

Project Title

Practice What You Preach- Improving Wellness in a Family Medicine Residency

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Abstract

INTRODUCTION Physical fitness and nutrition are the keys to overall health. Physicians who are healthy themselves are more likely to be effective in counseling their patients on fitness and nutrition. Residency training has inherent barriers to prevent trainees from maintaining overall health. This study re-implements a dormant wellness curriculum within the residency program, and seeks to determine its efficacy in improving health status and attitudes regarding fitness and nutrition among residents.

METHODS 21 FM residents participated. Employee biometric health screening data was obtained before and after intervention. Surveys gauging attitudes towards fitness and nutrition were collected before and after intervention. Intervention included sports leagues, changes to catered noon conference menus, fitness and nutrition goal setting during monthly meetings, and lectures on wellness topics.

RESULTS Pre-intervention Biometric data showed averages of BMI-26, LDL-123, HDL-54, Trig-120, Systolic BP-113, Diastolic BP-73, Blood glucose-86. Post-intervention Biometric data showed averages of BMI-25.6, LDL-88, HDL-62, Trig-111, Systolic BP-114, Diastolic BP-72, Blood glucose-91. Biometric data was not analyzed for statistically significant change from pre to post-intervention. Results of pre-intervention survey showed that on average, 4 questions received unfavorable responses. Of these questions, one item improved to become a favorable response on average. None of the questions showed statistically significant change from pre to post-intervention.

CONCLUSIONS Residents had good overall health markers. They felt unsatisfied with their diet and amount of physical activity, and felt that barriers were in place keeping them from desired amount of physical activity and proper nutrition. Statistically significant change was not found in this study. The results of this study can serve as a baseline from which to compare future similar studies within the residency. This study can also serve as proof that continued focus on healthier lifestyles for residency trainees is warranted.

Introduction

Physical fitness and nutrition are the essential components of overall health. Sedentary lifestyle and unhealthy diet have been correlated with poor health outcomes (1). Modifications of diet and physical activity have been associated with improvements in many conditions, including obesity (2), hypertension (3), type 2 diabetes (4), and coronary artery disease (5). These diseases are becoming more prevalent in the general population. It has been demonstrated in the past that physicians who follow a healthy diet and exercise regularly are more effective in influencing their patients to be physically active and eat well (6). However, residency training can serve as a barrier to wellness. Long work hours and frequent schedule changes can make it difficult to adhere to a healthy diet and a regular exercise regimen. Several studies have been done in the past to investigate the effect of physical fitness interventions on the health of residency trainees, but the results have been mixed (7). Residents at our own program

had previously investigated this matter and found statistically significant improvements in blood pressure and reported physical activity expenditure; however, the interventions used in that study are no longer applied within our residency curriculum. Our purpose is to stage a similar intervention, with an aim towards continuing the interventions of our study within the residency curriculum in the future, if successful. The objective of the present study is to determine whether implementing a wellness curriculum will lead to improvements in selected health measurements and attitudes toward healthy diet and physical fitness.

Methods

Informed consent was obtained from first and second-year residents to participate in the study. Subjects included 21 total participants- 12 male, 9 female. 1 resident was lost to follow-up due to transferring to different training program.

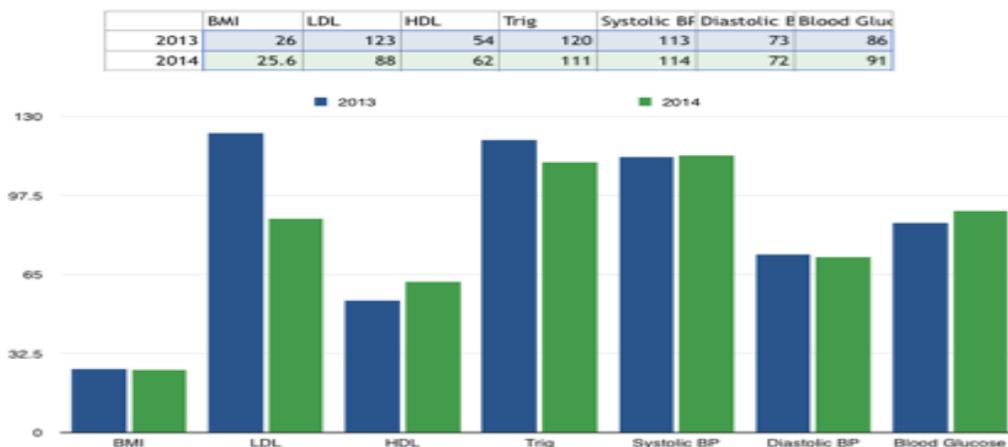
Data from Biometric employee health screening were obtained for baseline health status of participants. This data included BMI, LDL, HDL, triglycerides, systolic and diastolic blood pressure, and blood glucose. Surveys were distributed among participants to determine baseline attitudes toward physical activity and nutrition.

Next, multiple interventions were introduced over a 12 month period promoting improved physical activity and nutrition among residents. Interventions included participation in intramural sports leagues, elimination of soft drinks from office kitchen, promotion of fitness and nutrition goal setting during monthly residency meetings, and focus on fitness and nutrition topics during noon conferences and journal clubs.

At the end of this 12 month period, data from the following year's Biometric screening was obtained, and surveys were again distributed among participants, to determine any post-intervention changes in participant health status and attitudes toward fitness and nutrition.

Results

Pre-intervention Biometric data showed averages of BMI-26, LDL-123, HDL-54, Trig-120, Systolic BP-113, Diastolic BP-73, Blood glucose-86. Post-intervention Biometric data showed averages of BMI-25.6, LDL-88, HDL-62, Trig-111, Systolic BP-114, Diastolic BP-72, Blood glucose-91. Biometric data was not analyzed for statistically significant change from pre to post-intervention.



Results of pre-intervention survey showed that on average, 4 questions received unfavorable responses. Of these questions, one item improved to become a favorable response on average. None of the questions showed statistically significant change from pre to post-intervention.

Question #	1	2	3	4	5	6	7	8	9	10	11	12
Pre	4.75	4.625	2.75	4.25	1.75	2.5	4.25	2.5	4	3.5	4	4.125
Post	4.57	4.86	2.43	4.71	1.71	3.9	4.43	2.29	4	4.43	4.43	4.43
p value (0.05)	0.689	0.356	0.818	0.172	0.829	0.140	0.356	0.522	1.000	0.078	0.078	0.448

Conclusions

Data from Biometric screening showed that the overall health status was very good. Statistical analysis was not performed, but there was a large decrease in LDL post-intervention. Despite this good overall health status, several items from the survey averaged unfavorable responses. Prior to the intervention, residents felt unsatisfied with their amount of physical activity, they felt that they did not regularly follow a healthy diet, and they felt that there were barriers in place keeping them from their desired amount of physical activity and from following a healthy diet. After the intervention, residents did feel that they followed a healthy diet, but the other unfavorable responses remained. Based on the survey results, residents did feel that physical activity and nutrition were important aspects of overall wellness, and they felt comfortable counseling patients on these matters.

While this study failed to show significant changes in health markers or attitudes among residents, it can serve as a baseline or foundation on which to base further studies. There is currently a program-wide focus on healthier lifestyles for residents and staff, and we plan for future classes to continue the interventions and data collection implemented in this study. The data from this study indicates that continued focus on resident wellness is warranted. This data can also serve as a marker for the efficacy of these interventions.

There were several limitations to this study. The sample size was small and heterogeneous; with solid baseline health status it was unlikely to find major differences post-intervention. There was no control group used, so any changes noted post-intervention would be difficult to directly correlate with the interventions from this study. Also, the timing of data collection was not optimal- Biometric screening did not align well with the pre and post-intervention periods.

For future studies, we suggest expanding the survey to include more specific questions to identify the barriers residents view as keeping them from proper exercise and nutrition. Recall diaries for physical activity and diet could be used to determine whether those factors truly changed post-intervention. Finally, faculty and staff could be included with residents in future studies, since the interventions that were implemented also included faculty and staff, and the wellness of the entire program reflects on the patients seen in our office.

References

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