

ELŻBIETA PIETRYKA-MICHAŁOWSKA<sup>1</sup>, JOLANTA SZYMAŃSKA<sup>2</sup>, ANNA TORUŃ-JURKOWSKA<sup>1</sup>

## Styl życia kobiet z chorobą nowotworową. Część I. Wpływ choroby nowotworowej na społeczno-zawodową aktywność kobiet

## Lifestyle of women with neoplastic disease. Part I. Effects of neoplastic disease on women's socio-professional performance

### Streszczenie

**Wstęp.** Nowotwory złośliwe są drugą przyczyną zgonów w Polsce. Powodują one ponad 26% zgonów u mężczyzn i 23% zgonów u kobiet. Pod wpływem choroby niekiedy dochodzi do zmian w aktywności zawodowej chorych kobiet. Niektóre z nich przechodzą na rentę lub wcześniejszą emeryturę, zmniejszają dotychczasowy wymiar czasu pracy, inne z kolei zmieniają rodzaj pracy na mniej obciążający. Choroba w mniejszym lub większym stopniu utrudnia chorym funkcjonowanie w pracy zawodowej oraz spełnianie dotychczasowo pełnionych przez nich funkcji.

**Cel.** Głównym celem badania była analiza wpływu choroby nowotworowej na aktywność społeczno-zawodową kobiet, jak również identyfikacja zmiennych wpływających na prezentowane postawy.

**Materiał i metody.** W badaniu uczestniczyło 331 kobiet, u których zdiagnozowano chorobę nowotworową. Narzędziem badawczym był kwestionariusz ankiety opracowany przez autorów badania.

**Wyniki.** Stwierdzono, że choroba nowotworowa wprowadza szereg zmian w życiu kobiet oraz ich rodzin. Ma istotny wpływ na codzienne funkcjonowanie oraz na aktywność zawodową kobiet. Postawy kobiet wobec aktywności społeczno-zawodowej determinowane są: rodzajem leczenia, wiekiem, poziomem wykształcenia, miejscem zamieszkania oraz stanem cywilnym. Należy wprowadzić takie mechanizmy, które wymuszają na kobietach korzystanie z bezpłatnych badań profilaktycznych organizowanych przez NFZ w wybranych placówkach służby zdrowia.

### Abstract

**Introduction.** Malignant tumours are the second leading cause of death in Poland accounting for 26% of deaths amongst men and 23% of deaths amongst women. In some cases, the disease in question affects professional activities of women. The affected women take early retirement, reduce the working hours or change their jobs into less strenuous. Professional functioning of the affected individuals is hindered to a greater or lesser extent.

**Aim.** The main objective of the present study was to analyse the impact of neoplastic diseases on the socio-professional activity of women and to identify the variables affecting the adopted attitudes.

**Material and methods.** The study involved 331 women diagnosed with neoplastic diseases. The study tool was the questionnaire designed by the authors.

**Results.** The findings have revealed that neoplastic disease significantly changed lives of patients and their families. Moreover, it affects everyday functioning and professional activity of women. The attitudes of women towards socio-professional activity are determined by the type of treatment applied, age, education, place of residence and marital status. It is essential to introduce the mechanisms that are likely to force women to undergo free prophylactic examinations organized by the National Health Fund in the selected health care institutions.

**Słowa kluczowe:** choroba nowotworowa, aktywność kobiet

**Key words:** neoplastic disease, women's performance

<sup>1</sup> Department of Mathematics and Medical Biostatistics, Medical University of Lublin, Poland

<sup>2</sup> Department of Paedodontics, Medical University of Lublin, Poland

## INTRODUCTION

According to the 2006 report on epidemiology of malignant tumours prepared by researchers from the Department of Cancer Epidemiology and Prevention, Centre of Oncology in Warsaw, malignant tumours are the second leading cause of death in Poland accounting for 26% of deaths amongst men and 23% of deaths amongst women [1]. In the female population, breast, lung and cervical cancers are most common [2,3]. No campaigns or social projects promoting prophylactic examinations help in this respect [4,5]. In Poland, cancers arouse fear and trigger a hail of negative associations. The source of fear is the lack of sufficient knowledge about the disease, its causes or possible effective treatment [5]. In some cases, the disease induces changes in professional activity of the affected women who retire early, reduce working hours or change their jobs into less demanding. Moreover, the disease, to a greater or lesser extent, hinders professional functioning [6-8].

The main aim of the study was to analyse the effects of neoplastic diseases on socio-professional activity of women and to identify the variables affecting the attitudes adopted.

## MATERIAL AND METHODS

The study involved 331 women diagnosed with neoplastic diseases. The study tool was the questionnaire designed by the authors. The questionnaire was distributed amongst women attending prophylactic examinations in the hospital outpatient clinic (Teaching Hospital No. 4) between March 2007 and April 2009. The types of cancer diagnosed in the study population and methods of treatment applied were analysed. Moreover, the effects of neoplastic disease on socio-professional activity of women were studied. The results were statistically analysed. The values of parameters measured in the nominal scale were characterized by number and percentage whereas relations between variables were evaluated using the  $\chi^2$  test of independence. The 5% error of deduction was assumed;  $p < 0.05$  was considered as significant. The database was prepared and statistical analyses were performed using the Statistica 8.0 software (StatSoft, Poland).

## CHARACTERISTICS OF THE STUDY POPULATION

The study encompassed 331 women aged 23 - 62 years. The mean age was  $45.6 \pm 8.9$  years. The respondents were divided into three age categories (Table 1).

The largest group comprised women aged 41-50 years (41.4%) whereas the smallest one those < 40 years of age (27.2%). The percentage of women > 50 years of age was 31.4%.

TABLE 1. Age of the respondents.

Age groups	Number (n)	Percentage (%)
< 40 years	90	27.2
41 - 50 years	137	41.4
> 50 years	104	31.4

According to the education level, the highest proportion of the respondents had secondary education (138) while the smallest number had elementary education (14) (Fig. 1).

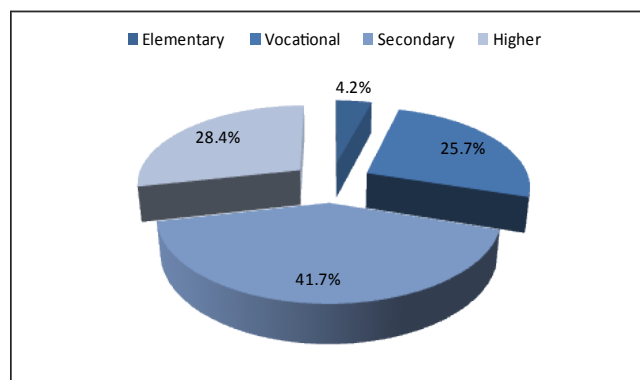


FIGURE 1. The level of education of the respondents.

According to marital status, the married women constituted the largest group – 232 (70.1%) followed by widows – 38 (11.5%); 35 women were separated or divorced (10.6%) and 26 were single (7.9%) (Table 2).

TABLE 2. Marital status of the respondents.

Marital status	Number (n)	Percentage (%)
single	26	7.9
married	232	70.1
separated or divorced	35	10.6
widowed	38	11.5

The majority of women were from towns with < 100 thousand inhabitants (42.3% – 140) followed by those from villages – 31.1% (103) and those from towns with > 100 thousand inhabitants – 26.6% (88) (Fig. 2).

The commonest cause of hospitalization was ovarian cancer – 45.3% (150) followed by cervical cancer – 32.3% (107). Uterine body cancer occurred in 11.5% (38) of the respondents whereas breast cancer was found in 10.3% (34) of the respondents (Table 3).

Furthermore, the study was to check whether the age of the affected respondents with various types of cancers was significantly statistically different; one-factor analysis

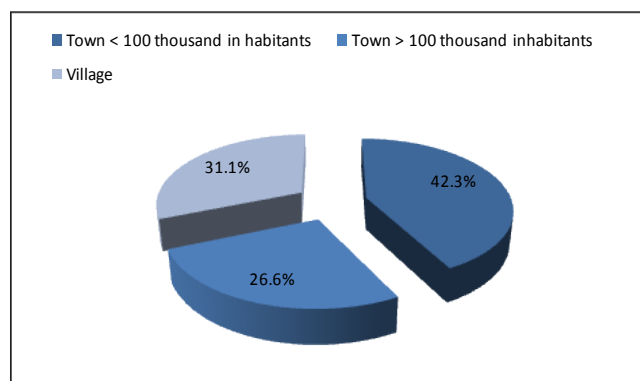
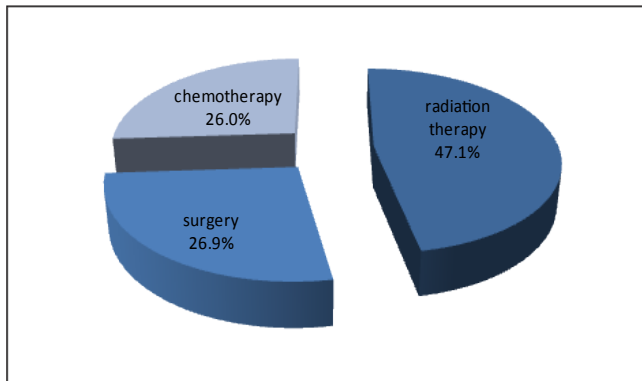


FIGURE 2. Place of residence of the respondents.

**TABLE 3. Types of cancers diagnosed in the respondents.**

Cancer	Number (n)	Percentage (%)
Breast cancer	34	10.3
Ovarian cancer	150	45.3
Cervical cancer	107	32.3
Uterine body cancer	38	11.5
Others	2	0.6
Total	331	100.0

of variance (ANOVA) was used. The assumption required for this test is that variances in different groups are homogenous; therefore, the Loven test was applied, which is considered the most powerful tool to verify such an assumption. The test revealed that there were no grounds to reject the zero hypothesis about the equality of variances ( $F=327$ ;  $p=0.258$ ). The one-factor analysis of variance ANOVA ( $F=17.54$ ;  $p=0.0000$ ) demonstrated that the mean age of patients suffering from various types of cancer was significantly statistically different. The youngest group consisted of the respondents with uterine body cancers – the mean age – 36.7 years; the mean age of women with breast cancer and those with cervical cancer was comparable – 44.8 years; 43.9 years, respectively. The oldest age group comprised patients with ovarian cancer – the mean age 48.8 years. The population studied was asked to list the methods of treatment used in individual cases (Fig.3). The majority of the respondents – 47.1% (156) of patients underwent radiation therapy. Surgery was used in 26.9% (89) of the respondents and chemotherapy in 26% (86) of patients.

**FIGURE 3. Methods of treatment applied in the respondents.**

## RESULTS

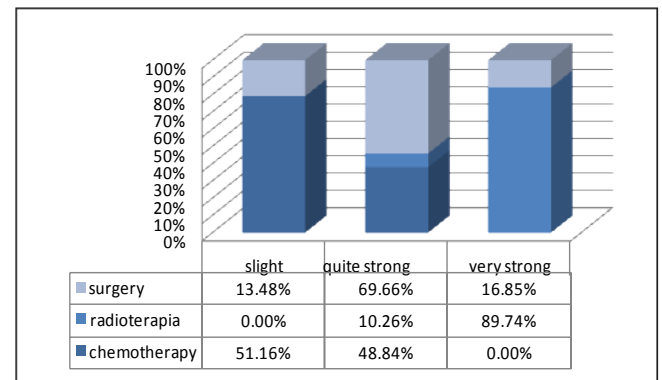
As far as the question “How do you cope with everyday problems?” is concerned, the majority of the respondents answered they tried to lead normal, everyday life and protect the family members against any negative effects of changes, irrespective of the way they felt; however, they believe that the method used had significant impact on everyday functioning. The questionnaire answers are presented in Table 4.

The majority of women 45.6% (151) stated that the method of treatment very seriously affected normal, everyday life. The

**TABLE 4. Opinions of the respondents about effects of therapy applied on everyday life.**

Categories	Number (n)	Percentage (%)
None	2	0.6
Slight	54	16.3
Quite strong	120	36.3
Very strong	151	45.6
Extremely strong	4	1.2
Total	331	100.0

“quite strong” category was chosen by 120 respondents (36.3%). The lowest percentages were found in “none” and “extremely strong” categories; 2 respondents – 0.6% and 4 respondents – 1.2%, respectively. To compare the effects of methods of treatment on subjective feelings of patients, the “extremely strong” category was combined with the “very strong” one whereas the “none” category with the “slight” one. The results are presented in Fig. 4. The majority of patients who underwent surgery believed that the method affected strongly their everyday functioning – 69.7% (62 individuals). A high proportion – 16.9% (15 patients) answered that surgery influenced very strongly their everyday life; 13.5% of the respondents in this group chose the “slight” category. Amongst patients subjected to radiation therapy, 140 respondents (89.7%) believed that this method affected very strongly their everyday functioning; the remaining women chose “quite strongly” category. In chemotherapy cases, the similar percentages of the respondents chose two categories “slightly” and “quite strongly”. The differences were statistically significant ( $\chi^2=265.6$ ;  $df=4$ ;  $p=0.0000$ ; Cramer’s  $V=0.63$ ).

**FIGURE 4. Opinions of the respondents on effects of different methods of treatment on normal life.**

In many cases, neoplastic diseases and effects of their treatment prevent the affected ones from undertaking professional activities, shatter work-related successes, lifestyle or living standards aimed at. In some cases, the professional activity of patients changes due to the disease [8].

As for the question “Did the disease affect your professional activity?” the majority of the respondents answered that the disease resulted in the decisions to reduce working hours (34.14%); 24.17% of the respondents took early retirement (Table 5).

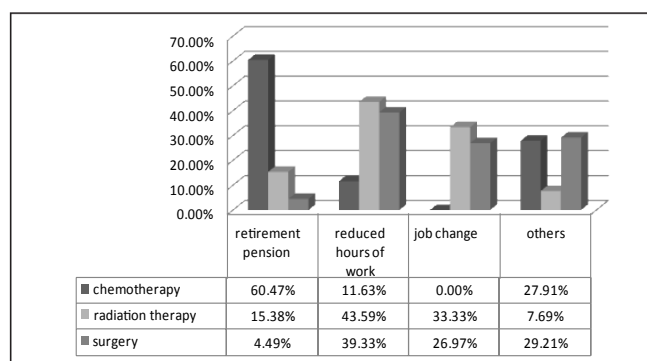
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**TABLE 5. Impact of neoplastic disease on professional activity of the respondents.**

Professional activity	Number (n)	Percentage (%)
Early retirement	80	24.17%
Reduced working hours	113	34.14%
Change to less demanding jobs	76	22.96%
No impact	62	18.73%

A substantial percentage of the respondents changed their jobs into less demanding ones due to cancer (22.96%); almost 19% of women did not change their professional activity. The method of treatment applied statistically significantly affected the professional activity of the respondents ( $\chi^2=130.57$ ;  $df=6$ ;  $p=0.0000$ ; Cramer's  $V=0.444$ ). The patients who underwent chemotherapy statistically significantly more often retired early; the use of radiation therapy was associated with the change of job to less demanding or reduced hours of work. The surgical treatment was mostly related to reduced hours of work, yet a substantial percentage of the respondents did not change their professional activity (Fig. 5).



**FIGURE 5. Effects of various methods of treatment on professional activity of the respondents.**

The further variables, which had effects on professional activity, were as follows:

- age of the respondents ( $\chi^2=48.624$ ;  $df=6$ ;  $p=0.0000$ ; Cramer's  $V=0.271$ ). It was found that older patients statistically significantly less often made changes in professional activity; patients < 40 years of age more often declared early retirement or reduced working hours.
- education ( $\chi^2=34.897$ ;  $df=9$ ;  $p=0.0006$ ; Cramer's  $V=0.309$ ). The higher the education level, the higher the incidence of early retirement
- place of residence ( $\chi^2=24.189$ ;  $df=6$ ;  $p=0.0005$ ; Cramer's  $V=0.261$ ). The respondents from the country statistically significantly more often did not make any changes in professional activity.
- marital status ( $\chi^2=35.189$ ;  $df=12$ ;  $p=0.0044$ ; Cramer's  $V=0.326$ ). The single respondents statistically significantly more often did not change their professional activity whereas the married and separated patients reduced the number of hours of work or changed their jobs into less demanding ones.

## CONCLUSIONS:

1. Cancer induces a variety of changes in lives of the affected women and their families. It has significant effects on everyday functioning and professional activity of women.
2. Attitudes of women towards socio-professional activity are determined by the type of therapy, age, education, place of residence and marital status.
3. It is essential to introduce the mechanisms that are likely to force women to undergo free prophylactic examinations.

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## Informacje o Autorach

Dr n. med. ELŻBIETA PIETRZYKA- MICHAŁOWSKA – adiunkt, Zakład Matematyki i Biostatystyki Medycznej, Uniwersytet Medyczny w Lublinie, dr hab. n. med. JOLANTA SZYMAŃSKA – adiunkt, Katedra i Zakład Stomatologii Wieków Rozwojowego, Uniwersytet Medyczny w Lublinie, mgr inż. ANNA JURKOWSKA – wykładowca, Zakład Matematyki i Biostatystyki Medycznej, Uniwersytet Medyczny w Lublinie.

## Adres do korespondencji

Katedra i Zakład Stomatologii Wieków Rozwojowego  
Uniwersytet Medyczny w Lublinie  
ul. Staszica 11, 20-081 Lublin