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The cost effectiveness of web-based and individual education given to primary school teachers and its effects on prevention of type 2 diabetes risk

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Aim: This study involves primary school teachers who are at risk of type 2 diabetes working at primary schools of Gaziantep Province, Sahinbey District. Web-based and individual education are given to them in order to assess effectiveness of cost and effectiveness of type 2 diabetes risk prevention with randomized controlled.

Method: Totally 53 primary school teachers are participated in this study. 27 participant received web-based education and 26 participants received individual education. When collecting data, those are used: "Finnish Diabetes Risk Score", "Social Demographic Data Form", "Metabolic Control Evaluation Form" and the book of the expenditures for groups are recorded on a daily basis. With primary school teachers who are at web-based group, interview is made once. During interview, participants are informed about using of web site and about how to enter. Collecting data is conducted through the web page. With primary school teachers who are at individual education group, interview is made three times giving information about prepared training presentation. Training materials and collecting data are conducted by researcher. Expenditures on both education groups are recorded for the cost-effectiveness of both education and the effectiveness of diabetes risk prevention. Prior to research, approval is taken from Clinical Research Ethics Committee of the Faculty of Medicine of Erciyes University, written permission is taken from Gaziantep Provincial Directorate of National Education and informed consent was obtained from classroom teachers. When evaluating data, those are used: Shapiro Wilk and Kolmogorov-Smirnov test, Chi-square, independent-samples t test, paired samples t test.

Results: FINDRISC point for web-based education group is found as 16.48 ± 1.57 before education, 13.40 ± 2.002 ($p < 0.05$) after education; for individual education group as 16.34 ± 1.29 before education, 13.65 ± 2.38 ($p < 0.05$) after education. Before and after education, FINDRISC point for web-based education group is determined as 3.07 ± 1.20 . For individual education group, reduction is found as 2.69 ± 1.61 ($p > 0.05$). With web-based and individually educated teachers, both form of education was found to be effective in providing metabolic control. Total cost is found as 1179.04 TL for web-based education group, as 2218.56 TL for individual education group. Average cost-effectiveness ratio is detected as 384.05 TL for web-based education group and as 824.74 TL for individual education group. Incremental cost-effectiveness ratio of web-based education is pound as -2735.57 TL with respect to individual education. Mean education cost per primary school teacher is determined as 43.66 ± 3.36 TL for web-based education group and as 85.33 ± 11.31 TL for individual education group ($p < 0.05$).

Conclusion: Conclusion of this study shows that both training methods are effective in preventing type-2 diabetes risk but web-based education is cost-effective.

Biography

Selma Oncel has completed his PhD from Ege University. She worked ten years as a Nurse in Dr. Behcet Uz Children Hospital in Izmir. She is working at the Akdeniz University in Antalya and at the Nursing School of Public Health Nursing Department. She has published more than 15 papers in reputed journals.

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