

Assessment of the knowledge, attitude and practice of radiotherapy staff of Iran about the principles of protection against ionizing radiation

Mitra Bokharaeian^{1*}, Hadi Hasanzadeh¹, Majid Jadidi¹, Majid Mirmohammadkhani², Alireza Emadi³

1. Department of Medical Physics, School of Medicine, Semnan University of Medical Sciences(SEMUMS), Semnan, Iran
2. Social determinants of health research center - Semnan University of Medical Sciences(SEMUMS), Semnan, Iran
3. Deputy of research and technology - Semnan University of Medical Sciences(SEMUMS), Semnan, Iran

ABSTRACT

Background: Effects of ionizing radiation are well known and many laws has been set to reduce unnecessary irradiation of staff and patients. So knowing the proper implementation of this legislation can reduce unnecessary exposure of staff and patients. The aim of present study was to evaluate the radiation protection knowledge, practice and attitude (KAP) among radiotherapy centers staff.

Materials and Methods: Data collection was performed by designing a special questionnaire consist of 31 multiple-choice questions. This questionnaire was divided into the three sections; knowledge, attitude and practice regarding protection against radiation. The data analyzed using SPSS (ver.16.0) software. Statistical analysis were evaluated with one-way ANOVA test. $P < 0.05$ was considered as statistically significant.

Results: Present study showed that radiotherapy staff with practice age ≥ 15 years had a higher level of knowledge ($p=0.033$) and better attitude of radiation protection principles ($p=0.026$) and also personnel who worked in medium-size of radiotherapy centers had higher level of knowledge ($p<0.01$) and better attitude ($p=0.02$) about radiation protection compared with other staff in smaller or larger centers. Another parameter that had significant difference in knowledge section was healthcare market and observed that knowledge level of Khozestan staff was significantly fewer than Qom staff ($p=0.02$).

Conclusion: The present study showed that novices and personnel of small and large centers had lower level of knowledge and attitude about radiation protection so it is suggested that organizing training courses will promote the level of knowledge and would have existed more control over the implementation of radiation protection principle by the authorities.

Keywords: Radiation, Protection, Radiotherapy staff, Healthcare market