Determination of factors influencing perceived health status among poor and non-poor women in eastern Turkey

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B A C K G R O U N D : Socio-economic status, income, gender, education, and individual and cultural differences influence the perceived health status. Perceived health is important as it enables individuals to be sensitive to changes in their health, and heralds the presence of diseases before their signs and symptoms appear.

A I M : This study was conducted to determine factors that may account for variations in perceived health status between poor and non-poor women.

M A T E R I A L - M E T H O D : The study was conducted in Kars, a city located in the eastern part of Turkey, and included a total of 420 women (210 poor and 210 non-poor).

R E S U L T S : The non-poor women had better living conditions and did not have to struggle to make a living. There was a significant difference ($P<0.01$) in health perception between the poor and non-poor populations, with 78.1% of the poor women and 43.4% of the non-poor women having a bad to moderate perception of health. Among the poor women, chronic diseases ($P<0.01$), age ($P<0.05$) and monthly income ($P<0.05$) significantly affected perceived health status; education, marital status, smoking and health insurance had no significant impact on perceived health status ($P>0.05$). Among the non-poor women, education ($P<0.05$), chronic diseases ($P<0.01$), age ($P<0.05$), monthly income ($P<0.05$) and health insurance ($P<0.01$) significantly affected perceived health status; marital status and smoking did not affect the perceived health status ($P>0.05$).

C O N C L U S I O N S : The results of this study indicate that perceived health status, an important indicator for actual health status, is affected by poverty.

K E Y - W O R D S : Poverty, women's health, perceived health, nursing

INTRODUCTION

At the most basic level, poverty is a human condition characterized by sustained or chronic deprivation of resources, security, and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political, and social rights [International

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Council of Nurses (ICN) 2004, Rumsey & Foley 2004]. It is usually considered under two headings, absolute and relative poverty. Individuals, whose daily income is not enough to purchase food providing 2400 kcal, are considered absolutely poor [Bellù 2005, State Planning Organization (SPO) 2001]. Relative poverty is a condition in which a certain proportion of a community has below average affluence (Turkish Industrialists and Businessmen Association 2000). The rate of relative poverty was 9.3% in Australia (1995), 7.5% in France (1994), and 5% in Denmark (1995) (Förster & Pearson 2000). In

2004, in Turkey it was 14.8% according to the Turkish Statistics Institute (Turkish Statistical Institute 2004).

Health problems are strongly associated with socio-economic status. Disease prevention and health promotion are directly related to a wide variety of individual, cultural, and socio-economic features (Baltaş 2004). Children and women are particularly at risk for poverty (WHO 2001). The most frequent effect of poverty on children is inadequate nutrition. Stress at home, early weaning, inadequate maternal nutrition, unhealthy physical conditions and insufficient health services are determinants of inadequate nutrition among children (Hatun 2002). Women also tend to be poorer than men from the same social backgrounds. At present, 70% of 1.2 billion poor people are women (ICN 2004, Öztek 2001). Poor women more frequently suffer from iron deficiency, pregnancy-related complications, and inadequate nutrition and may not have the same access to education (Yard m 2001).

The rate of smoking is gradually increasing among poor women in Europe. Smoking causes a number of systemic disorders, such as cancer, especially among poor young women (Akın, Esin, & Çelik 2005). Diseases become chronic partly due to poor environmental and living conditions. Individuals in poverty-stricken areas have to struggle against chronic diseases such as obesity, diabetes, and heart disease. Women with a low socio-economic status were 3.2 times more likely to develop diabetes than those with a high socio-economic status (Agardh et al 2004). Poor people more frequently suffered from asthma (Lethbridge & Phipps 2005). Poor women more frequently had hypertension and high cholesterol (Goldstein, Jacoby, del Aguila & Lopez 2005).

Perceived health status is important in that it enables individuals to be sensitive to changes in their health and harbingers a disease before its symptoms arise and before clinical examinations are made (Erengin & Dedeoğlu 1997). Goldberg et al (2001) reported a strong association between perceived health status and medically diagnosed disease. Socio-economic status, income, gender, and education considerably affect perceived health status (Ahmad, Jafar & Chaturvedi 2005, Öztek 2001, Vissandjee et al 2004). Women had poorer perceived health status in relation to men, and low socio-economic status, living in the countryside, and illiteracy affected perceived health status (Ahmad et al 2005). Yen & Kaplan (1999) emphasized the place of residence and found that women living in poverty-stricken areas had poorer perceived health status. Vissandjee (2004) also found that type of residence, employment, and age af-fected perceived health status, and individuals who lived with their families had better perceived health status.

It has been frequently reported in the literature that poverty, perceived health status, and demographics are always interrelated (Ahmad et al 2005, Vissandjee et al 2004, Yen & Kaplan 1999). Unfortunately, there have not been any studies by nurses on the relation between poverty and perceived health status in Turkey. The aim of this study is to determine the factors which influence perceived health status among poor and non-poor women.

MATERIAL-METHOD
Data collection

This is a descriptive study which was conducted in Kars, a city in the eastern part of Turkey. It was conducted in the areas of Health Clinic 1 and Health Clinic 4. Selection of these two areas was based on references made by the City Health Directorate, the Health Clinic, and the municipality. The area of Health Clinic 1 is comprised of seven districts with a total population of 25,922, most of which were of higher socio-economic status. In the area of Health Clinic 4, the individuals were either of low or moderate socio-economic status, and the area provided health care for a population of 16,412 living in four districts.

We used a sampling method recommended by the World Health Organization for screening programs (Bahar 1988, Rothenberg, Lobanov, Singh, Stroh 1985). For selection of poor women, a map with the names of the streets and addresses was obtained from midwives working in Health Clinic 1. Next, each street was numbered, and 30 streets were randomly selected. After this, addresses of the residences at the beginning and at the end of the streets were numbered, and one of each was randomly selected to start distributing the questionnaire. The investigator gave the questionnaires to the women living in the selected residence, and then visited six other nearby residences. Using this approach, a total of 210 women (from sampling seven families from each of the 30 streets) completed the questionnaire. When we failed to reach seven families, we visited residences in other streets. For a group of non-poor women, the same steps were followed and a total of 210 women were given questionnaires. Non-poor women living in the district where most of the residents were poor were not included into the study and vice versa. As a result, we formed two groups, each of which included 210 women, so the study included a total of 420 women. Only three individuals declined to participate in the study or were not available. To replace these individuals, three substitutes were randomly selected and included in the study. Data were

collected by the investigator herself via face-to-face in-terviews between January 6th and February 26th 2006.

Ethical considerations

The study was approved by the Ethical Committee of Dokuz Eylül University and Kars City Governorship and Health Administration. Potential participants were in-formed about the study and its aim, and then asked if they agreed to participate.

Instrument

"A poverty and health questionnaire" was used. The questionnaire included 26 questions about health status, socio-demographic and socio-economic characteristics, and perceived health status. It was developed with the help of experts and methods from the recent literature. The experts who assisted were two professors working on research of poverty. A pilot study was performed on 30 women with cultural and socio-economic features simi-lar to those who were included in the study in order to determine whether the questionnaire would be appropri-ate. Based on recommendations from the experts and the results of the pilot study, several questions were excluded because they were difficult to understand. The questions were directed towards the household owner and not to-wards the oldest or the youngest woman of the house.

Dependent variable

Perceived health status (Figure 1): To determine per-ceived health status, the question "How is your general health?" was used. For the evaluation of the variable, the scores obtained by the participants were divided into "moderate-poor" (1–2) and "good-very good" (3–4) (Yen & Kaplan 1999).

Independent Variables

Age: The participants were not distributed into groups by their ages.

Education: The participants were designated into the following seven groups based on their education level: illiterates, literates, primary school graduates, second-ary school graduates, high school graduates, university graduates, and postgraduates. However, for the statis-tical analysis, the participants were divided into two groups: Group 1 included illiterates, literates and prima-ry school graduates (participants with an education level of primary school or a lower education level) and Group 2 included secondary school graduates, high school graduates, university graduates and postgraduates (the participants with an education level of secondary school
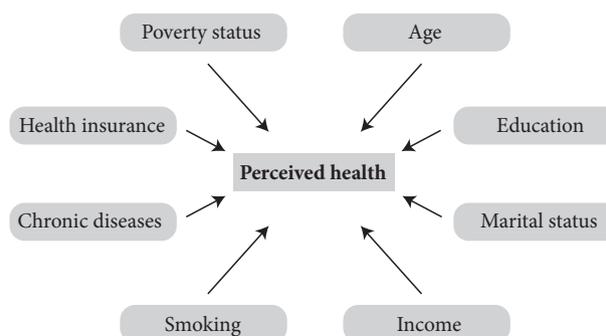

Figure 1. Variables

or a higher education level). Each question of the ques-tionnaire was read by the investigator to all women with various educational backgrounds.

Marital Status: Based on the new classification system of marital status in Turkey, the participants were divided into two categories, married and single.

Income: The monthly income of the participants was considered as a constant variable and was not classified.

Smoking: Based on the smoking status, the partici-pants were also divided into two categories, non-smok-ers or ex-smokers, and daily smokers.

Chronic diseases: To determine the presence of chronic diseases, the question "Have you got a chronic disease diagnosed by a doctor?" was used.

Health insurance: To analyze health insurance, the participants were assigned into two groups: those with or without health insurance.

Poverty status: Absolute poverty (the food energy in-take) method was used. The food energy intake (FEI) methodology defines the minimum food intake needed by a given individual to lead a decent life. By this defini-tion, people who cannot afford the cost of the FEI are poor. Individuals who cannot afford enough food to produce 2400 calories are considered poor (Bellù 2005, Bonnie & Khayum 2003, Erdoğan 2002, SPO 2001). Figure 2 illustrates the step-by-step procedure to calcu-late the cost of FEI.

Data Analysis

Chi-square test and Spearman correlation analysis were performed using SPSS 10.0 for Windows.

RESULTS
Participants' characteristics

The mean age of women in the poor and non-poor group was 38.74 (±12.81) years and 35.86 (±10.06) years,

Step 1

• Formation of a 2400-kcal-nutrition-table for a four-person family [To form this table, a ready-made table was chosen from previous studies (Bellù 2005, Erdoğan 2002) using the same method and two experts interested in the topic were asked for advice]

Step 2

• Prices of food items were derived from local supermarkets and the amount of money required to buy food for a family of four members was determined.

Step 3

• Those not having the amount of money determined were assigned into the poor group. [In this study 308 YTL ($232) was determined as the poverty line for a four-person-family]. When the women had a family of more or fewer than four members, we used a simple proportion technique and calculated the amount of money required.
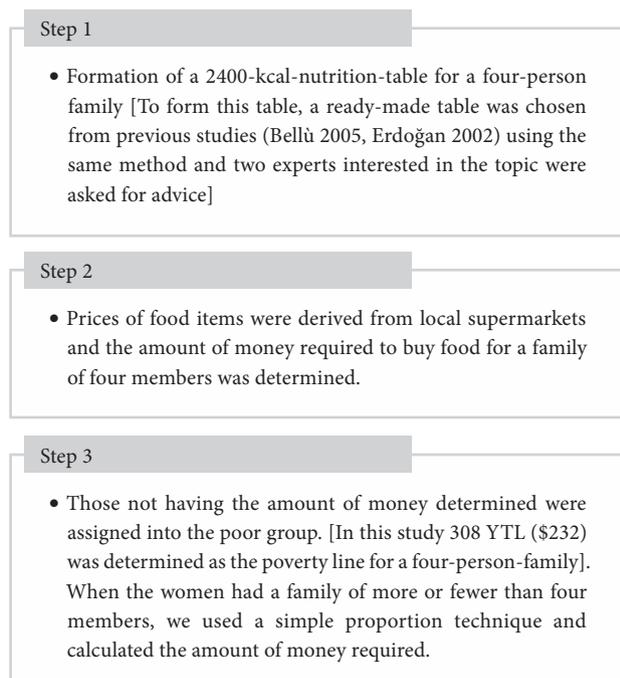
Figure 2. Calculating the cost of Food Energy Intake

respectively. Of the poor women, 52.9% were illiterate. However, only 11.4% of the non-poor women were illiterate. Most women in both groups were married. Thirty-eight percent of poor women and 20.9% of non-poor women had at least one chronic disease.

Seventy six percent of the poor women included in the study had a nucleus family, and the mean number of family members in a household was 5.27 (±2.10). Approximately 95.7% of the poor women were housewives, and 78.3% of their husbands were unemployed or did not have a full-time job. All poor women were living on charity and 77.6% of the donations they received were in the form of fuel. The mean monthly household income of poor women was 277 YTL (New Turkish Lira) ($208). When the study was conducted, $1 was equal to 1,330 YTL (Table 1).

Eighty four point eight percent of non-poor women had a nuclear family, and the mean number of family members in a household was 4.29 (±1.43). Moreover, 68.1% were housewives, and 42.2% of their husbands were state officials. None of the group members were dependent on charity. The mean monthly household income of non-poor women was 1,164 YTL ($875).

Factors that may account for variations in perceived health status

Of the poor women, 78.1% had perceived health status ranging from "bad" to "moderate", while only 43.33%

of the non-poor women perceived their health as "bad" or "moderate". The difference in perceived health status between the two groups was statistically significant (P<0.01) (Table 2). In the poor group, there was a slightly negative relation between age and perceived health status (r=−0.206), and there was a slightly positive relation between income and perceived health status (r=0.203) (P<0.05). In the non-poor group, there was a slightly negative significant relation between age and perceived health status (r=−0.232), and a slightly positive significant relation between income and perceived health status (r=0.139) (P<0.05).

Among the poor women, there was a significant difference between perceived health status and chronic diseases (P<0.05), but there was no significant difference between perceived health status and education, marital status, or smoking (Table 3).

In the group of non-poor women, there was a statistically significant difference between perceived health status and education (P<0.05), chronic diseases (P<0.05) and health insurance (P<0.05), but there was no significant difference between perceived health status and marital status or smoking (Table 3).

DISCUSSION
Perceived health status among poor and non-poor women

There was a significant difference in perceived health status between the poor and non-poor women. In fact, poor women had a more negative perception of health (Table 2). There have been several studies with similar results. Eisenberg (1997) emphasized that poor women were three times more likely to have a negative perception of health, and Vissandjee et al (2004) found that low socio-economic status was an important determinant of negative perception of health (Eisenberg 1997, Vissandjee et al 2004). Another study on perceptions of health in developing countries revealed that poverty played an important role in perceived health status (Ahmed, Rana, Chowdhury & Bhuiya 2002). Ahmad et al (2005) noted that individuals with low socio-economic status were 1.56 times more likely to have a negative perception of health (Ahmad et al 2005). Belek (2004) also reported that individuals with low socio-economic status living in shanties had a more negative perception of health.

Based on these studies, it can be expected that, in general, poor women have a more negative perception of health. Poor living conditions, low education level, low social status, and the struggle for money to pay for nutrition, accommodation, and health care, put poor women

Table 1. Demographic characteristics of the participants (n=210)		
Variables	Poor women	Non-poor women
	N (%)	N (%)
Age groups		
15–24 years	21 (10)	25 (12)
25–34 years	71 (33.8)	78 (37.1)
35–44 years	47 (22.4)	61 (29)
45–54 years	38 (18.1)	33 (15.7)
55–64 years	24 (11.4)	11 (5.2)
≥65	9 (4.3)	2 (1)
Mean age	38.74 (±12.81)	35.86 (±10.06)
Education		
Illiterate	111 (52.9)	24 (11.4)
Primary school graduates	77 (36.6)	75 (35.7)
Secondary school graduates	13 (6.2)	20 (9.5)
High school graduates	8 (3.8)	66 (31.4)
≥University graduates	1 (0.5)	25 (12)
Marital status		
Single	35 (16.7)	18 (8.6)
Married	175 (83.3)	192 (91.4)
Chronic diseases		
No	129 (61.4)	166 (79.1)
1 Problem	71 (33.8)	36 (17.1)
≥2 Problems	10 (4.8)	8 (3.8)
Mean household income	276.6 (±111) YTL	1,163.9 (±697) YTL

at a disadvantage in terms of health. These social, physical, and emotional factors have a negative impact on perceived health status, which can be considered as an indicator of health status. For this reason, one can expect that poverty may have negative effects on perceived health status.

Monthly income and perceived health status

An individual has to have social, physical, and emotional well-being in order to be healthy. We found a significant relationship between monthly income and perceived health status among both poor and non-poor women. There have been many other studies with comparable results in the literature. McMahon et al (2003) found a significant relationship between low income and a negative perception of health, and reported that only 40% of the participants with the lowest income had a perfect perception of health, while 82% of the participants with the highest income had a perfect perception of life (McMahon, Mckay, & Hearne 2003). Yen & Kaplan (1999) found that low incomes caused 2.67 times more negative perception of health (Yen & Kaplan 1999). Belek (2004) stated that individuals had worse perceived health as their income decreased over a five year period (Belek 2004).

In the present study, the significant relationship between high income and a more positive perception of health can be explained by the fact that high income contributes to social welfare and makes health services easily available to individuals. However, poor women did not have such resources and even had difficulties in meeting their own nutritional needs, which had a negative impact on their perceived health status.

Age and perceived health status

In this study, most of the women were adults, and their perception of health became more negative with age. In the previous study, many researchers found a similar relationship between increased age and a decline in perception of health (Ahmed et al 2002, Erengin & Dedeoğlu 1997, Goldberg et al 2001, Vissandjee et al 2004). Al-Windi (2005) reported that most people aged 46–64 years had a negative perception of health, but people aged 16-44 years had a more positive perception of health (Al-Windi 2005). McMahon et al (2003) reported that 79% of individuals less than 40 years old had a good/perfect perception of health, but only 15% of individuals aged 70 years or older had a good/perfect perception of health (McMahon et al 2003). Aging is followed by physiological changes, chronic diseases, psychosocial conditions, and immobility, all of which cause a cycle wherein physiological changes and health problems caused by advanced age may lead to a negative perception of health.

Education and perceived health status

In this study, almost half of the poor women were not literate, whereas almost half of the non-poor women were at least secondary school graduates (Table 1). There was no significant relation between education and perceived health status among the poor women, but there was a significant relation between education and perceived health status among the non-poor women (Table 3). In fact, women who were primary school graduates or

Table 2. Perceived health among the poor and the non-poor women (n=420)			
Perceived health	Bad-Moderate	Good-Very good	P value
	N (%)	N (%)	
Poor women	164 (78.1)	46 (21.9)	0.000
Non-poor women	91 (43.3)	119 (56.7)	$(x^2=53.195)$
Total	255 (60.7)	165 (39.3)	

Table 3. Perceived health status and independent variables		
Variables	Bad - Moderate perceived health status	
	Poor women (N=210)	Non-poor women (N=210)
Education		
Primary school graduates and those with little or no education	148 (78.7)	51 (51.5)**
Marital status*		
Single	30 (85.7)	10 (55.6)
Smoking*		
Smokers	30 (81.1)	17 (37)
Chronic diseases		
Yes	92 (71.3)**	104 (62.6)**
Health insurance*		
No	138 (78.4)	118 (59.6)**

*Yates correction was made
**P<0.05

illiterate had a more negative perception of health. Yen & Kaplan (1999) also reported a more negative perception of health among the primary school graduates and illiterate women (Yen & Kaplan 1999). Ahmad et al (2005) found literacy to be associated with perceived health status and underlined that education played an important role in perceived health status (Ahmad et al 2005). Belek (2004) followed the subjects for five years and found that as education ameliorated, perceived health status improved (Belek 2004). Erengin & Dedeoğlu (1998) reported that individuals with less than eight years of education were 1.2 times more likely to have a poor perception of health than those with more than eight years of education (Erengin & Dedeoğlu 1998). McMahon et al (2003) noted that education was an important factor in perceived health status.

In the present study, education did not have an impact on perceived health status among poor women. This may be because these women were not financially independent, and their families had financial difficulties. The non-poor women had a more positive perception of health, possibly because they had higher education, income levels, more active social life, and ability to contact health services.

Marital status and perceived health status

It can be expected that married people have a stronger social support system, and therefore a better perception of health. In this study, most of the women were married, and single women had a worse perception of health, but the difference in perceived health between the married and single women was not statistically significant in either group (Table 3).

Otha et al (1998) found that individuals with employment had significantly better marital relationships than those with low socio-economic status, and had fewer subjective complaints overall. McMahon et al (2003) reported that 72% of the individuals who had never been married, 59% of the married individuals, and 21% of the divorced individuals had a good/perfect perception of health, with a significant difference. Erengin & Dedeoğlu (1997) found that the individuals whose spouses were dead or who were separated from their spouses had a significantly worse perception of health.

In the present study, marital status had no effect on perceived health status. It may be that difficulties in meeting basic needs, inability to afford health care, and a low education level might have decreased the effect of marital status on perceived health status among the poor women. In addition, the non-poor women might not have had enough attention and support from their husbands due to traditional and cultural values predominant in the eastern part of Turkey.

Smoking and perceived health status

Smoking did not affect perceived health in either group (Table 3). However, Ahmad et al (2005), Al-Windi (2005), and McMahon et al (2003) reported smoking to have a negative effect on perceived health. Likewise,

Vissandjee et al (2004) stated that smoking played an important part in perceived health. In contrast, Otha et al (1998) and Yen & Kaplan (1999) explained that there was no significant difference in perceived health between smokers and non-smokers. It is expected that poor individuals smoke more, and their perceived health may be more negative since they face more stressors such as adequate finances.

In this study, the rate of smoking was lower (28%) in both groups than in the general population of Turkey (Turkey Demographic and Health Survey, 2003), and smoking had no impact on perceived health. It may be that the participants came from patriarchal families and thus smoked less, or may not have admitted their smoking habits.

Chronic diseases and perceived health status

Poverty brings about poor living conditions and limits education, which causes health problems and low productivity in all parts of life. In this study, we found that the presence of chronic diseases caused a negative perception of health regardless of socio-economic status (Table 3). Al-Windi (2005), Erengin & Dedeoğlu (1997), and Miilunpalo et al (1997) reported similar results. Chronic diseases may have a negative impact on perceived health status since they may last for a lifetime, cause physical handicaps, occur in episodes and leave sequelae, require more frequent visits to health centers, and cause psychological and physiological problems. For these reasons, women with chronic diseases, whether they were poor or non-poor, may have had a poor perceived health status. Considering that poor women also had difficulties with access to nutrition, accommodation, and treatment facilities, it was not surprising that chronic diseases had a negative impact on perceived health status as an indicator for health status.

Health insurance and perceived health status

An individual has to have a job and a regular source of income in order to have health insurance. Most of the poor participants had a "green card" – a document which confirms that one is poor. Health services are free for people with a "green card" in Turkey. The non-poor participants were provided with health services by "Emekli Sandigi" – an institution which pays for health services offered to state officials in Turkey.

Health insurance had an impact on non-poor women, but not on poor women (Table 3). Erengin & Dedeoğlu (1997) found that individuals without health insurance had 1.48 times more negative perception of health. However, Nenasir et al (2005) reported that health insur-

ance played an important role in perceived health status irrespective of income level. Ozcebe (2003) also noted that most individuals without health insurance considered their health to be bad (78.1%), explained that health services were not available to them, and that their diseases were not treated effectively because they did not have an adequate income.

As in many countries around the world, poor people in Turkey live away from the residential areas. This means that they live away from health centers. In addition, most of the poor women have a "green card", which provides limited access to health care services although it was actually distributed to offer health care for free. In this study, poor women did not have enough money even to pay the bus fares to health centers. Also, they did not know how to get health services. Even if they had the money to go to a hospital, they might not have been able to afford the necessary prescriptions. For these reasons, health insurance may not have had an impact on perception of health among poor women. In contrast, non-poor women could benefit from health services and afford their prescriptions, and therefore had a more positive perception of health.

CONCLUSION

At present about 21 million people in Turkey earn $4.30 a day. There have been increasing insights into the physical and psycho-social problems caused by stress due to poverty. The results of this study emphasize that perceived health status, an important indicator for actual health status, is affected by poverty. In addition to poverty, advanced age, lack of education, and presence of chronic diseases had a negative effect on perceived health status. In addition to the above mentioned factors, health insurance and marital status also affected perceived health status among non-poor women.

Nurses are frequently in contact with poor people. With regard to home visits, nurses should give priority to poor people, direct them to public education centers, investigate age-related diseases among women, refer women with these symptoms to health centers, and provide appropriate care. They should follow patients with chronic diseases, facilitate their treatment, and direct them to charities if they cannot afford treatment. Nurses should also volunteer to lobby the government to improve "green card" functions. In addition, it should be kept in mind that single women are also at a high risk of poor health.

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