office before the collection of the data. An approval was collected from the Ethical Committee of Istanbul University (No: 22463). Moreover the participants who accepted to attend in the study signed an approval form.

## Results

Women were in 19-45 age groups and at the average age of  $29.0 \pm 5.1$ , where men were in 24-54 age groups and at the average age of  $35.6 \pm 5.2$ . 56.3% of women and 38.8% of men were graduates of primary school, 25.7% of women and all of the men were working. 59.7% of the couples had enough income, 73.8% were nucleus family type and 95.6% had social security. 81.6% of couples did not have an in-vitro fertilization history. When the causes of infertility is observed, in 26.7% the factor was women, in 27.7% it was men, in 9.2% the cause was both sexes and in 35.9% it was not determined. 68.4% of infertile couples were married for 1-6 years ( $\bar{x} = 6.0 \pm 3.7$ ) and 73.8% were having treatment for 1-4 years ( $\bar{x} = 3.6 \pm 3.1$ ). 72.3% of couples did not have a history of pregnancy after treatment.

### The COMPI Fertility Problem Stress Scale and the COMPI Coping Strategy Scale Descriptive Statistics

The COMPI Fertility Problem Stress Scale subscale score means are presented in Table 1. It was determined that there were significant differences in infertile couples in terms of gender between personal-domain ( $t = 4.551$   $p = 0.001$ ) stress subscale score means in infertility stress scale subscale score means and there were not significant differences between the stress subscale score means of marital-domain and social-domain ( $p > 0.005$ ; Table 1).

The COMPI Coping Strategy Scale subscale score means are presented in Table 2. It was determined that there were significant differences between active-avoidance coping ( $t = 2.441$   $p = 0.015$ ), active-confronting coping ( $t = 4.671$   $p = 0.001$ ) and passive-avoidance coping ( $t = 2.858$   $p = 0.004$ ) subscale score means of coping with infertility stress scale subscale score means of infertile couples in terms of gender and there were not statistically significant differences for meaning-based coping subscale score means ( $p > 0.05$ ; Table 2). The score means of women were significantly higher than men in active-avoidance coping, active-confronting coping and passive-avoidance coping subscales.

**Table 1: The comparison of the score means in The COMPI Fertility Problem Stress Scale sub-scales in terms of gender in infertile couples (N=412).**

	Personal domains	Marital domains	Social domains
<b>Score</b>	0-20	0-14	0-12
<b>Women (n =206) <math>\bar{x}\pm Sd</math></b>	8.96 $\pm$ 5.39	3.44 $\pm$ 3.47	2.16 $\pm$ 2.75
<b>Men (n = 206) <math>\bar{x}\pm Sd</math></b>	6.58 $\pm$ 5.20	2.95 $\pm$ 3.08	2.12 $\pm$ 3.03
<b>Test value (t)</b>	4.551	1.512	0.153
<b>p value</b>	0.000	0.131	0.878

**Table 2: The comparison of the score means in The COMPI Coping Strategy Scale sub-scales in women and men in infertile couples (N=412).**

	Active-avoidance coping	Active-confronting coping	Passive-avoidance coping	Meaning-based coping
<b>Score</b>	4-16	7-26	3-12	5-20
<b>Women (n = 206) <math>\bar{x}\pm Sd</math></b>	7.95 $\pm$ 2.79	15.00 $\pm$ 3.94	7.83 $\pm$ 2.58	13.42 $\pm$ 3.57
<b>Men (n = 206) <math>\bar{x}\pm Sd</math></b>	7.29 $\pm$ 2.69	13.19 $\pm$ 3.90	7.10 $\pm$ 2.58	13.15 $\pm$ 3.60
<b>Test value (t)</b>	2.441	4.671	2.858	0.768
<b>p value</b>	0.015	0.000	0.004	0.443

**Table 3: The relation between The COMPI Fertility Problem Stress Scale sub-scale scores of women and men in infertile couples (N=412).**

		Men					
		Personal domains		Marital domains		Social domains	
		r	p	r	p	r	p
Women	Personal domains	0.53	0.001	0.41	0.001	0.32	0.001
	Marital domains	0.46	0.001	0.64	0.001	0.31	0.001
	Social domains	0.38	0.001	0.30	0.001	0.55	0.001

**Table 4: The relation between The COMPI Coping Strategy Scale sub-scale scores of women and men in infertile couples (N=412).**

		Men							
		Active-avoidance coping		Active-confronting coping		Passive-avoidance coping		Meaning-based coping	
		r	p	r	p	r	p	r	p
<b>Women</b>	<b>Active-avoidance coping</b>	0.35	0.001	0.21	0.003	0.28	0.001	0.20	0.017
	<b>Active-confronting coping</b>	0.24	0.001	0.35	0.001	0.27	0.001	0.20	0.006
	<b>Passive-avoidance coping</b>	0.27	0.001	0.25	0.001	0.45	0.001	0.32	0.001
	<b>Meaning-based coping</b>	0.23	0.001	0.23	0.001	0.25	0.001	0.50	0.001

**Table 5: Relationship between The COMPI Fertility Problem Stress Scale and The COMPI Coping Strategy Scale sub-scale score means in women and men in infertile couples (N=412).**

	Women (n = 206)								Men (n = 206)							
	Active-avoidance coping		Active-confronting coping		Passive-avoidance coping		Meaning-based coping		Active-avoidance coping		Active-confronting coping		Passive-avoidance coping		Meaning-based coping	
	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p
<b>Personal domains</b>	0.444	0.001	0.242	0.001	0.281	0.001	0.004	0.954	0.394	0.001	0.284	0.001	0.314	0.001	0.128	0.067
<b>Marital domains</b>	0.347	0.001	0.166	0.017	0.234	0.001	-0.035	0.618	0.347	0.001	0.248	0.001	0.257	0.001	0.034	0.625
<b>Social domains</b>	0.347	0.001	0.166	0.017	0.234	0.001	-0.035	0.618	0.193	0.005	0.281	0.001	0.220	0.002	-0.022	0.750

**The comparison of The COMPI Fertility Problem Stress Scale subscale score means in infertile couples according to the demographic characteristics of women and men**

In women and men in infertile couples, there were not significant differences between family type, the reason of infertility, marriage duration,

length of treatment period, having or not having IVF treatment before with stress cores of personal-domain, marital-domain and social-domain ( $p>0.05$ ). The differences between the age of women with personal-domain, marital-domain and social-domain stress scales score means were not statistically significant in infertile couples ( $p>0.05$ ). However, there were statistically significant differences between the

age of women and men in infertile couples with personal-domain subscale score means.

Personal-domain subscale score means were significantly higher in men at the age of 35 and more than men at the age of 18-34. It was determined that there were significant differences ( $p < 0.05$ ) between the educational status of women in infertile couples with personal-domain and social-domain stress scores, however, the differences were not significant ( $p > 0.05$ ) with marital-domain. The differences between the educational status of men in infertile couples with personal-domain, marital-domain and social-domain stress scales score means were not statistically significant ( $p > 0.05$ ). There were not significant relation between the working statuses of women with all the subscales ( $p > 0.05$ ). As all the men in the study were working, a comparison between the nonworking men could not be made.

Significant differences were determined between the financial statuses of women in infertile couples with personal-domain, marital-domain and social-domain stress scores ( $p < 0.05$ ). In all the subscales, the stress scores of women with insufficient financial income were higher than women with sufficient financial income. In men, there were not significant differences between the financial status with all the subscales scores ( $p > 0.05$ ). There were significant differences in women between having pregnancy in the former infertility treatment (the women in the study do not have living child) with personal-domain and marital-domain ( $p < 0.05$ ) and the differences were not significant with social-domain ( $p > 0.05$ ). The differences in men between their wives' having pregnancy in the former infertility treatment with all the subscales were not significant ( $p > 0.05$ ).

#### **The comparison of The COMPI Coping Strategy Scale subscale score means with the demographic characteristics of women and men in infertile couples**

Both in women and men in infertile couples, the differences between financial status, family type, former IVF treatment, marriage duration, treatment duration and pregnancy history after treatment with active-avoidance coping, active-confronting coping, passive avoidance and meaning based coping subscales score means were not significant ( $p > 0.05$ ).

The differences between the age groups of women with active-avoidance and meaning based coping subscales score means were significant ( $p < 0.05$ ), where the differences with the other sub scales were not significant ( $p > 0.05$ ). The differences between the age groups of men with active-avoidance, passive avoidance and meaning based coping subscales score means were significant ( $p < 0.05$ ), while the differences with active-confronting coping were not significant ( $p > 0.05$ ).

In women and men in infertile couples the differences between educational status with passive- avoidance coping subscales score means were significant ( $p < 0.05$ ) and the differences between the other subscales were not significant ( $p > 0.05$ ).

In women and men passive avoidance coping subscales were significantly higher in having education for 8 years and below group than having education for 8 years and higher group.

There were not significant relation with the working status of women and all the subscales ( $p > 0.05$ ). As all the men were working, the comparison with the nonworking could not be carried out.

It was determined that there was significant difference between the reason of infertility with active-avoidance coping subscale ( $p < 0.05$ ), however, the differences with the other subscales were not significant ( $p > 0.05$ ). In men, the differences between the reason of infertility with passive-avoidance coping subscales were significant and the differences with the other subscales were not significant ( $p > 0.05$ ).

#### **The Relation between the COMPI Fertility Problem Stress Scale and the COMPI Coping Strategy Scale**

It was found that there were positive and significant relation between women and men in infertile couples in terms of The COMPI Fertility Problem Stress Scale subscales. In couples, the stress in women is increasing when the stress is increasing in men ( $p < 0.000$ ; Table 3).

It was found that there was a positive and statistically significant relation between women and men in terms of The COMPI Coping Strategy Scale subscale scores. In couples, the

use of coping methods in women is increasing when the use in men increases ( $p < 0.05$ ; Table 4).

It was determined that there was a positive and statistically significant relation between women and men in infertile couples in terms of The COMPI Coping Strategy Scale subscale scores and The COMPI Fertility Problem Stress Scale subscale scores. The stress in women is increasing when the use of active-avoidance, active-confronting and passive-avoidance coping methods in women is increasing ( $p < 0.05$ ; Table 5). The stress in men is increasing when the use of active-avoidance, active-confronting and passive-avoidance coping methods in men is increasing ( $p < 0.05$ ; Table 5). A significant relation was not found between meaning-based coping method and stress in both women and men (Table 5).

### Discussion

In the study, according to the results of infertility stress scale, the stress in personal-domain in women was higher than men. There were not significant differences between women and men in terms of marital and social-domains. It was found that women used active-avoidance, active-confronting and passive-avoidance coping methods more than men. There were not significant differences between women and men in the use of meaning-based coping method.

### The Discussion of The Results in The COMPI Fertility Problem Stress Scale subscales and Gender in Women and Men in Infertile Couples

It was reported in several studies that the infertility stress in women is higher than men (Newton, 1999; Lee & Sun, 2000; Bayley, Slade, & Lashen, 2009). However, in some studies the differences between women and men in terms of infertility stress were not significant (Sreshthaputra, Sreshthaputra, & Vutyavanich, 2008).

The stress in personal-domain being higher in women than men in the present study was similar with Schmidt (2006) and Peterson et al.'s (2008;2009) studies. The women's experiencing higher stress in personal-domain than men might be related to infertility's being more effective on women identity and the infertility treatment's being carried out more on women's

body (Peterson et al.2009; Draye, 2004; Unal, Kargin, & Akyuz, 2010). The result that having a child is more important in women than men in Pasch, Dunkel-Schetter, & Christensen's (2002) study on 48 couples having infertility treatment is also supporting the result of this study as women are experiencing more stress in personal-domain than men.

The result of the present study that there were not significant differences between women and men in terms of stress in marital-domain was similar with the results of Schmidt (2006) and Peterson et al. (2009). No significant differences in stress in marital-domain between women and men in infertile couples might be explained by the marital harmony being higher in infertile couples than couples who are not infertile (Schmidt, 2010). Supporting this idea Wright et al. (1991) found no stress in marital-domain in their study on psychosocial reactions in infertile couples; Greil (1997) reported marital relations being strong in infertile couples who want to continue infertility treatment and Onat Bayram (2009) found the marital harmony high in infertile couples.

The result of the present study showing that there was not a significant difference between women and men in terms of social-domain is similar with the result of Peterson et al. (2009), however is different than the results of Schmidt (2006) and Peterson et al. (2008). The result of the present study might be due to the infertile couples' not sharing their situations about infertility problem with their friends and the inner circle (Kizilkaya Beji, 2001; Ozcelik et al., 2007; Yanikkerem, Kavlak, & Sevil, 2008).

### The discussion of The COMPI Coping Strategy Scale Subscale in Women and Man and The Results of Gender in Infertile Couples

In the studies of Schmidt (2006) and Schmidt, Holstein, Christensen, & Boivin (2005) it was found that women used methods to cope with infertility more than men. Peterson et al. (2006) evaluated methods to cope with infertility in eight subscales and determined that women used seven subscales more than men. In another study of Peterson et al. (2008) with 1169 women and 1081 men, it was found that women used methods to cope with infertility stress more than men. The reason for women to use coping

methods more might be their experiencing infertility stress more than men (Schmidt et al., 2005; Peterson et al., 2008).

In the present study it was determined that women used active avoidance coping method more than men. The results of the present study being similar with the result of Schmidt (2006), Peterson et al. (2008), Lechner et al. (2007) and Bayley et al.'s (2009) studies gives the thought that infertile couples used active-avoidance coping method frequently. Supporting this idea, in the study of Galhardo, Cunha, & Pinto-Gouveia (2011) comparing infertile group with different groups it was found that infertile group used avoidance coping method more. Moreover it can be thought that men face the situations in which they can use active-avoidance coping method less than women.

In the present study it was determined that women used active-confronting method more than men. The results of Peterson et al. (2006) and Bayley et al. (2009) are in accordance with the results of the present study. The use of active-confronting coping methods more by women in the present study strengthens that gender difference has significance in the displaying of stress. While women searched for more support in solving infertility problem, men coped by avoiding the situation (Benazon, Wright, & Sabourin, 1992; Oguz, 2004; Erden, 2006; Yilmaz, 2006).

It was found in the present study that women used passive-avoidance coping method more than men. Peterson et al. (2006) also reported that women used escape/avoidance coping method more than men. The reason why men used this method less could be their being in a more realistic character than women (**Yeşiltepe Oskay & Kizilkaya Beji, 2001**).

In the present study there were no differences between women and men in terms of using meaning-based coping methods. The results of the present study are in accordance with Peterson et al.'s (2006) and are different than Bayley et al.'s (2009) study. It can be said that the destiny based thought structure in Turkey is an effective factor in the acceptance of infertility problem.

### **The Discussion of The Results of Relations between The COMPI Fertility Problem Stress Scale subscales and The COMPI Coping**

### **Strategy Scale subscales in Women and Men in Infertile Couples**

In the present study it was found that there were positive relations between all subscales of The COMPI Fertility Problem Stress Scale subscales in women and men. This result was similar with Peterson et al.'s (2008) study result. These results support the idea that infertility stress affects many life issues of infertile couples.

It is suggested in the references that different coping methods should be used in coping with stress (Peterson et al., 2006; Ozcelik et al., 2007). In the present study positive relations were found between all the subscales of The COMPI Coping Strategy Scale subscales in women and men. Parallel to the results of Peterson et al. (2008), the present study shows that infertility stress effects on many aspects of the lives of infertile couples and they display necessities to use different coping methods to cope with this problem (Peterson et al., 2006; Ozcelik et al., 2007).

In the present study, positive relations were found between The COMPI Fertility Problem Stress Scale subscales and active-avoidance, active-confronting and passive-avoidance coping methods subscales of The COMPI Coping Strategy Scale subscales in women and men and there were no relations with meaning-based coping method. There are similarities between Bayley et al.'s (2009) results and the results of the present study.

In the present study positive relations were found between active-confronting coping method and all the subscales of the infertility stress scale. In different references positive and negative effects of social support on stress was reported (Kizilkaya Beji, 2001; Ozcelik et al., 2007). In the study group of the present study it can be said that the use of active-confronting coping method, which included social support, increased stress in social-domain.

There are similarities with other study result together with differences between the results of the present study and the results of studies carried out in different countries on coping methods (Bayley et al., 2009; Peterson et al., 2006; 2009). It is evaluated that this situation is arising from cultural differences in using coping methods against stressors by people in different cultures. Because the effects of life



events are special to individual and the meaning an individual gives to an event is closely related to the coping methods and social supports of the individual.

It is significant to identify the stress of infertile couples and the methods they use to cope with infertility stress in planning and applying the education during infertility treatment. According to the results collected in the present study by infertility stress scale, the stress in personal-domain was higher in women than men. Among methods to cope with infertility stress it was determined that women used the active-avoidance, active-confronting and passive-avoidance methods more than men.

### Conclusion

It was found that stress subscale of The COMPI Fertility Problem Stress Scales score means of women in personal-domain were higher than men. There was not significant difference between women and men in marital and social-domains. It was determined that in terms of The COMPI Coping Strategy Scales women used active-avoidance, active-confronting and passive-avoidance coping methods more than men. There was not a significant difference between women and men in terms of the use of meaning-based coping method.

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