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Work ability in healthcare personnel after breast cancer

Introduction: Breast cancer (BC) is one of the most common health concerns throughout the world which includes 30% of female cancers. It is also known as the second most common cause of death in developed countries and the third leading cause of death in less developed countries. Excluding non-melanoma skin cancers, in 2020 there were 54,976 new cases of BC registered in Italy (30.3% of all cancers affecting women). They represent 14.6% of the cancers affecting the entire population. The 5-year survival rate of women with BC in Italy is 87%. In women, BC was the leading cause of cancer death (16.1% of all cancer deaths), followed by lung cancer (12.5%) and colorectal and anus cancers (11.0%). A decrease in BC mortality has been confirmed, less than 6% from 2015 to 2020. Mortality, however, appears to be decreasing in all age groups, especially in women under the age of 50, attributable to the greater diffusion of early diagnosis programmes and therefore to diagnostic anticipation and also to therapeutic progress. Early BC is considered potentially curable. Therapy has progressed substantially over the past years, with a reduction in therapy intensity, both for locoregional and systemic therapy; avoiding overtreatment but also undertreatment has become a major focus.

There are many factors that affect the incidence of BC: increased life expectancy; changes in reproductive patterns; lifestyle; use of hormones during menopause; increasing prevalence of obesity; factors related to the socio-cultural environment and increased early diagnosis, mainly due to effective screening programmes. The main recognized occupational risk factors are: ionizing radiation, ethylene oxide and shift/night work. These risk factors are often present in healthcare facilities. According to recent scientific literature, there are correlations between shift work, especially night work, and an increase in the incidence of BC. Night work, capable of disrupting the normal circadian rhythm, has been classified by the International Agency for Research on Cancer (IARC) as a probable carcinogen factor for humans (Group 2A).

The treatment of these tumours often involves surgical therapy combined with chemotherapy and radiotherapy. These therapies are extremely aggressive with the tumour, often generating localized and

systemic damage, which also causes severe disabilities. Disabilities resulting from BC treatment often reduce the quality of daily life and affect working and social life.

Objective: This study investigated the residual work ability in a cohort of female healthcare workers (HCWs) suffering from BC.

Patients and Methods: The study analyzed a cohort of female HCW's operating at a hospital in Southern Italy. Each HCW underwent a medical examination and routine laboratory tests and a questionnaire on the Work Ability Index (WAI).

Results: Out of the 663 (100%) HCWs undergoing the mandatory health surveillance, 6% (n=40) had been affected by BC; however, only 75% (n=30) agreed to join the study. 23 (77%) worked night shifts. The average number of days of absence from work was 155.8 ± 205.4 days in nurses/technicians and 128.2 ± 239.7 days for doctors/biologists. The WAI score (range: 7-49=poor-excellent) was very low in no cases, moderate in 57% cases, good in 36% cases and excellent in 7% of HCWs. The nursing/technical staff had lower WAI scores than the other health figures. Arm/shoulder pain, numbness, limited mobility in the upper limbs and lymphoedema were the main comorbidities reported by HCWs which affected WAI score.

Conclusions: An increased absence from work was observed in nurses and technicians compared to doctors/biologists, also justified by the different professional risks that see them perform a physically more demanding job, i.e. manual handling of loads/non-self-sufficient patients. WAI showed lower scores in nurses/technicians than in doctors/biologists. Morbidity in the upper limbs is one of the main complications that can negatively affect any work activity. The correlation between shift work, including night work, and BC onset is confirmed by our study. Early diagnosis will result in fewer demolition procedures and the possibility of avoiding highly disabling treatments, such as chemotherapy. This is accompanied, as highlighted in our study, by significantly higher WAI scores, therefore higher residual working abilities, this leading to the guarantee of an earlier return of women to work.