Volume 4 | Issue 2 www.clinhp.org oct | 2014

CLINICAL HEALTH PROMOTION

Research & Best Practice for patients, staff and community

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News from SEEHN

Editorial Office

WHO-CC, Clinical Health Promotion Centre
Bispebjerg & Frederiksberg Hospital,
University of Copenhagen, Denmark

The Official Journal of

The International Network of Health Promoting Hospitals and Health Services

The South-eastern European Health Network

CLINICAL HEALTH PROMOTION

Aim

The overall aim of the journal is to support the work towards better health gain by an integration of Health Promotion into the organisational structure and culture of the hospitals and health services. This is done by significant improvement of a worldwide publication of clinical health promotion based on best evidence-based practice for patient, staff and community.

Printet by Zeuner Grafisk.

ISSN 2226-5864
Online ISSN 2223-7399

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Editorial

Good Clinical Health Promotion Practice

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Clinical health promotion (ClinHP) is patient-centered health promotion activities performed by competent staff in collaboration with the individual patient; thus aiming at a better health gain for patients during their clinical pathway. Examples of highly effective ClinHP are smoking cessation intervention prior to surgery, intensive diet programmes for patients with diabetic, and rehabilitation in mental illness. ClinHP also includes the staff's own health and development of specific ClinHP competences required for their patient groups. Furthermore, ClinHP reaches out for collaboration and continuity between the hospitals and the local communities (1).

Summer Schools

Competences on ClinHP activities are not part of a classic medical, nursing, public health education program or the following specialist training. That is why the International HPH Network establishes HPH Summer Schools on this important theme. The HPH Summer Schools are held every year at the annual HPH Conference in collaboration between the local host and International HPH Secretariat. The two day school is held prior to the HPH Conference as a preconference activity, which provides participants with an opportunity to add additional education to their itinerary.

Need for ClinHP competences

Integration of ClinHP into a fast patient pathway requires specific competences in order to harvest the tremendous potential for effect and cost-effectiveness, and to get the benefits for the individual patients, the health care providers and society at large. An early example on the effect of further education in ClinHP showed that a nurse with special training had a recruitment rate on 97% when offering alcohol and smoking cessation programs to patients in an emergency room setting, compared to a recruitment rate on 47% for nurses without this specific training (2).

The competences required for ClinHP should cover knowledge, skills and performance; safety and quality; communication, partnerships and teamwork; as well as expertise on maintaining trust (3;4). However, these competences must be specified in order to establish excellent ClinHP services based on solid evidence instead of experience- or ideology-based health promoting practice. Inspiration for these specifications can be found from the recent development of competences described in Good Medical Practice and Good Surgical Practice amongst others (3;4). Since ClinHP is a relatively new field on the evidence-based platform, it is important to emphasize the need for evaluation in real life and for performance of high-quality research.

Evaluation for effect in real life

Tools for evaluation of ClinHP activities have been developed and validated by WHO and the International HPH Network, such as the HPH Standards and Indicators (1) as well as documentation models to the medical recording for identification of needs for ClinHP and delivery of ClinHP activities and services (5;6). As systematic data collection is crucial for evaluation. It is important to have access to the easy-to-use and low-time-consuming models in the daily routines. Some countries and regions have integrated the models in their electronic medical records with pop-up windows, while in other cases the individual hospitals and health services have built their own registration form based on the models.

Examples also exist on how to integrate the models into the clinical quality reg-

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istries. One example is the hip prosthetic registry in Sweden, where the national program "smoke-free operation" was launched a few years ago (7). The Danish Smoking Cessation Database is a good example on how to follow-up directly on the effect on ClinHP activities (8). Since 2001 the database has registered more than 80,000 smokers undertaking face-to-face smoking cessation programs in Denmark. The database is run for about 160,000€ yearly and the costs includes quality assurance and development, which are delivered continuously to the consumers, clinical staff and the policy-makers (8).

The above mentioned models are also easy to integrate into the DRG-system and other re-imbursement systems. A joined task force under the WHO and the International HPH Network have concluded, that integration of ClinHP into the DRG reimbursement is feasible without technical barriers exist. However, the integration of the DRG reimbursement may meet political or administrative barriers (9).

Research

ClinHP is a relatively new addition to the evidence-based platform, and the HPH member hospitals and health services are excellent arenas for multicenter studies as well as for local projects. Thus, many high quality research projects have been performed showing dramatic effects on adding ClinHP to the daily treatment routines of many diseases. Most studies have evaluated mono-factorial interventions, such as smoking cessation programs or physical activity programs; and they have showed that only the intensive programs running over 6-8 weeks have effect on the primary treatment outcomes like complication rates or functionality. Though the ClinHP results are very promising, the implementation process is the Achilles heel – as always. Therefore, an ongoing international research in a randomized design evaluates a fast-track 12 months model for implementation of ClinHP in the clinical departments (www.HPHnet.org).

Other new studies focus on multi-factorial interventions, such as the VIP program (Very Integrated Program / Very Important Patient), because most hospital patients are suffering from multiple risk factors. The VIP program recruits participants among the patient groups with the highest ClinHP needs. The VIP program includes the most risky lifestyles (tobacco, alcohol, nutrition and physical inactivity) and co-morbidity that are all predictors of a poor treatment outcome and at the same time potentially preventable or improvable.

Development of good clinical HP practice

Time has come to describe good ClinHP Practice in line with other clinical areas, such as medicine and surgery. The international "Clinical Health Promotion Society" (CHPS) starts a new initiative, where the aim is to describe the Clinical Health Promoters of the future. In line with this mission is the open CHPS Workshop at the 23rd International HPH Conference in Oslo, Norway. The HPH Conference takes place in June 10-12, 2015, and as the president of CHPS, I wish to invite you and all other interested to join the CHPS workshop on good clinical health promotion practice (www.clinhpsociety.org).

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Research and Best Practice

Short- and long-term effect of a worksite group versus individual counseling on physical activity and dietary habits in moderately overweight hospital employees – a randomized controlled trial

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Abstract

Background Individual counseling demands considerable resources whereas a group intervention will lower the costs in relation to lifestyle changes on physical activity and dietary habits. The aim of this study was to examine the short- and long-term effect of group counseling compared to individual counseling on physical activity and dietary habits in moderately overweight hospital employees with a Body Mass Index between 25.0 and 30.0.

Methods A randomized controlled trial, allocating participants to individual or group-based counseling based on a behavioural change approach, which consisted of five meetings during the first three months and one follow-up meeting respectively after 6 and 12 months. Assessment of physical activity was obtained using the International Physical Activity Questionnaire. Data on diets were obtained by a three-day self-administered dietary record. Additional measurements were Body Mass Index, fat percentage, waist circumference and fitness rating. Assessments were at 3, 6 and 12 months.

Results 120 employees, consisting of 105 women and 15 men aged between 25 and 66 years were consecutively included. No statistically significant differences were seen between the groups in relation to physical activity level, total fruit and vegetable intake or fat energy percentage at any time. Statistically significant differences were seen within the groups, especially at the 3-month follow-up. No significant differences between the groups were seen in relation to BMI, fat percentage, waist circumference and fitness rating.

Conclusion Based on resource calculations more people can be offered counseling by group intervention provided that the general problems concerning long-term compliance are solved. From a public health point of view maintenance of physical activity and weight stabilization are important effect outcomes.

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Clin Health Promot 2014; 4:41-47

Introduction

Physical inactivity and obesity are increasing public health problems in Denmark and worldwide due to a high prevalence and a strong association with risk of serious medical illnesses (1;2). There is substantial evidence from several longitudinal studies that improving dietary habits and/or increasing physical activity can reduce the risk for developing cardiovascular diseases and type 2 diabetes (3-5). Regular physical activity alone prevents illnesses such as cardiovascular disease, diabetes, certain cancers and osteoporosis (2). The Oslo Diet and Exercise Study showed that a combined intervention was superior to a single intervention in affecting lipid concentrations and blood pressure (6).

In 2000, 50% of men and 34% of women in the Danish population were overweight. In 2013, the incidence of overweight and obesity had raised to 69% in men and 55% in women (7;8). The increase in overweight and obesity might be due to several independent factors including increased calorie consumption and decreased physical activity, but evidence from initiatives which can ensure primary prevention of obesity is inconclusive (9). Positive changes in lifestyle may improve health status regardless of any weight loss (10). From an economic and a public health perspective, preventing weight gain for moderately overweight people may be an important focus rather than treating established overweight and obesity as an important response to the obesity epidemic (1).

There is no consensus on (cost) effective ways to implement lifestyle interventions, but attention to both dietary habits and physical activity combined with components from behavioral therapy, continuity and intensity seem to be important aspects (11). Earlier studies show that an intervention targeting both physical activity and diet can be beneficial although results are varying (11;12). The Danish National Board of Health has published National Action Programs for both physical activity and obesity to improve public health (13;14).

A worksite offers a unique setting to implement health promotion programs and provides an ideal opportunity to engage large numbers of individuals in an efficient manner (15). The worksite offers a feasible and social empowering environment, which may support adherence to life style changes. A systematic review conducted by Proper et al. (16) found evidence that worksite physical activity programs were effective regarding levels of physical activity, although an effect on physical fitness was inconclusive (16). The authors stress that only a few of the identified studies were of high quality and recommend more rigorously conducted randomized controlled trials (16). Individual counseling demands considerable resources whereas a group counseling will lower the costs and may be a motivational factor for participation.

The aim of this study was to examine short- and long-term effect of group counseling compared to individual counseling on physical activity and dietary habits in moderately overweight hospital employees with a Body Mass Index (BMI) between 25.0 and 30.0.

Methods

Participants, setting and ethics

The study was a randomized controlled trial and health care workers were allocated to individual or group-based counseling on physical activity and diet. The intervention took place at the worksite. The participants were employed at a University Hospital in Denmark and were recruited through information sent to all personnel. The inclusion criteria were a BMI between 25.0 and 30.0 and a motivation for lifestyle changes. Employees with conditions requiring special attention were excluded.

Participants were randomized to individual counseling (IC) or group counseling (GC) through block randomization with permuted blocks of 12. The block randomization was carried out in ten stages by placing 12 envelopes (six for individual and six for group intervention) in a bag, after which the participants were asked to take an envelope each. The group size was six participants. The project leader was only responsible for the concealed randomization procedure. The study was approved by The Danish Data Protection Agency. Informed written consent was obtained from all participants.

Intervention

The interventions concerning physical activity and dietary habits were similar in both groups and were provided by a physiotherapist and a clinical dietician. The counseling was based on a pre-determined program consisting of five meetings during the first three months and respectively one follow-up meeting after six months and one after 12 months. Interventions for individuals lasted between 1 and 1½ hour each and for group interventions between 2 and 2½ hours. The first five meetings consisted of setting and evaluating goals for the participants, providing exercise options, intensity, strain, duration and frequency, together with dietary information and advice. In both groups, the counseling was based on a behavioural change approach and emphasis was on self-awareness, goal setting, facilitators and barriers to overcome during the process as this approach preveiously has proven useful in a worksite based intervention in relation to physical activity (17). Furthermore, group counseling aimed to support experience based dialogues between the participants as a means towards the achievement of the participants' individual goals. Discussions and negotiations about suitability, challenges and modifications of goals and plans were continuosly initiated by the counselors to ensure adherence to the program and integration of changes into everyday lives.

The counseling given on exercise was based on the recommendations of the Danish National Board of Health, which suggest a minimum of 30 minutes daily exercise of light to moderate intensity and 30 minutes twice a week exercise of moderate to high intensity (2;13). The aim of the diet counseling was to improve the eating habits of the participants. As a secondary aim, the participants were encouraged to follow the recommendations concerning a low fat content (max 30 E%) and a high carbohydrate content (55-60 E%), primarily unprocessed carbohydrates. The diet counseling was based on the National Dietary Recommendations (14). The two physiotherapists and the two clinical dieticians involved were trained in standard procedures to minimize variation.

Measurements

Primary outcomes

Assessment of physical activity was obtained using the International Physical Activity Questionnaire (IPAQ-long form) (18) asking about physical activity during seven days immediately prior to counseling. IPAQ has shown acceptable measurement properties in a large in-

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ternational study across 12 countries (19). The participants were required to fill in the questionnaire at baseline and at 3, 6 and 12 months. The questionnaires were sent out before the 6- and 12-month follow-up meetings and filled in by the participants before the meetings. The participants who were absent were asked to send the questionnaire to the project leader. Written reminders were sent if necessary.

Data on diets were obtained by a 3-day self-administered dietary record using household measurements for three consecutive days (two weekdays and one weekend day). The diet records were to be completed four times, at the introduction to the project (week 0) and at 3, 6 and 12 months.

Secondary outcomes

Additional measurements were obtained six times during the project - in intervention weeks 0, 4, 8, 12 and follow-up at 6 and 12 months. These measurements included: weight, BMI, fat percentage, waist circumference and fitness rating. Measurements were intended to be a motivating factor for lifestyle chances.

A Tanita impedance scale model BC-418MA was used to calculate BMI and fat percentage. For standardization of measurement the procedure was carried out at the same time of the day. The participants were informed of no alcohol and no physical activity of high intensity 24 hours prior to the measurements.

The fitness rating was measured with a Watt-max Test carried out on an exercise bicycle. The fitness rating was assessed as good/average/poor (2).

Statistical analysis

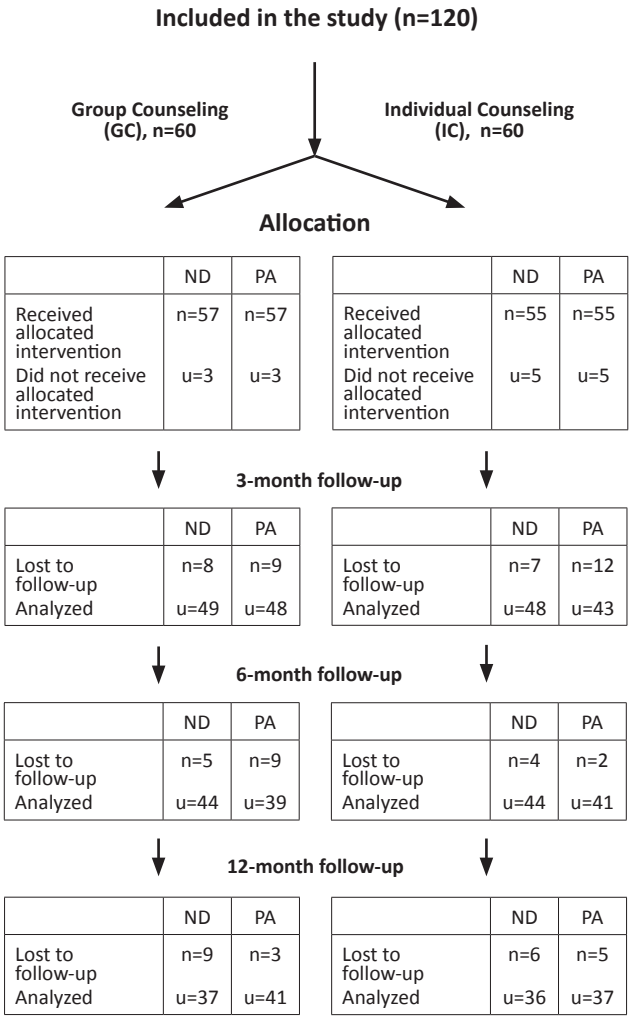
Baseline characteristics were reported for each group giving the actual numbers for categorical variables and giving the mean +/- standard deviation for continuous variables. The physical activity was summarized using medians with bootstrapped 95% confidence interval, as data was not normally distributed. For continuous variables judged to be normally distributed, a paired t-test was used for analysis of within-group change from baseline, and a unpaired t-test for comparing the change-from-baseline between the groups. The comparisons of physical activity were carried out using Wilcoxons signed-rank test within groups and Wilcoxons rank-sum test between groups. The diet registrations were processed using the program Master Diætist version 1.223, 2005, Master Data I/S, Copenhagen, Denmark. Energy distribution and intake of fruit and vegetables were calculated. Due to a high drop-out, a per protocol analysis was performed. A drop-out analysis was performed to define possible predictors of the drop-outs using Fisher's exact test.

Analyses were done using Stata 9.2SE. A two-sided p-value<0.05 was considered statistically significant.

Results

120 employees, consisting of 105 women and 15 men with BMI between 25.0 and 30.0, were consecutively included. The participants were between the ages of 25 and 66 years. The two groups were almost identical at baseline although a difference in dispersion of job categories was seen (Table 1). Drop-outs at the 3-month follow-up was 9 and 12 out of 60 participants following GC and IC respectively. At the 12-month follow-up, 41 and 37 participants returned the questionnaires (Figure 1). Reasons for drop-out were change of employments, poor health and lack of time and motivation.

Figure 1 Flowchart



ND = Nutrition data, PA = Physical activity data

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Table 1 Baseline characteristics

		Group Counseling (GC)	**Individual** Counseling (IC)
Participants		57	55
Gender	*Male, n (%)*	6 (11)	8 (15)
	Female, n (%)	51 (89)	47 (85)
Age	*≤ 45, n (%)*	27 (47)	26 (47)
	> 45, n (%)	30 (53)	29 (53)
Marital status	*Married, n (%)*	45 (79)	47 (85)
	Single, n (%)	12 (21)	8 (15)
Children	*None, n (%)*	27 (47)	28 (51)
	At least one, n (%)	30 (53)	27 (49)
Education*	*≤ 10 years, n (%)*	12 (21)	7 (13)
	> 10 year, n (%)	45 (79)	47 (87)
Job	*Medical staff, n (%)*	24 (42)	33 (60)
	Administration staff, n (%)	12 (21)	11 (20)
	Service staff, n (%)	21 (37)	11 (20)
Smoker**	*Yes, n (%)*	4 (11)	2 (5)
	No, n (%)	34 (89)	36 (95)
Body measures	*Height, cm* +/- SD	167.0 +/- 6.3	167.2 +/- 8.4
	Fitness rating, oxygen l/min +/- SD	27.7 +/- 4.5	27.7 +/- 6.0
	Weight, kg +/- SD	76.2 +/- 8.2	76.7 +/- 8.4
	Body fat, % +/- SD	30.2 +/- 6.2	30.3 +/- 6.5
	Body mass index, kg/m2 +/- SD	27.2 +/- 1.6	27.4 +/- 1.7
	Waist, cm +/- SD	88.5 +/- 6.9	89.0 +/- 6.9

Data are presented as number of participants (%) or mean +/- standard deviation
* Information about education is missing for 1 participant (Individual).
** Information about smoking status is missing for 19 (Group) and 17 (Individual) participants.

Table 2 Daily exercise and food intake. Changes from baseline

	Baseline	**3 months**	**6 months**	**12 months**
Group Counseling (GC):				
Number:	*57*	*48*	*39*	*41*
	median (95%CI)	median (95%CI)	median (95%CI)	median (95%CI)
Total physical activity (minutes) *	69 (51,86)	**+21 (-2,44)**	+19(-7,45)	-11 (-31,8)
Physical activity - leisure time (minutes)	59 (43,75)	**+18 (5,31)**	+13 (-2,27)	-4 (-24,16)
Number:	*57*	*49*	*44*	*37*
	mean (95%CI)	mean (95%CI)	mean (95%CI)	mean (95%CI)
Fruits, g	231.2 (193.3; 269.1)	-9.3(-65.0; 46.5)	-30.7 (-87.8; 26.0)	-41.2 (-100.0; 17.7)
Vegetables, g	244.8 (206.8; 282.7)	7.6 (-49.7; 64.8)	48.4 (-10.2; 106.9)	-0.6 (-61.5; 60.3)
Total, g	475.9 (415.6; 536.3)	0.3 (-88.1; 88.8)	19.6 (-70.6; 109.7)	-39.3 (-132.2; 53.7)
Fat energy %	30.9 (29.2; 32.7)	**-3.2 (-5.8; -0.6)**	**-3.1 (-5.7; -0.4)**	**-1.2 (-4.0; 1.5)**
Individual Counseling (IC):				
Number:	*55*	*43*	*41*	*37*
	mean (95%CI)	mean (95%CI)	mean (95%CI)	mean (95%CI)
Total physical activity (minutes)	51 (38,64)	**+9 (-10,29)**	+16 (-1,34)	+14 (-4,32)
Physical activity - leisure time (minutes)	41 (33,48)	**+14 (-8,35)**	**+14 (-2,30)**	**+17 (-2,36)**
Number:	*55*	*48*	*41*	*36*
	mean (95%CI)	mean (95%CI)	mean (95%CI)	mean (95%CI)
Fruits, g	264.2 (217.0; 311.4)	-29.6 (-71.2; 11.8)	-42.7 (-85.4; 0.1)	-28.2 (-74.0; 17.7)
Vegetables, g	245.5 (202.3; 288.6)	39.6 (-6.2; 85.5)	23.4 (-40.5; 87.3)	-23.3 (-91.8; 45.1)
Total, g	509.7 (448.3; 571.1)	10.3 (-51.7; 72.2)	23.4 (-40.5; 87.3)	-23.3 (-91.8; 45.1)
Fat energy %	31.1 (29.3; 32.9)	**-3.3 (-5.4; -1.2)**	**-3.1 (-5.2; -1.0)**	**-2.3 (-4.6; -0.1)**

*) Note that the sum of medians is not the same as the median of the total sums.
[+]Highlighted in bold: Significant change from baseline within group (Wilcoxons signed-rank test), p<0.05.
There are no significant differences between the groups.

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There was a non-significant difference of 18 min/day in total physical activity between the groups at baseline. Both groups increased their total physical activity levels significantly after three months by 30% (21 min/day (-2;44)) after GC and 18% (9 min/day (-10;29)) after IC. After six months the increase was maintained, but non-significant in total physical activity of 26% (19 min/day (-7;45)) and 31% (16 (-1;34)), respectively. At the 12-month follow-up the total physical activity level after GC had dropped by 16% (-11 min/day (-31;8)) from baseline, while after IC the total physical activity level was still increased by 27% (14 min/day (-4;32)), still non-significant. There were no significant differences in changes in physical activity levels between the groups. Most physical activity was carried out during leisure time (Table 2).

At baseline, there was a significant difference in the total intake of fruit and vegetables of 33.8g between the groups as a larger intake of fruit was reported in the IC. After three months, the IC had increased their total intake of fruit and vegetables in relation to the starting-off point by 10.3g (-51.7;72.2) whereas the GC had maintained their intake of 0.3g (-88.1;88.8). After six months a higher level of intake of 23.4g (-40.5;87.3) for the IC and 19.6g (-70.6-109.7) for the CG was presented. At the 12-month measurement point, the IC´s intake of fruit and vegetables was 23.3g (-01.8;45,1) lower than at baseline, and for the CG the amount was 39.3g (-132.2;53.7) lower.

At baseline, the fat energy percentage was 30.9 (29.2;32.7) and 31.1 (29.3;32.9) respectively, for the CG and the IC. At three months, the fat energy percentage had dropped by 3.2 (-5.8;-0.6) percentage points after GC and 3.3 (-5.4;-1.2) percentage points after IC. At the six-month follow-up, the decrease was 3.1 points for both groups. After 12 months, the decrease in relation to baseline was 1.2 and 2.3 percentage points for GC and IC, respectively.

There was no statistically significant difference between the two groups. (Table 2).

Table 3 shows anthropometry and physical fitness measurements at baseline, 3, 6 and 12 months for BMI, weight, waist, fat percentage and fitness rating. The number of fitness rating tests varied, as several participants preferred not to carry out this test, due to the workload intensity in the test. The results show no significant difference in changes between the groups in relation to weight, BMI, fat percentage, waist circumference and fitness rating. Within the groups there were significant improvements in relation to all measurements at the 3- and 6-month follow-up compared to baseline. Furthermore, improvements after GC were significant at the 12-month follow-up, whereas after IC, changes were only significant for waist circumference and fitness rating.

The average BMI among participants in GC was 27.2 (26.8;27.7) at baseline, and fell to 26.5 (25.8;27.4) at the 3-, 6-, and 12-month follow-up. BMI among participants in IC dropped from 27.4 (26.9;27.8) to 27 (26.0;27.7) at the 3-month follow-up, and 26.8 (26.0;27.6) at the 6 -month follow-up and to 27 (26.0;27.7) at the 12-month follow-up. No statistical significant differences were seen between the groups. The weight loss after GC was 2,1 kilograms, while after IC, the loss was 1,1 kilogram at 3 months and 1.2 kilogram at the 12-month follow-up.

Table 3 Anthropometry and physical fitness level. Changes from baseline

	Baseline	**3 months**	**6 months**	**12 months**
Group counseling (GC)	mean (95%CI)	mean (95%CI)	mean (95%CI)	mean (95%CI)
Number:	*57*	*33*	*39*	*32*
Body mass index, kg/m2	27.2(26.8,27.7)	-0.7(-1.0,-0.4)	-0.7(-1.0,-0.3)	-0.7(-1.1,-0.3)
Weight, kg	76.2(74.0,78.4)	-1.9(-2.7,-1.0)	-1.9(-2.9,-0.9)	2.1(-3.2,-1.0)
Waist circumference, cm	88.5(86.7,90.4)	-2.0(-3.1,-0.8)	-2.5(-3.6,-1.3)	-2.6(-4.2,-1.0)
Body fat, %	36.0 (34.8,37.2	-1.3(-2.0,-0.6)	-2.2(-2.9,-1.5)	-1.8 (-2.5,-1.1)
Fitness rating, oxygen l/min*	27.7(26.4,28.9)	2.6 (1.5,3.8)	2.6 (1.3,3.8)	2.3 (1.4,3.1)
	Baseline	**3 months**	**6 months**	**12 months**
Individual counseling (IC)	mean (95%CI)	mean (95%CI)	mean (95%CI)	mean (95%CI)
Number:	*55*	*37*	*36*	*32*
Body mass index, kg/m2	27.4 (26.9,27.8)	-0.4 (-0.6,-0.1)	-0.6 (-0.9,-0.2)	-0.4 (-0.9,0.1)
Weight, kg	76.7 (74.2,79.2)	-1.1 (-1.8,-0.4)	1.2 (-2.7,-0.6)	-1.2 (-2.6,0.1)
Waist circumference, cm	89.0 (87.1,90.9)	-2.2 (-3.2,-1.3)	-2.2 (-3.3,-1.1)	-1.8 (-3.2,-0.4)
Body fat, %	34.4 (32.5,36.3)	-0.8 (-1.4,-0.1)	3.1 [9] (1.5,4.7)	2.1 [8] (0.4,3.8)
Fitness rating, oxygen l/min *	27.7 (26.1,29.3)	2.2 [7] (1.3,3.1)	3.1 [9] (1.5,4.7)	2.1 [8] (0.4,3.8)

Data are presented as mean and 95% confidence interval at baseline, and at each follow-up time as mean change from baseline with 95% confidence interval. There are no significant differences between the groups. - Number of missing values in square brackets.

The fitness rating was 27.7 (26.4;28.9) for both groups at the baseline and was increased by 2,2 points (IC) and 2,6 (GC) at the 3-month follow-up. This increase was maintained by both groups throughout the study. Overall the statistical significant changes in the anthropometric measurements and the fitness rating within both groups were relatively small, but maintained over time.

The total drop-out at the 12-month follow-up were 25 (42%) in the GC and 24 (40%) in the IC. Analyses using Fisher's exact test showed no difference between the drop-out group and the baseline group.

Discussion

Physical activity levels and dietary habits improved after a three-month intervention in both groups. There were no statistically significant differences between the groups. After one year, physical activity and dietary habits were close to baseline levels. Most measurements (BMI, weight, waist, fat percentage and fitness rating) showed significant changes after one year in both groups and thereby the interventions seem to be preventive against a weight gain. However, multiple testing may have increased the risk of type I errors in the secondary outcomes. The analyses were hypothesis driven but individual, non-systematic differences between groups should be interpreted critically.

A limitation of this study may be that both groups improved just because they participated in an intervention study. If we had included a control group, a difference between this group and the two intervention groups might have been seen. We did however, not include a control group as the primary aim was to explore differences in effects of group and individual intervention. The costs of individual intervention would limit the potential of this intervention. Furthermore selection bias may have influenced the results and thereby also the generalizability of the results as the participants were recruited by self-selection and it might therefore be the more active/motivated volunteers that signed up for the study than the general population.

Drop-out is often high in lifestyle programs. Toft et al. (20) found that awareness of unhealthy lifestyle, perceived susceptibility of disease and motivation towards a lifestyle change were important mediators of participation. Susceptibility of disease was not an inclusion criteria and this might have influenced the drop-out rate. The motivational factor may as well be affected (4). The large drop-out may weaken the validity of the results, although drop-outs were equally divided between the two groups. Even though an intention-to-treat analysis is the recommended method in randomized controlled trials, it was decided to perform a per-protocol analysis due to the large drop-out and this may be a potential bias in the study. As a supplement, a drop-out analysis was performed to identify potential predictors for drop-out.

Physical activity is a behavior which is difficult to estimate (21). The IPAQ is a validated tool widely used in the literature (18;22-24), but may lead to higher estimates of total physical activity than other questionnaires (25). Furthermore, social desirability and recall bias might have influenced the data. Using an activity log combined with the IPAQ questionnaire could have improved the validity of the data (21). However, IPAQ has successfully been used in health promotion studies previously. Further, VO2 max tests were used to substantiate the physical fitness assessment.

Dietary habits reported on fruit and vegetable intake after 12 months were lower than reported at baseline after an increase in both groups at six months. Studies have shown overweight people generally underreport their food intake, which may also be the case in our study (26).

Other studies also found an increase in physical activity and weight loss after the three-month follow-up, whereas the long-term compliance, especially in relation to physical activity, was reported to be low (24;27;28). Even though there were no significant changes in the daily physical activity after 12 months the participants did not gain weight. Both groups had a small weight loss which was maintained throughout the study. It is recommended that prevention through weight stabilization is preferable when excess weight is already a reality (1;29) and it is questioned whether a weight loss even may be hazardous in the long term.

In a worksite setting, it is time consuming to implement both physical activity and dietary counseling. Recent evidence on the effects of physical activity (29) shows a trend towards physical activity alone as having a positive effect on preventing obesity, cardiovascular disease and cancer disease, thereby indicating that especially physical activity is important to implement in a health promotion in a worksite setting. Focus on physical activity may increase both motivation and implementation of a lifestyle change. Furthermore, it seems clear that making lifestyle changes is difficult over time and there may be very complex dynamics and patterns involved. A qualitative exploring approach could help to describe and address these dynamics thereby providing knowledge on how to improve the interventions and minimize drop-outs.

The limitations of our study were also reported in a Cochrane review and only limited conclusions could be drawn regarding whether individual or group based interventions were preferable (30).

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Conclusion

It was possible to change physical activity levels with both individual and group counseling, and the level was changed markedly and significantly at the 3-month point. After one year, the changes were, however, non-significant in both groups and not significantly different. Dietary habits reported on fruit and vegetable intake after 12 months were lower than reported at baseline.

Most measurements (BMI, weight, waist, fat percentage and fitness rating) showed significant changes within both groups, indicating that the interventions may have prevented a weight gain and improved the aerob capacity of the participants.

No significant differences in improvement between the groups were found, and one type of counseling does not seem superior. Based on resource calculations, more people can be offered advice by group counseling than by individual counseling, provided that the general problems concerning long-term compliance are solved.
From a public health point of view the maintenance of physical activity of the participants and weight stabilization are important effect outcomes.

Acknowledgements

The authors would like to thank Jens Erik Joergensen for assisting in revising the manuscript.

Contribution Details

All authors have read and approved the manuscript and met the ICMJ criteria for authorship. LS, KO and JA designed the study and all authors analyzed and interpreted the results. LS and JA drafted the article and LS, KO and JA revised the article critically on content.

Funding

The study was undertaken with financial support from Aalborg University Hospital and Spar Nord Fonden.

Competing Interests

None declared.

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Does an intensive alcohol cessation intervention at the time of fracture surgery induce smoking cessation? - The Scand-Ankle study

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Abstract

Background Hazardous alcohol consumption is a risk factor for developing postoperative complications. Other risk factors are smoking, overweight, malnutrition and physical inactivity. Preoperative alcohol and smoking cessation programs have been found effective in reducing postoperative morbidity, but it remains unknown whether these induce a general change of lifestyle. The aim of this study was to investigate whether the gold standard alcohol intervention programme (GSP-A, which is based on the gold standard programme for smoking GSP-S) used in the Scand-Ankle study, affected the non-targeted risk factors; smoking, overweight, malnutrition and physical inactivity.

Method 64 patients with hazardous alcohol consumption who underwent ankle fracture surgery, were randomized to the GSP-A or usual care (control). The groups were compared at baseline and 6 weeks follow-up regarding lifestyle factors. An intention to treat (ITT) and per protocol analysis were performed using non-parametric statistics.

Results The ITT-analysis showed no significant differences between the GSP-A and control group regarding non-targeted risk factors. The per protocol analysis showed that alcohol cessation regardless of study group did not influence non-targeted risk factors.

Conclusion The GSP-A did not affect smoking, overweight, malnutrition and physical inactivity. Thus, a potential effect of the GSP-A on postoperative complications will likely be due to the effect on alcohol intake and not a general change in lifestyle. The findings suggest that multiple lifestyle interventions are required, e.g. combined alcohol and smoking cessation.

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Clin Health Promot 2014; 4: 48-53

Introduction

High alcohol consumption is a major risk factor for post-operative complications, including general infections, wound complications, pulmonary complications, prolonged hospital stay and increased mortality (1). In addition to hazardous drinking it is well-known that smoking, being overweight, malnutrition and physical inactivity also constitute major risk factors for post-operative complications (2-9). Intensive preoperative alcohol and smoking cessation intervention programs have been found to be effective at reducing postoperative complications and morbidity (10;11). Further, a postoperative smoking cessation intervention has also shown a beneficial effect on postoperative complications following acute fracture surgery (12).

Alcohol consumption and smoking are known to be associated with one another, with smokers drinking more alcohol than non-smokers (13-15), and heavy drinking being associated with heavy smoking (16). However, it is still unclear to what extent alcohol interventions affect non-targeted risk factors as smoking. To our knowledge the effect of intensive alcohol intervention in a surgical setting on other non-targeted lifestyle factors has not previously been investigated. The aim of this study was therefore to investigate whether the gold standard programme for alcohol cessation (GSP-A) induced smoking cessation, and also whether or not it had an effect on overweight status, risk of malnourishment and physical inactivity. Our hypothesis was that the GSP-A, targeting alcohol consumption, would result in a healthier lifestyle in general. The GSP-A has been proven effective on alcohol cessation in the setting of this study; 58% of the patients stopped drinking for 6 weeks in the GSP-A group vs. 13% in the control group (17).

Methods

Study design

This is a sub-study of the Scand-Ankle study, which is an ongoing randomized clinical trial (RCT) that investigates the effect of a new GSP-A on postoperative complications, alcohol intake and cost-effectiveness in hazardous drinking patients undergoing ankle fracture surgery (ClinicalTrials.gov Id: NCT00986791).

Inclusion and exclusion criteria

Patients were included if they during the past three months had an alcohol consumption of ≥21 units/week (one unit equals 12 g of ethanol), were undergoing ankle fracture surgery, and gave informed consent for participation within 36 hours of admission.

Patients were excluded if they were under the age of 18 or otherwise unable to give informed consent, were pregnant or breastfeeding, were allergic to disulfiram or benzodiazepines, had previously experienced delirium or alcohol withdrawal seizures, had multiple or pathological fractures, had an American Society of Anesthesiologist (ASA) score ≥4 or fulminant heart or liver insufficiency, if the surgery was cancelled or the patient received external fixation of the fracture.

Study groups

Out of 141 eligible patients, 64 patients gave informed consent to participate in the study. The patients were recruited from Bispebjerg Hospital and Hvidovre Hospital in Denmark between April 2010 and October 2013 and were allocated to GSP-A (n=32) or usual care/control (n=32). They were stratified for each center and block-randomized in blocks of unknown sizes.

The intervention group began the 6 week GSP-A immediately before or after surgery, consisting of a structured patient education program with weekly meetings (5 in total), including a motivational conversation in the beginning with reflections on benefits and costs of continued drinking vs cessation, and teaching sessions on the damaging effects of alcohol as well as discussions of risk situations and relapse prevention. Further, the intervention group received disulfiram (200 mg x 2 per week) and B-vitamin and Thiamin. The patients in the intervention group also received benzodiazepines if they developed abstinences. The GSP-A is developed based on the gold standard programme for smoking cessation with the same structure and content adapted to alcohol cessation (18). The control group received the orthopedic department's standard care for patients with ankle fracture and hazardous alcohol intake, which include screening all patients with hazardous alcohol intake for abstinence and treatment with benzodiazepines if needed.

All participants were free to seek alcohol treatment outside of the GSP-A. All participants were also informed of smoking as a risk factor for postoperative complications, and recommended to quit smoking, as part of the routine, but it was not further mentioned unless the participant brought it up. Both groups were followed up at 6 weeks. All patients underwent internal fixation and anaesthesia according to the department's routine, including thrombo-embolic and antibiotic prophylaxis.

Registration of lifestyle factors/Outcomes

The lifestyle factors were registered at baseline and at follow-up after 6 weeks and defined as; Smoking: daily smoking, Overweight: BMI> 25 kg/m^2 and/or waist measurement >80 cm(W)/94 cm(M). Subjects were weighed and had their waist measured by the investigator with measuring tape. Height was self-reported. Risk of malnutrition: BMI<20,5 kg/m2 and/or weight loss during the last 3 months and/or reduced food intake during the last week and/or severe endocrine stress metabolism. Physical inactivity was self-reported as physical activity <30 min per day during the last month (19,20).

Analyses

Three of the 64 patients were excluded in this analysis. Two patients from the control group were excluded shortly after inclusion because they underwent external fixation. One patient in the GSP-A group withdrew the informed consent on the same day as inclusion, and there was therefore no data on this patient. For patients who dropped out or cancelled their 6-week follow-up, baseline data was used for analyses. The follow-up rate at 6 weeks was 88% in the GSP-A group, and 93% in the control group (see trial profile in figure 1).

Data were presented as numbers (percentages) and medians (range). The two groups were compared at baseline and follow-up regarding the individual lifestyle factors by intention to treat using non-parametric statistics; Fischer's exact test and Pearson Chi-square. The same method was used to perform the per protocol analyses, which investigated the effect of alcohol abstinence, regardless of study group, on lifestyle risk factors. P-values < 0.05 were considered statistically significant.

A sample size calculation was performed to provide an estimate on how many study subjects would be required to find a 20% decrease in daily smoking with a risk of type 1 error on 5% and a type 2 error of 20% (n=2825). The analyses were performed in IBM SPSS v. 19 and Excel 2010.

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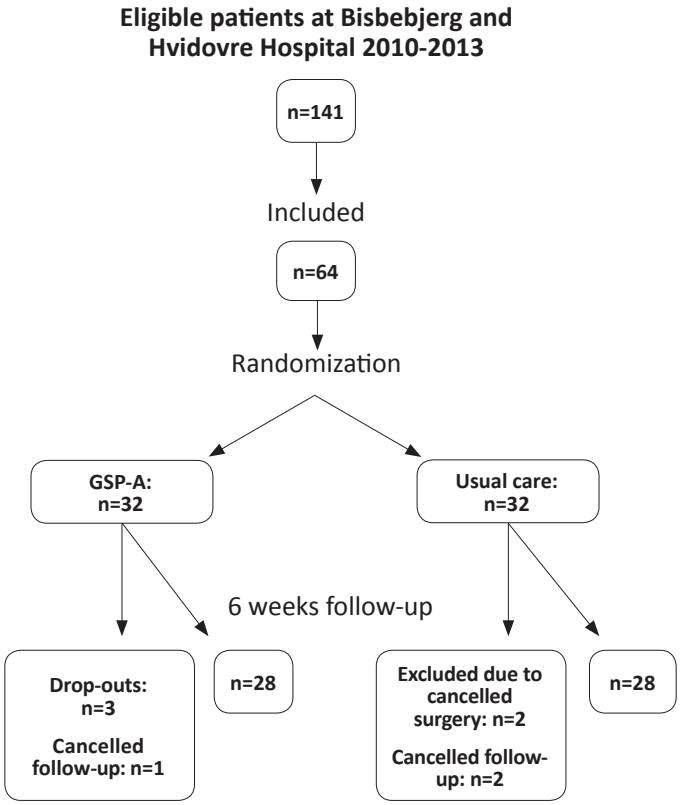
Figure 1 Trial profile



Results

Baseline characteristics

Table 1 shows the baseline characteristics for the GSP-A and the control group. There were more men than women in both groups, and the median age was 50 years in the GSP-A group versus 54,5 years in the control group. About one in three in each group were alcohol dependent, and the alcohol consumption in the week before inclusion had a median of 35 and 31 units in the two groups, respectively. Most of the patients were unemployed at the time of inclusion, and had no or short education apart from public school. In the GSP-A group 52% had comorbidity, psychiatric disorders being the most common, followed by lung disease. In the control group 37% had comorbidity and also in this group psychiatric disorder and lung disease were the most common. Most of the patients had an ASA-score of 1 (52% in the GSP-A versus 40% in the control group) or 2 (48% versus 50%, respectively). Regarding lifestyle risk factors there were more daily smokers in the GSP-A group than in the control group (77% vs 50%), and there were also more patients with physical inactivity in the GSP-A group (68% vs 40%). The majority of patients were overweight (77% versus 80%, respectively). There were fewer study participants in risk of malnourishment in the GSP-A group than in the control group (19% vs 33%). In total most of the study partici-

Table 1 Baseline characteristics presented in number (%) or median (means)

	Intervention n=31	Control n=30
Bispebjerg Hospital	18 (58%)	19 (63%)
Age (years)	50 (26-77)	54,5 (20-78)
Gender (men)	21 (68%)	19 (63%)
Alcohol units in the last week	35 (14-106)	31 (2-114)
Alcohol dependency (ICD-10)	11 (35%)	11 (37%)
Missing data	1 (3%)	0 (0%)
Employed	14 (45%)	11 (37%)
Education		
None	7 (23%)	10 (33%)
Short	14 (45%)	9 (30%)
<3 years	1 (3%)	2 (7%)
3-4 years	3 (10%	5 (17%)
>4 years	5 (16%)	4 (13%)
Missing data	1 (3%)	0 (0%)
Comorbidity		
Patients with comorbidity	16 (52%)	11 (37%)
Lung disease	4 (13%)	2 (7%)
Cardio-vascular disease	6 (19%)	5 (17%)
Diabetes	1 (3%)	0 (0%)
Liver disease	0 (0%	2 (7%)
Gastrointestinal disease	4 (13%)	2 (7%)
Neurologic disorder	2 (6%)	1 (3%)
Psychiatric disorder	10 (32%	5 (17%)
Musculoskeletal disorder	2 (6%)	2 (7%)
Other	1 (3%)	3 (10%)
ASA-score*		
1	16 (52%)	12 (40%)
2	15 (48%)	15 (50%)
3	0 (0%)	3 (10%)
Lifestyle risk factor in addition to alcohol		
Daily smoking	24 (77%)	15 (50%)
Risk of malnourishmen	6 (19%)	10 (33%)
Overweight	24 (77	24 (80%)
Physical inactivity	21 (68%)	12 (40%)
Total nr of lifestyle risk factors in addition to alcohol		
1 risk factor	4 (13%)	8 (27%)
2 risk factors	12 (39%)	15 (50%)
3 risk factors	13 (42%)	5 (17%)
4 risk factors	2 (6%)	2 (7%)

*American Society of Anaesthesiologist physical status classification

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pants had 2 or 3 risk factors in addition to hazardous alcohol consumption.

Intention-to-treat analysis

Table 2 shows the results of the ITT-analysis. The results showed no significant differences between groups regarding risk of malnutrition, overweight or physical inactivity after 6 weeks, but a significant difference regarding daily smoking with the GSP-A group having twice as many daily smokers as the control group (84% vs. 43%). However, this difference was also present at baseline (Table 1.) Figure 2a-d illustrates the percentage of patients with a certain risk factor at baseline and at the 6 weeks follow-up.

Table 2 ITT-analysis for lifestyle factors at 6 weeks follow-up

	Intervention n=31	Control n=30	P-value
Daily smoking	26 (84%)	13 (43%)	0.001*
Risk of malnutrition	12 (39%)	12 (40%)	0,92
Overweight	21 (68%)	22 (73%)	0.63
Physical inactivity	25 (81%)	25 (83%)	1

*statistically significant; p < 0.05

Per protocol analysis

Alcohol abstainers and non-abstainers after 6 weeks were found to be comparable regarding to baseline characteristics. The results of the per protocol analysis, showed that there were no significant differences between alcohol abstainers and non-abstainers regarding lifestyle risk factors after 6 weeks. The results of this analysis are shown in Table 3. Figure 3a-d illustrates the percentage of patients with a certain risk factor at baseline and at the 6 weeks follow-up.

Table 3 Per protocol-analysis for lifestyle factors at 6 weeks follow-up

	Alcohol abstainers n=22	Non-abstainers n=39	P-value
Daily smoking	15 (68%)	24 (62%)	0.60
Risk of malnutrition	8 (36%)	16 (41%)	0,72
Overweight	17 (77%)	26 (67%)	0.56
Physical inactivity	19 (86%)	31 (79%)	0.73

Discussion

This study showed that intensive alcohol cessation intervention does not induce smoking cessation nor does it affect other non-targeted risk factors, including overweight, risk of malnutrition and physical inactivity in the intervention period following acute fracture surgery. The lack of significant differences between study groups

Figure 2a-d Development of the individual lifestyle risk factors, from inclusion to 6 weeks follow-up, respectively in the GSP-A (full line) and control group (dotted line); intention to treat analysis

Figure 2a)

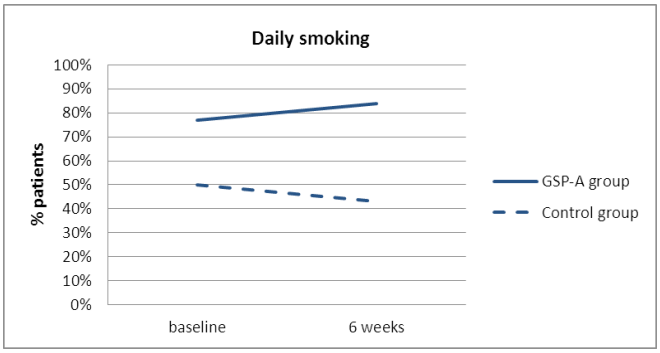


Figure 2b)

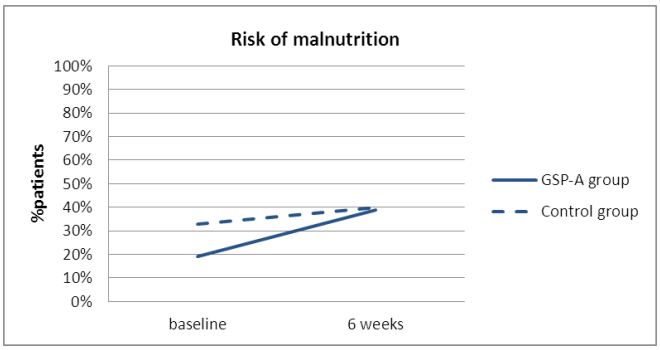


Figure 2c)

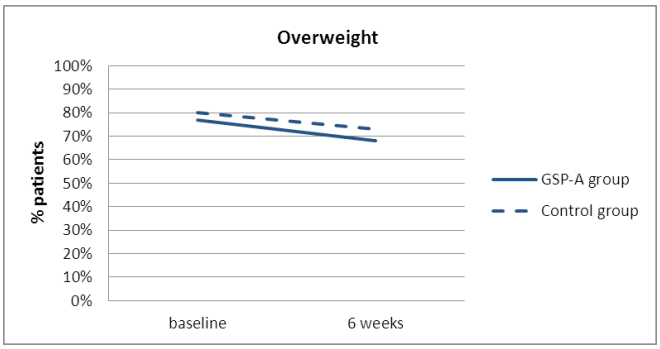
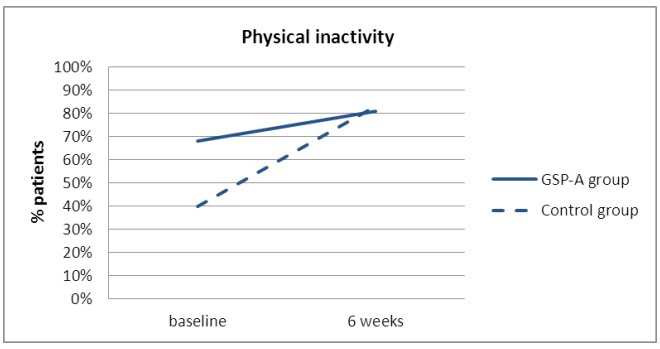


Figure 2d)



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in the ITT-analysis, along with the per protocol analysis, suggests that neither the intensive intervention program nor alcohol cessation in itself affect non-targeted lifestyle factors.

We hypothesized that there would be a general change of lifestyle in the patients who received the alcohol intervention, but our findings are similar to the results from less intensive programs. Brief alcohol interventions have been found not to have an effect on smoking (21) and smoking cessations have been found not to have an effect on alcohol consumption (22). The results from this study, which, to our knowledge, is the first to investigate the effect of an intensive alcohol intervention in a surgical setting on other non-targeted lifestyle factors, together with the above mentioned studies, points in the direction of non-targeted lifestyle factors not being affected by monofactorial lifestyle interventions.

Since alcohol interventions appear not to induce smoking cessation, combined interventions are probably needed. Some might argue that when stopping to drink alcohol it is too difficult also to cease smoking, but recent research has shown that not only are 75% of smokers in alcohol treatment interested in quitting smoking (23), it is definitely possible, and it has been shown that smoking cessation does not hurt sobriety (24-27). Some studies have even shown that smoking cessation is associated with improved alcohol intervention outcome (28).

In general, the participants in this study constituted a very vulnerable group of patients, as one third were addicted to alcohol and the majority were also smokers and overweight. The number of physically inactive and malnourished patients was also high. Overall, this study group has more lifestyle risk factors both in comparison to hospital patients in general and to the background population. The Scand-Ankle study group contained 64% daily smokers compared to around 20% among hospital patients in general (15) and 15-20% in the Danish background population (29;30). Further, there were close to 80% overweight patients in the Scand-Ankle study group compared to 68% of hospital patients in general (15), and a little less than half of the background population (29). In Denmark around 50% of the population does not have any risk factors, 30% have one, and a few have two or more risk factors (31).

The picture presented in the Scand-Ankle study group is completely different. In addition to having high alcohol consumption, a majority of the study subjects had additionally two or three risk factors. This, together with the results that the GSP-A does not contribute to a general

Figure 3a-d shows the development of the individual lifestyle risk factors, from inclusion to 6 weeks follow-up, respectively in alcohol abstainers (full line) and non-abstainers (dotted line); per protocol analysis

Figure 3a)

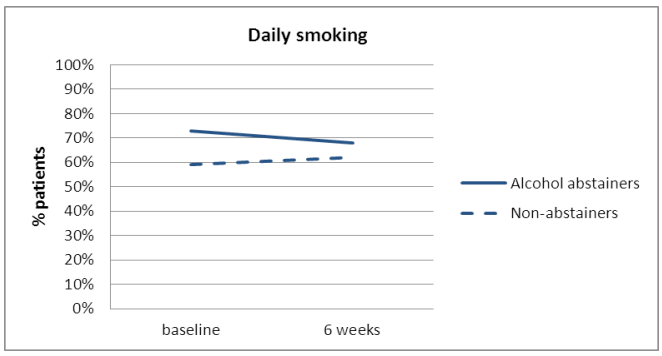


Figure 3b)

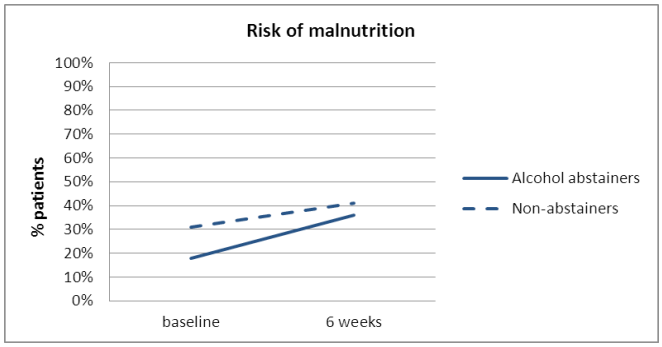


Figure 3c)

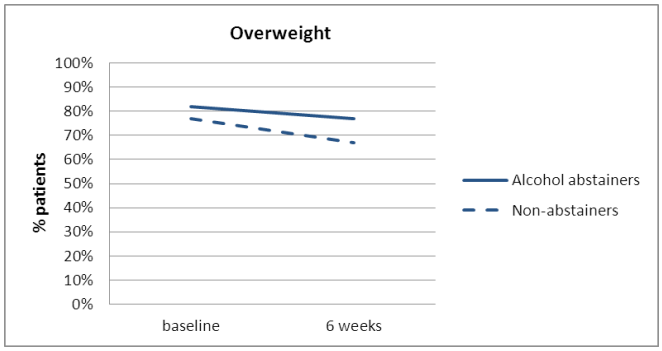
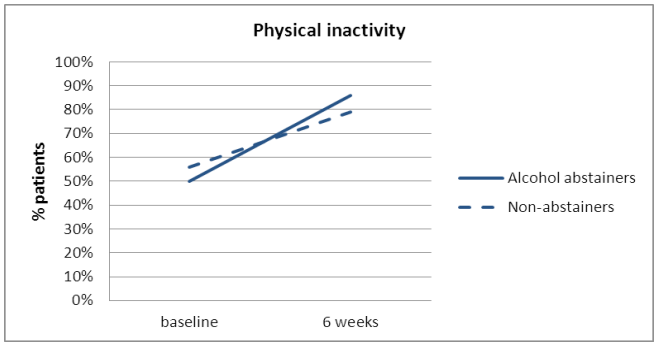


Figure 3d)



change of lifestyle, call for development and implementation of lifestyle interventions targeting multiple risk factors to achieve a synergetic effect.

Bias and limitations

There is a possibility that there is a difference which we have failed to detect due to the small study sample (Type-2 failure). However, based on our results a new study would require about 2825 patients.

Another bias was that the participants could not be blinded to the group allocation nor could the investigators. This was not possible because of the nature of lifestyle intervention programmes. Height, food intake and physical activity were self-reported and might therefore also be a source of bias.

Conclusion & future perspective

The results of this study showed no effect of the GSP-A on lifestyle risk factors other than alcohol consumption. This suggests that in relation to the Scand-Ankle study, a potential effect on postoperative complications following ankle fracture surgery is related to the GSP-A and its effect on alcohol intake and not a general change of lifestyle.

In regard of smoking, overweight, malnourishment and physical inactivity all being risk factors that increase the risk of developing postoperative complications, it is relevant to further investigate the effect of multiple lifestyle interventions in surgical settings, to achieve the best outcome for the patient.

Acknowledgement

Randi Beier Holgersen for supervision. Ina Stark, Anne-Birgitte Larsen and Troels Riis for clinical assistance, and Jesper Borch for technical assistance.

Contribution details

Conception and design: HT
Acquisition, analysis and/or interpretation of data: All
Drafting the article: EW
Revising and approving the article: All

Competing interests

None declared

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Gender and Content influence Second-Level Students' Expectations of Health Education Seminars provided in a Health Promoting Hospital Setting

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ABSTRACT

Purpose Our objective was to evaluate health education seminars offered to school transition year students (aged 15-16 years) within the hospital catchment area by means of analysis of self-completed student evaluations of seminars from 2009 to 2013. Internationally, detailed evaluations of such seminars are not widely reported.

Method The seminars aimed to increase students' knowledge about their health and well being and to enable behaviour change. Male and female students attended one or more of five hour-long seminars; Smoking, Minding Your Mind (MYM), Healthy Eating, Active Living (HEAL), Cancer Awareness and Alcohol - a Different Approach. Student opinions were recorded via Likert Scale on a structured form. Responses were dichotomised into those who found the seminars strongly met students' expectations and those who did not. Logistic Regression analysis taking into account gender, seminar type and other relevant variables was used to find predictors of expectation.

Results There were in all 925 respondents. Factors predictive of strongly met expectations were strongly finding the seminar interesting, OR 5.11, 95% CI (3.43-7.61), balanced OR 2.49, 95% CI (1.62-3.80) and understandable, OR 2.47, 95% CI (1.53-4.01). These OR were all highly significantly increased $p < 0.001$. There was also evidence of a significant interaction ($p = 0.039$) between gender and type of seminar.

Conclusion The importance of gender is demonstrated in this analysis. As with other health promotion activities, more targeted student health seminars could enhance engagement.

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Clin Health Promot 2014; 4:54-60

Introduction

Partnerships between schools and health care providers offer an opportunity to contribute to school pupils' health education. The settings-based approach to health promotion, as promoted by the World Health Organisation, is highly contextual in that it capitalises on the infrastructure, expertise and resources available to achieve positive outcomes for individuals (1). The Health Promoting School Model together with Healthy Cities and Healthy Workplace Settings for health promotion is the basis for the now established International Network of Health Promoting Hospitals and Health Services (HPH Network) and proposes a health-proofed spiral curriculum content, in that key concepts are revisited at different age points, with different subject areas and with increasingly complex content. Although it is well understood by health educators that one-off talks are not effective in themselves, they can improve knowledge, and contribute to a wider personal skills development strategy, as well as acting as a cue to action in relation to behavioural modification and change (2;3).

The HPH Network too can make an educational contribution on health matters to the wider community by providing topic-specific and informative materials to adults and young people in its catchment area. Although collaborative seminars between the health sector and school communities are a commonly used educational technique for improving students' knowledge on health promotion topics (4-8) and undoubtedly a significant grey area, literature is likely to exist in many countries. However, relatively few systematic evaluations of satisfaction have been published to date, including whether such seminars meet the expecta-

tions of students, an important educational outcome if the learning objectives are to be capitalised upon. For instance Bandura's social cognitive model for health promotion identifies a number of components influencing health behaviour including self-efficacy, socio-structural factors and outcome expectations (9). The consideration of met expectation may influence quality of life assessments as from treatment pathways as well as experience (10).

Such school programmes can be resource-intensive, however, and arguably be at the expense or opportunity cost of other, possibly more efficacious interventions. Accordingly, evidence-based evaluations, which assess impact, process and outcome from the intervention, are important. Examples from the literature are various, dating from early efforts to reach young people on AIDS prevention (5;11), sun protection (2;12) and fruit and vegetable promotions (13), alcohol (14;15) and exercise programmes (16) and specific medical interventions around medication consumption (17), or organ donation cards (18;19). St Vincent's University Hospital is a large general teaching hospital in Dublin. The hospital's Department of Preventive Medicine and Health Promotion was one of the first established in the world in the nineteen seventies and has a long history of health education and health promotion activities in cardiovascular disease prevention in particular. It has received a gold level award from (ENSH European Network for Smoke-free Healthcare Services) Global Network for Tobacco-free Healthcare Services for becoming the first campus to ban smoking outright in 2009 (20;21).

The department has offered structured one-hour health education seminars for both male and female transition year students from second-level schools in the surrounding area since 2000 (See Participants below). The purpose of these seminars is to act as a support that helps reinforce what the students have learned in Social, Personal and Health Education (SPHE) modules as part of the National school curriculum (22;23), or possibly other mainstream subjects such as Home Economics, Science or other relevant topics in their so-called Transition year curriculum (24). The aim of the programme is to develop the students' skills and knowledge in relation to their health, personal lives and social development. Our objective in this analysis was to assess whether the content or topic of the seminars met student expectations and whether this was influenced by gender, content and type of seminar offered or by students' opinions of the seminar. This is an evaluation of the findings of the self-administered surveys completed by each student for the seminars attended from 2009 to 2013.

Methods

Participants

Transition year is an optional year offered by schools in the Republic of Ireland between the junior and leaving certificate cycles (aged on average 15-16 years). The Transition year offers a flexible, personal skills development curriculum for students, with the aim of helping them integrate into the working and social environment when they leave school. Transition year students are targeted for this hospital seminar programme, as they tend to have flexible timetables with no end-of-year examinations. Each school plans its own unique Transition year programme, which also includes core academic subjects. Students may choose other flexible modular subjects, some of which can cover areas in mental, physical and emotional health. Currently the Social, Personal & Health Education Program (SPHE) provides Irish secondary school students with one class period per week, throughout the 3 years of the junior cycle.

Procedure

The hospital seminars we provided were interactive, delivered by topic specific clinical experts and offered the opportunity for students to ask questions and receive advice from health professionals, who were experts in their relevant field. The health seminars all took place in the hospital. Each one lasted approximately one hour and consisted of an oral presentation, along with power point presentations and discussions. Facilitators were drawn from disciplines across the hospital; Medicine Specialties, Nursing, Physiotherapy and the Health Promotion staff themselves. The topics covered and the year offered are summarised in Table 1.

At the end of each seminar, students were asked to complete an evaluation form rating the seminar they had just attended. Students answered a series of mainly closed questions in Likert scale format where 1 represented strongly disagree, 2 represented disagree, 3 represented undecided, 4 represented agree and 5 represented strongly agree. We asked whether the seminar met the students' expectations, whether they found the seminar interesting, how they found the balance between information and activity and whether they understood the information given. Other questions used a yes/no/don't know answering system which covered length of programme, whether they had learned the information in school already, or learned anything new and were interested in attending another seminar. Students were also asked which part of the seminar they had liked the most, least liked and if they had any suggestions on improvements.

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Table 1 Summary of content of 17 seminars evaluated as part of the hospital-provided seminar series for transition year students and years in which offered.

Name of seminar	Information Covered
Healthy Eating Active Living (Boys) 2009, 2010, 2011, 2012	Understanding Health, Determinants of Health, Healthy Lifestyles, Healthy Eating, Alcohol and Smoking, Active Living
Healthy Eating Active Living (Girls) 2009, 2010, 2011, 2012	Healthy Eating, Myths and Facts about Healthy Eating, Important Dietary Aspects for Girls, Physical Activity and Exercise
Smoking (Both genders) 2011, 2012, 2013	What is in a Cigarette?, Passive Smoking, Benefits of not and Stopping Smoking
Minding Your Mind (Both genders) 2011, 2012, 2013	Mental Health and Drugs, Understanding Gateway Drugs, Recognising Early Signs of Depression
Cancer Awareness (Both genders) 2012, 2013	For boys: Reducing the Risk of Cancer with a special focus on Testicular Cancer, For girls: Reducing the Risk of Cancer with a special focus on Breast Cancer
Alcohol-A different Approach (Both genders) 2013	The dangers of teen drinking, Awareness of alcohol industry marketing to teens, A DVD showing what happens to a group of teens who go drinking one night and some safety messages

Data Analysis

Data from the student evaluation forms were analysed using S.P.S.S. (Statistical Package for the Social Sciences). All questions on the evaluation forms were tested for significance at the 0.05 level of probability, employing the chi square test of independence to compare differences in range of response between male and female student respondents. For the multivariable logistic regression analysis, we selected strongly agreed that the seminar met expectations as the outcome measure and dichotomised the variable appropriately. The initial logistic model included ender, type of seminar and all the other rating measures from the evaluation form as co-variates. Likert scale variables were dichotomised into 'Strongly agree' versus the rest. The second and final model included those variables that met a significant level of $p < 0.05$. A significant ($p = 0.039$) interaction between gender and type of seminar was also found and included in the model.

Results

In all, 925 students attended seventeen seminars from a range of local schools in the South Dublin area and each completed the individual evaluation forms. Though response rate was not systematically recorded, all students were expected to complete the forms, collected by one of the health promotion team. Based on booking information, an average class size of around 72 per seminar and the average number of forms collected was 54, we estimated a response rate of approximately 73%. Overall the seminars were evaluated positively by the students with Smoking and Cancer Awareness performing particularly well. The Minding Your Mind (MYM) seminar had a less positive response. All individual survey questions were evaluated positively for all students with understood information given, learned anything new, interested in attending another seminar and length of programme performing particularly well. The findings from the univariate analysis are summarised in Table 2, giving the strongly agree and strongly disagree categories for both male and female respondents. There were apparent gender differences between the individual seminars. The Healthy Eating Active Living seminars tended to be more popular with males, while Minding Your Mind, Smoking and Cancer Awareness tended to be more popular with females.

Predictors of a seminar strongly meeting expectations were examined. In the final logistic regression model (Table 3) the four significant predictors were the type of seminar, whether students found the seminar interesting, whether they found the balance between information and activity was good and whether they understood the information that was given. All four of these factors were associated with strongly met expectations for the seminar. A significant ($p = 0.039$) interaction between gender and type of seminar was also found. The odds ratios for each type of seminar according to gender are presented in Figure 1, with the cancer awareness seminar for males as the reference category. The Minding Your Mind seminar least met male expectations.

Discussion

This was a systematic evaluation of an ongoing health education seminar series showing that content, topic area and gender were all important factors in meeting students' expectations. The study has strengths in that there were high and consistent levels of student evaluation and numbers were sufficient to examine different aspects of the content of the seminars. For the final logistic regres-

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Table 2 Percentage of students who strongly agree or not with a series of statements about the different seminars according to gender (Total N=925)

		Male				Female				Total	P-Value for difference according to gender
		Strongly Agree N	(%)	Agree - Strongly Disagree N	(%)	Strongly Agree N	(%)	Agree - Strongly Disagree N	(%)	N	
The seminar met my expectations.	H.E.A.L.	15	(22.7)	51	(77.3)	32	(13.6)	203	(86.4)	301	.072
	M.Y.M.	9	(9.5)	86	(90.5)	13	(17.8)	60	(82.2)	168	.112
	Smoking	11	(26.2)	31	(73.8)	27	(40.9)	39	(59.1)	108	.118
	C.A.	29	(25.4)	85	(74.6)	40	(25.6)	116	(74.4)	270	.970
	Alcohol and You	**6**	**(40.0)**	**9**	**(60.0)**	**11**	**(15.1)**	**62**	**(84.9)**	**88**	**.026**
I found the seminar interesting.	H.E.A.L.	12	(18.5)	53	(81.5)	34	(14.4)	202	(85.6)	301	.421
	M.Y.M.	16	(16.8)	79	(83.2)	17	(23.3)	56	(76.7)	168	.297
	Smoking	**10**	**(23.3)**	**33**	**(76.7)**	**28**	**(42.4)**	**38**	**(57.6)**	**109**	**.040**
	C.A.	24	(24.1)	90	(78.9)	44	(28.2)	112	(71.8)	270	.181
	Alcohol and You	4	(26.7)	11	(73.3)	16	(22.2)	56	(77.8)	87	.710
The seminar had a good balance between information and activity	H.E.A.L.	17	(26.2)	48	(73.8)	53	(22.5)	183	(77.5)	301	.532
	M.Y.M.	12	(12.8)	82	(87.2)	6	(8.2)	67	(91.8)	167	.347
	Smoking	**5**	**(11.6)**	**38**	**(88.4)**	**22**	**(33.3)**	**44**	**(66.7)**	**109**	**.010**
	C.A.	21	(18.4)	93	(81.6)	22	(14.1)	134	(85.9)	270	.338
	Alcohol and You	4	(26.7)	11	(73.3)	20	(27.8)	52	(72.2)	87	.930
I understood the information given.	H.E.A.L.	28	(43.1)	37	(56.9)	129	(55.4)	104	(44.6)	298	.079
	M.Y.M.	46	(48.4)	49	(51.6)	42	(57.5)	31	(42.5)	168	.241
	Smoking	**18**	**(42.9)**	**24**	**(57.1)**	**43**	**(65.2)**	**23**	**(34.8)**	**108**	**.023**
	C.A.	61	(53.5)	53	(46.5)	97	(61.8)	60	(38.2)	271	.173
	Alcohol and You	7	(46.7)	8	(53.3)	40	(55.6)	32	(44.4)	87	.530
		Yes (%)		No/ Don't know (%)		Yes (%)		No/Don't know (%)			
I learned something new at the seminar	H.E.A.L.	**47**	**(72.3)**	**18**	**(27.7)**	**197**	**(83.8)**	**38**	**(16.2)**	**300**	**.035**
	M.Y.M.	80	(84.2)	15	(15.8)	63	(88.7)	8	(11.3)	166	.404
	Smoking	39	(90.7)	4	(9.3)	62	(93.9)	4	(6.1)	109	.526
	C.A.	107	(96.4)	4	(3.6)	149	(94.9)	8	(5.1)	268	.561
	Alcohol and You	12	(80.0)	3	(20.0)	66	(91.7)	6	(8.3)	87	.177
I would be interested in attending another seminar	H.E.A.L.	45	(69.2)	20	(30.8)	165	(70.2)	70	(29.8)	300	.878
	M.Y.M.	57	(60.6)	37	(39.4)	48	(65.8)	25	(34.2)	167	.497
	Smoking	**23**	**(53.5)**	**20**	**(46.5)**	**58**	**(87.9)**	**8**	**(12.1)**	**109**	**.000**
	C.A.	**55**	**(49.5)**	**56**	**(50.5)**	**115**	**(73.2)**	**42**	**(26.8)**	**268**	**.000**
	Alcohol and You	9	(60.0)	6	(40.0)	52	(72.2)	20	(27.8)	87	.347

		Male			Female			Total	
		Too short N (%)	Just right N (%)	Too long N (%)	Too short N (%)	Just right N (%)	Too long N (%)	N	P-Value
Length of Programme	H.E.A.L.	5 (7.6)	60 (90.9)	1 (1.5)	9 (3.8)	205 (86.9)	22 (9.3)	302	.055
	M.Y.M.	9 (9.5)	77 (81.1)	9 (9.5)	9 (12.3)	58 (79.5)	6 (8.2)	168	.819
	Smoking	9 (20.9)	33 (76.7)	1 (2.3)	10 (15.2)	56 (84.8)	0 (0.0)	109	.326
	C.A.	**5 (4.3)**	**100 (87.0)**	**10 (8.7)**	**21 (13.4)**	**132 (84.1)**	**4 (2.5)**	**272**	**.005**
	Alcohol and You	1 (6.7)	12 (80.0)	2 (13.3)	4 (5.5)	66 (90.4)	3 (4.12)	88	.359

Signinficant differences between gender distribution are highligthed in bold

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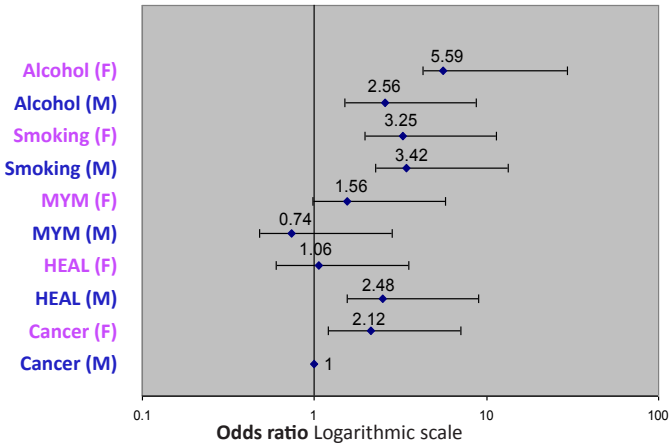
Figure 1 Difference in the likelihood of males and females strongly agreeing that the seminar met their expectations



Alcohol: Alcohol – A different Approach
Smoking: Smoking – It's your choice
MYM: Minding your Mind
HEAL: Healthy Eating Active Living
Cancer Cancer Awareness - The future is in your hands

sion model, we took a stringent cut-off point of strongly meeting expectation, as such programmes are likely to meet expectation to some degree, which proved to be the case with most students. A higher-level cut-off helps to discriminate opinions more clearly.

As might be expected, in that model, if the topic was rated as novel, interesting or informative, it was more likely to meet expectation. If content was already covered in the school curriculum it was less likely to be highly rated. The seminar with the lowest score for learning anything new, in both males and females, was for instance Healthy Eating and Active Living, suggesting that the students had covered this information in school programmes such as S.P.H.E. or Home Economics or more widely from media and other sources. The Minding your Mind seminar was least popular, particularly for males, which may relate to the fact that both males and females scored it lowest on balance between information and activity. The gender effect was also consistent, both in differences between males and females generally and in relation to specific seminars. Female students showed a greater interest in attending future seminars when compared to male students.

Sex differences in how students receive health information are well documented internationally and should be addressed in planning. The Hamilton Board of Education in Canada carried out 70 minute AIDS seminars for senior grades in 10 secondary schools in 1990 and reported on the findings of student surveys to ascertain how useful students found the seminar and also found a gender effect, with greater interest amongst girls (5).

The gendered nature of education is particularly relevant for sex education (25-27). Previous studies in Ireland have shown that girls perceived breastfeeding as more challenging than boys because they would actually have to initiate the practice, whereas boys could be supportive without commitment themselves (28). Similarly fashion conscious girls were more likely to be smokers, the converse with boys (29). In a schools lifeskills programme, girls were more likely to engage effectively with the programme than boys (15). These gender effects persist into adulthood and in other settings (30;31). Men appear to favour more fact-based than skills development programmes in primary care (32). Planners of health education and promotion programmes should routinely proof their content for this effect, to ensure the content is relevant and focused to the target audience, whilst avoiding the introduction of bias and preconception about different gender expectations and maintaining gender equity considerations.

Table 3 Multivariate analysis of combined 2009 – 2013 data (n = 925), according to gender and seminar and including the interaction (Gender X Seminar)

Factor	Adjusted OR	95% CI	P-Value
Seminar Interesting			
Strongly disagree, disagree, undecided, agree	1		
Strongly Agree	5.11	3.43 – 7.61	p < 0.001
Seminar Balanced			
Strongly disagree, disagree, undecided, agree	1		
Strongly Agree	2.49	1.62 – 3.8	p < 0.001
Seminar Understood			
Strongly disagree, disagree, undecided, agree	1		
Strongly Agree	2.47	1.63 – 3.75	p < 0.001
Type of Seminar*:			p < 0.001
Males			
Cancer Awareness	1		
Healthy Eating Active Living	2.48	0.94 – 6.53	0.067
Minding Your Mind	0.74	0.26 – 2.11	0.574
Smoking	3.42	1.17 – 9.97	0.024
Alcohol	2.56	1.06 – 6.15	0.036
Females			
Cancer Awareness	2.12	0.92 – 4.92	0.080
Healthy Eating Active Living	1.06	0.46 – 2.46	0.886
Minding Your Mind	1.56	0.58 – 4.20	0.380
Smoking	3.25	1.29 – 8.18	0.012
Alcohol	5.59	1.3 – 23.79	0.020

*The p-value for the interaction between gender and type of seminar was p = 0.039

Limitations

It is problematic that the exact response rate is unknown, though we estimate that around three-quarters of the students attending any given seminar did complete and hand up the evaluation form. Another possible limitation is that the students might have been influenced by the classroom effect when they were completing their evaluation forms; discussions could have occurred between the students during the completion of the evaluation form. Individual students may have had an effect on their fellow students' opinions and this could have led to non-independent responses from the students. Such clustering is a common consideration, however the study did show a wide spread of opinion, both within and between groups. We performed a number of tests at univariate level and as in most similar type analyses there was no correction for multiplicity. We could arguably have considered a correction such as that of Bonferroni. Use of such a method can be over conservative, however and it is up to the reader to interpret our findings as given. On the other hand, the main outcome we set for the regression model was strongly agreeing to meet expectation, which is quite stringent and we wished to retain power to consider several variables in the model.

Another limitation of the study is that it was observational in design without pre-seminar data on knowledge, attitudes or beliefs and was not randomised in design. Nevertheless it does give important insight into delivery of a hospital-based programme for schools on which there is little published literature. In health promotion there is much discussion as to whether random allocation to an intervention is feasible though in general for logistic reasons, especially in a setting such as a hospital, this would be difficult to mount. For instance school groups could be randomly allocated to topic seminars, stratified by gender with a priori powered outcome measures. In the real-time setting a topic list is offered to schools, and they have the option to choose, introducing some self-selection into the analysis.

Conclusions

In conclusion, differences emerged according to gender and type of seminar in this evaluation in common with other health promotion activities. Whilst a majority of students rated the seminars positively, more targeted student health seminars could enhance engagement at the strongly agree level. The school presents an important opportunity to provide effective topic-based health education in partnership with health professionals. We have shown in this study that content and gender influence expectations, which is of international interest to those working in developing such programmes. This could include proofing the content for gender specific issues, rather than simply opting to deliver the seminars separately.

Funding

The schools pay a small concession towards the running costs of the seminars. There was no formal funding of the evaluation. As this is completely anonymous data collected for routine service evaluation it is regarded as an audit rather than research and does not require formal approval by the hospital's research ethics committee.

Author contribution

Planning, implementation, analysis and write up of seminars: All authors.
contributed to the planning, implementation, analysis and write up of the seminars.
Maina draft of manuscript: CK, PF
Responsible for planning, delivering and evaluating the seminars: IG, GC, KD
Statistic: DK, OF, MK under the supervision of IG, KD, LD.
Analysis, data interpretation, write-up of the findings, and approved the paper: All

Competing Interest

None declared.

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Enhance your Clinical HP competences at the HPH Schools in 2015

The International HPH Secretariat offers a range of Schools and Seminars during 2015. So far the following events have been planned for 2015:

- **Second International HPH Seminar in Japan**
  In collaboration with MIN-IREN, the International HPH Secretariat is proud to invite hospitals to participate in the second HPH Semniar in Japan. The Seminar takes place in Tokyo on January 17-18.

- **The HPH School: Good Clinical HP Practice**
  Each year in the week of the International HPH Conference, the HPH secretariat developes a day-and-half Summer School for particpants with an interest in the Evidece-based Health Promotion. The HPH School is taking place in Oslo on April 21-22.

- **The HPH Coordinators Workshop**
  The workshop is a closed event for National and Regional HPH Coordinator and takes place in Oslo on June 11 in the Afternoon.

- **The HPH Newcomers Workshop**
  The half-day-workshop is aimed for new HPH members and other interested who wish to learn more on the tasks and possibilities in the International HPH Network. The workshop takes place in Oslo on June 13 in the morning.

To read more about the HPH Schools, please go to: www.hphnet.org

Pilot Study

Diabetes and Weight Loss: a Pilot Study

Yen Ang, Teik Kee Ng, Chai Nyuk Chong, Keat Hui Ch'ng

Introduction

Most people with type 2 diabetes are found to be also obese. Research provides strong evidence linking obesity to diabetes, and that some weight loss can prevent the development of the disease or reduce its comorbidities (1;2). Diet and physical activities, often supported by pharmacotherapy remains the mainstay treatment for diabetes.

Malaysia has one of the highest diabetes prevalence in the world, and the highest obesity rate in South East Asia. Notably, the country has experienced a triple increase in DM2 (from 6% to 20%) and obesity (from 15% to 40%) incidences in the past 2 decades. Such dual epidemic is observed in many countries (5) and it is arguably not coincidental. As effective as it is in controlling hyperglycemia, medication does not treat the root of the problem—i.e, those risk factors that contribute to the development of disease or its complications, such as dietary habit, physical inactivity and obesity (3;4). There is a need to incorporate the management of those lifestyle risk factors into a comprehensive care plan for diabetes.

Purpose/Method

The primary objective of this study was to examine the feasibility of a program on weight loss through lifestyle modification on patients with diabetes.

Patients with diabetes or elevated blood sugar were referred to the lifestyle clinic at the hospital where they would be enrolled in a 10-week (70 days) weight loss program. The non-drug therapy consists of providing calorie-controlled healthy meals daily, 3 times a week exercise classes and once a week group classes focusing on motivation and behavioral change.

Results

A total of 8 patients with diabetes history ranging from newly diagnosed to 30 years of duration were enrolled in the program. Everyone lost weight, between 4.8kg to 12kg (6% to 13.5% of total body weight), average weight loss of 8kg (9.6%) in 10 weeks. For every 1% drop in body weight there is a corresponding 2% drop on fasting blood glucose. All 8 participants reduced their waist circumference by average of 7.4cm (8%) and body fat by average 3.8%.

The fasting blood glucose was lowered in every participant, with an average reduction of 18.6% or 1.5mmol/L. notably, the reduction is comparable to the effect achieved by some of the most commonly used glucose lowering medications (e.g., sulfonylureas or metformin). All participants improved their cardiovascular (CV) risk factors: reduction in blood pressure, triglycerides and waist circumference. One patient with 15 years of diabetes successfully weaned off insulin injection. Another one got off her diabetes medication completely.

Discussion

The causal relationship between excessive body fat and diabetes has been acknowledged over the past decades in the literature (6;7). Nonetheless, most diabetic care focuses on drug therapy, and very few incorporate health promotion focusing on weight loss. Though our number of cases is small, the finding in this pilot study suggest that weight loss through diet and exercise is effective in managing diabetes and many of its CV risk factors. The pilot study also suggests, that a loss of Body fat appears to increase insulin sensitivity of the diabetes patients.

Conclusion

Most non-pharmacological aspect of diabetic intervention involves diet, exercise and behavioral therapy. Our intervention provides all the above, plus a provision of daily caloric restricted meals to the diabetic patients with the aim of inducing weight loss. We do not just teach and motivate people to lose weight, we show them how by providing them the food. The intensive lifestyle therapy resulted in a significant amount of weight loss among the participants, who at the same time experienced improvement in many other health parameters, with some completely got off their medication.

Overall, this pilot study shows that the weight loss program is feasible for our Malaysian patient group.

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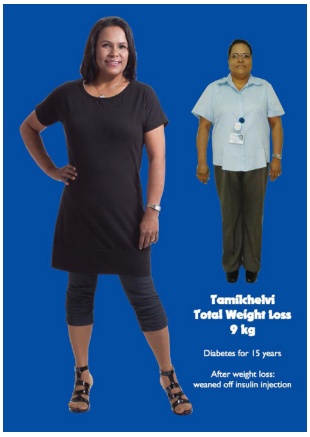

Clin Health Promot 2014; 4:61-62

Pilot Study

Table 1 Change in weigth and cardiovaskolar risk factors for all participants

									Cardiovaskolar (CV) Risk Factors							
Demographic Data			Weight			Body Mass Index (BMI)			Waist Circumference			Blood Pressure		Triglycerides		
Participant			Before	After	Difference	Before	After	Diff	Before	After	Diff	Before	After	Before	After	
(n=8)	Age	Gender	kg	kg	%	kgm^{-2}	kgm^{-2}	%	cm	cm	%	mmHg	mmHg	mmol/L	mmol/L	%
1	47	Male	80.0	75.2	-6	30.7	28.7	-6.5	99	93	-6.1	130/80	124/71	2.0	1.7	-15.0
2	49	Male	98.1	85.9	-12.4	34.4	30.0	-12.8	101	97	-4.0	130/70	126/70	1.4	1.0	-28.6
3	51	Female	65.6	56.7	-13.5	32.2	27.8	-13.7	96	87	-9.4	120/70	105/70	0.8	0.7	-12.5
4	53	Female	77.3	69.9	-9.6	29.1	25.3	-13.1	89	79	-11	130/80	120/80	0.9	1.7	+88.9
5	58	Female	74.0	64.5	-12.8	30.0	26.2	-12.7	84	75	-11	140/90	120/90	2.7	1.4	-48.1
6	60	Female	111.0	103.1	-7.1	45.0	44.6	-0.9	125	118	-7.9	130/90	140/80	1.2	1.9	+58.3
7	61	Female	93.0	85.3	-8.3	32.6	29.4	-9.8	90	86	-4.4	120/80	120/80	1.8	1.2	-33.3
8	71	Female	88.4	82.1	-7.1	31.7	30.0	-5.4	100	90	-10	120/80	126/72	2.0	1.8	-10.0
Mean	56		85.9	77.8	-9.6	33.2	30.3	-9.4	98.0	90.6	-8.0	128/80	123/77	1.6	1.4	0

Table 2 Fasting blood glucose changes for all participants

Participant	Before	After	Difference		Years of DM
(n=8)	mmol/L	mmol/L	mmol/L	%	
1	8.9	6.3	-2.6	-29.0	6
2	5.7	5.0	-0.7	-12.0	N/A*
3	9.0	4.3	-4.7	-52.0	15**
4	10.2	9.6	-0.6	-5.9	18
5	5.9	4.7	-1.2	-20.0	<1*
6	6.7	6.2	-0.5	-7.5	10
7	5.6	5.2	-0.4	-7.1	3***
8	7.8	6.7	-1.1	-14.0	30
Mean	7.5	6.0	1.5	18.6	

N/A: Not Available
* Patients did not take any Oral Hypoglycemic Agent (OHA) prior to intervention
** Patient did not need insulin injection after intervention
*** Patient did not need OHA after intervention

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Research and Best Practice

Awarded scientific abstracts from the 22nd International HPH Conference

At the 22nd International HPH Conference in Barcelona, 10 abstracts were awarded for their scientific content. The assessment of the 10 abstracts were done prior to the conference by our journal editors. The tradition of awarding abstracts for their scientific content was initiated to enhance the visibility of the different scientific projects in the many HPH member countries.

Development of a Multidisciplinary Educational Program for Early CKD and High Risk Patients, a Controlled Randomized Study

Chiu-Ching Huang, Cheng-Chieh Lin, Fung-Chang Sung, Tsai-Chung Li, Chiu-Shong Liu, Wen-Yuan Lin, Li-Chi Huang, Ya-Fei Yang, Chia-Ing Li

Introduction

Chronic kidney disease (CKD) has become the 10th leading cause of death in Taiwan since 2010. The prevalence of CKD in Taiwan was about 11.9%, which was similar to that in the United States. However, Taiwan used to have the highest incidence of dialysis patients in the world. It is mandatory to control this high incidence. The previous multidisciplinary educational program for CKD 3b-5 patients has been shown to be effective in slowing progression to the end stage of renal disease and reducing mortality of CKD patients in Taiwan. However, it is not clear if similar intervention will have the same effect for early CKD patients (stage1-3a).

Purpose

The aims was 1) to develop a multidisciplinary educational model for early CKD patients and 2) to evaluate the change of health related behaviors and outcomes of two different multidisciplinary educational programs.

Methods

This study was a randomized controlled trial (RCT) that evaluated the efficacy of 2 different multidisciplinary educational programs based on a trans-theoretical model with one year of intervention toward early CKD and high risk patients. All participants were randomly assigned to two different experimental groups (self-management and peer-assisted management) and a control group (ordinary clinic management). Participants in the self-management group received 10 classes of CKD education and administered the self-managed interventions by using education materials provided by the multidisciplinary team. The peer-assisted management group received a similar educational program for 3 months, followed by several additional peer oriented group activities.

Results

A total of 411 patients were recruited and randomly assigned to the ordinary management group (n=135), self-management group (n=138) and peer-assisted management group (n=138). Information on medical history, physical examination, biochemical tests, hospitalization and medical costs etc., as well as behavior changes, including smoking, chewing betel nut, medication compliance, exercise and diet were collected and evaluated.

Serial blood biochemistry and urine protein measurements have been scheduled to take place at baseline, the 3rd, 6th and the 12th month of the intervention period and again 18 months after baseline. This project is still ongoing. The preliminary data revealed that the experimental groups had a better understanding of chronic kidney disease, a better control of blood pressure and blood lipids compared to the control group in this 6-month follow-up evaluation. No significant changes in proteinuria, serum creatinine and eGFR were observed. No significant difference was observed between the self-management group and the peer-assisted management group. Subsequent data for the final analyses in the 18-month follow-up survey will be collected.

Conclusions

Self-management may empower patients with early CKD to manage their health related behaviors effectively. When completed, this RCT will provide the information about the degree of intervention needed to slow the pro- gression of CKD and provide evidence of the effectiveness of a multidisciplinary educational program on the change of health related behaviors and outcomes in early CKD patients.

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Research and Best Practice

Creating a salutogenic culture with quality standards

Laura Molloy, Nazih Eldin, Laura McHugh

Introduction
In Ireland the Health Information and Quality Authority (HIQA) set and monitor compliance with standards for the quality and safety of healthcare (National Standards for Safer, Better Healthcare). The Irish Network of Health Promoting Health Services (IHPHS) identified the need to standardise how "Health and Wellbeing" is understood in the standards and how this translates into health promotion activities. To meet these needs, IHPHS have developed a guidance document for healthcare organisations (called) 'Standards to Practice' which has an overall aim of helping to develop a more salutogenic culture within health services.

Purpose
The purpose of the guidance document is to:
- Support hospitals to gather information and evidence to verify their assessments against the Irish "National Standards for Safer Better Healthcare".
- Support hospitals to gather information and evidence to verify their assessments against the WHO Standards for Health Promotion in Hospitals.
- Support Health Promotion Coordinators in hospitals and/or standards assessment teams in carrying out the assessments.
- Demonstrate the interlinking of the WHO HPH and the HIQA standards.
- Illustrate comprehensive examples of evidence of health promotion activities in acute hospitals.
- Reorient the health services to develop a more salutogenic culture.

Results
The guidance document was developed in consultation with specialist health promotion staff in various topics and settings and specialist quality and safety staff and was informed by HPH standards, national policies and practitioners. It expands on standards relevant to "Health and Wellbeing" by illustrating levels of quality with examples of evidence under specific headings.

Conclusion
This guide will help Health Promotion Coordinators and/or Assessment-teams to assess progress in relation to the Irish National Standards for Safer Better Health Care as well as the HPH standards, thus helping to reorient the Irish Health Services to develop a more salutogenic culture.

Comments
This guidance document has been very well received by the acute sector of the Irish Health Services and plans are underway to develop similar documents for primary care services.

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First do no harm: pain relief for the peripheral venous cannulation of adults, a systematic review

Mary Bond, Chris Cooper, Helen Coelho, Marcela Haasova, Quentin Milner, Vicki Shawyer, Christopher Hyde, Roy Powell, Louise Crathorne

Introduction
It can be argued that causing unnecessary pain during medical procedures is harmful. One example is the routine insertion of peripheral venous cannula (PVC). This procedure is a common experience for thousands of patients every day and reported by adults to be painful.

Purpose
Our objective was to discover the relative effectiveness of local anaesthetics for routine peripheral venous cannulation in adults and whether the ease of cannulation is affected by the use of local anaesthetics.

Methods
This systematic review was carried out following the principles published by the NHS Centre for Reviews and Dissemination and is registered at PROSPERO no. CRD42012002093. Data sources included: Medline, Medline in Process, Embase, PsycINFO, Cinahl, British Nursing Index and the Cochrane library. Eligibility criteria were: studies of adults who experienced routine PVC; intervention, any local anaesthetic, comparator, routine PVC without local anaesthetic. Design; controlled trials, observational studies with control groups and economic evaluations. The primary outcome was self-reported pain.

Results
16,368 titles and abstracts produced 34 includable studies. All local anaesthetics were effective and lidocaine was found to be most effective, with a weighted mean difference (95% CI) 11.2 (18.20 to 4.21). The pain of peripheral venous cannulation was more than twice as great as a lidocaine injection (lidocaine admin: mean

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10.0 (95% CI 3.5, 19.0)) control: mean 23.5 (95% CI 12.0, 47.8), VAS 1-100. The mean (SD) score unattenuated cannulation pain was 3.62 (2.86), VAS 1-10. Local anaesthetic did not make cannulation more difficult.

Conclusions

Adults find peripheral venous cannulation painful. This pain can be successfully treated without making the procedure more difficult. Routine adult peripheral venous cannulation should include local anaesthesia as in common paediatric practice.

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Developing a more salutogenic workplace for nurses: compatible practices

Robert Bilterys, Nicole Dedobbeleer

Introduction

Healthcare staffs, particularly nurses, are one of the most challenged groups of employees. In Canada, like many other Western countries, nurses' workplace is an important issue. To improve their working conditions and the quality of care, one of the largest University Hospitals in Canada decided to implement the WHO Health Promoting Hospitals project (HPH), and particularly its dimension related to workplace health promotion. This hospital is a member of the Quebec Network of Health Promoting Institutions.

Purpose

Our objective is to present some of the results of a case study designed to better understand the implementation context of a health promoting workplace for nurses.

Methods

Semi structured interviews were conducted with directors and nurse managers to assess their perceptions about the implementation. A questionnaire was also administered to several strategic stakeholders of the University Hospital, in order to measure the compatibility of existing organizational practices with the criteria of a 'health promoting workplace' for nurses.

Results

Results show a discrepancy between perceived and measured compatibility. Indeed, participants perceived few organizational practices compatible with the criteria of a health promoting workplace. However, our data show that many existing organizational practices are compatible with several criteria i.e. learning and performing organization, health and safety, health promoting lifestyles, and social and physical environment changes. Yet, compatibility is weaker for the criteria on a health promotion policy and very weak for nurses' participation to decision making.

Conclusions

Our study contributes to a better understanding of the context needed to implement a health promoting workplace. Our results suggest hospitals should examine compatibility prior to implementing. Indeed, it allows getting an accurate picture of existing strengths and weaknesses, and helps collecting data about organizational readiness to implement such an innovation. Finally, our results suggest reinforcing knowledge, communication and training about HPH among both strategic and tactical managers, in order to reduce discrepancies and to achieve successful implementation.

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Implementing a health promotion program to improve the quality of life in prostate cancer patients

Carles Serdà Bernat, Rafael Marcos Gragera, Dolors Canal Juvinyà

Introduction

As prostate cancer (PC) is diagnosed at early stages and with more favourable survival outcomes, the basis on which patients select primary therapy has shifted toward considerations of quality of life (QoL) (1;2). Urinary incontinence (UI) remains a significant predictor of lower QoL across all domains of physical, mental and social health in PC patients. The improvement of UI is significantly associated with reduced distress and improves the QoL over time (3).

Purpose

The purpose is to describe a Health Promotion Program (HPP), based on Pelvic Floor Muscle Treatment (PFMT) adapted to the UI symptom and QoL.

Methods

This study is a randomized clinical trial. The sample was formed by 66 participants with PC. The groups were randomized into an experimental group (EG) and a control

group (CG). The variables are related to the UI, muscular strength, and QoL. A statistical analysis was conducted using the Student-Fisher t-test, the Mann-Whitney-Wilcoxon test, and the chi-square test.

Results

After 24 weeks an improvement was identified in the EG compared with the CG, in waist perimeter ($p \leq .001$), variables related to the UI symptom, intensity, frequency, difficulty and limitation of activity ($p \leq .0001$). A correlation between UI and QoL was observed ($p = .039$).

Conclusions

The improvement in QoL is mediated by the improvement in the UI symptom. The HPP is an effective way of causing the symptom of UI to regress in men treated for PC. PFMT improves the muscular condition of the pelvic floor muscle (a decisive aspect for improving urine retention) and, the general strength and muscular resistance of the body. The adherence rate achieved was 91.66%. Furthermore, starting PFMT in a pre-operative context could contribute to the improvement of the achieved results.

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Developing Migrant-friendly organisations: From assessment to implementation

Antonio Chiarenza

Introduction

Rather than creating an inclusive and responsive environment, the health care system risks perpetuating the level of stress the migrants may feel in their everyday life, if it fails to address a number of barriers in the access of services and quality of care for this vulnerable group. As shown in the MFH project, integrating interpreting services, patient information, education strategies and staff training in the policy and management system of the organisation is a key to successful responsiveness to migrants' needs (1). These measures are well known to all of us, and there is general consensus that they are indeed needed in order to adapt health care organisations to diversity. However, many obstacles remain, preventing the transformation of this knowledge into action (2).

Purpose

To face these challenges and to favour the effective implementation of policy measures in health care organisations, the Task Force on MFH proposes the use of a set of standards for assessing equity in five main areas of the health care organisation: Policy and planning; Access and utilization; Quality of care; Users participation and Equity promotion outside the organization.

The objective of the equity standards is to improve the current ways of tackling inequalities in healthcare organisations by focussing on all kinds of differences, favouring a case-by-case assessment of the needs of patients, regardless of which kind of characteristics they bring with them (3). The final aim of this project is to provide health care organisations with a tool that allows them to assess the level of accessibility to health care for migrants and other vulnerable groups and to guide them in the implementation of improvement measures.

Methods

These standards were piloted from April to October 2012 in 45 health care organizations - 5 in Australia, 10 in Canada, and 30 in Europe. The aim of the pilot–test was to evaluate clarity, relevance and applicability of the standards in pilot-organisations.

Results

The overall evaluation process was positive and provided important indications for the revision of the standards from pilot institutions. Comments on the applicability of the standards provided important indications for effective implementation of the tool in health care organisations, with regards to national legislation, health systems organisation and socio-political contexts.

Conclusions

The findings of the pilot-test suggested important next steps to facilitate the implementation and dissemination of the standards to a wider global audience. The next phase of the project will include activities to develop a self-assessment tool that health care organisations can use to benchmark structures, processes and results related to health equity. To this purpose the TF MFH has

undertaken a second pilot-test to evaluate how institutions can utilize the standards and self-assessment process, as well as to explore challenges and opportunities for effective uptake in connection with existing policies and practices.

Comments

Developing explicit, actionable and measurable equity standards can both be a crucial mechanism for operationalizing strategic commitments to equity in health care delivery and can enhance quality improvement and performance measurement initiatives as drivers of change.

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Health Literacy, Chronic Illness, and Use of Primary, Secondary and Tertiary Healthcare - Making the Case for Health Literate Organizations

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Introduction

The evidence base for health literacy shows that lower health literacy is significantly associated with poorer health status, challenges in adherence to, medical recommendations, less use of preventive services, and early mortality. Most of the research has focused on functional health literacy, and has been conducted among special populations. National data based on measuring health literacy according to the broad sense of the concept is essential for health promotion planning, particularly when developing health literate organizations.

Purpose

To assess the level of health literacy in the Israeli population and to study the association between health literacy, social determinants, and association with measures of healthcare service use, health behaviour, and reported health.

Methods

The Health Literacy Survey of Israel (HLS-ISR) was based on the Health Literacy Survey of Europe (HLS-EU) and was conducted in 2012-2013 among a representative sample of 600 adults in home interviews, following qualitative formative research. The study was conducted in Hebrew, Arabic and Russian.

Results

Low health literacy in Israel is associated with significantly higher rates of chronic disease, more frequent visits to family physicians/medical specialists, to emergency services, and higher initial and repeated hospitalisation ($p<0/0001$). At risk for low health literacy are people with lower socio-economic status, shorter formal education, and poorer self-evaluated health. Health literacy was positively and significantly correlated with physical activity, while no association was found with other risk behaviours (smoking, etc.).

Conclusions

The results reflect: 1. The responsibility of the health system for providing more health literacy resources and cultural appropriate services; as demonstrated in this study, people with low literacy use health services at all levels, significantly more than those with higher health literacy. 2. The opportunities for Health Promoting Hospitals based on the settings approach to health promotion, to plan, implement and evaluate interventions for improving health literacy as measured both in Israel and Europe.

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Research and Best Practice

Effectiveness of an intervention program to increase health professional's motivation towards their HBV immunity protection. A randomized control trial

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Purpose
The aim is to investigate the associated factors that can positively increase health professionals' motivation toward their immunization level against HBV and to assess an intervention program's effectiveness.

Methods
In 2010, a total of 117 health professionals, working in a Greek public hospital, were stratified to take part in a randomized control trial. The intervention group received a complete intervention program aiming to mo- tivate the subjects to check their immunization status. The control group received only general information about HBV infection. A self- completed questionnaire, based on the Health Belief Model, was used to evaluate both group's responses, their intention to act and their actual outcome (action).

Results
Significant increase was noted in the intervention group's motivation to check their immunity status ($p = 0.040$), HBV infection's perceived susceptibility ($p = 0.040$), HBV infection's perceived seriousness with regard to the consequences it can have for the quality of life ($p = 0.040$) and financial status ($p = 0.020$), and also in subjects' self-efficacy to use a reminder method, after the intervention. No significant results were noted in the control group

Conclusions
The implementation of intervention programs can contribute towards the motivation of health professionals to undertake the relevant immunity check in order to protect them against HBV.

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VIP (Very Important Patient) project: Health Promotion for Alcohol and Drug Abusers

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Introduction
Drug and alcohol addiction are often accompanied by other risk factors such as heavy smoking, poor nutrition and physical inactivity. In addition, co-morbidity may also be increased compared to the background population. A comprehensive cross-section Health Promotion programme could have a major potential for better outcomes for these patients.

Purpose
The aim is to identify the presence of comorbidity and lifestyle risk factors, and to evaluate the effect of adding the VIP program to the usual alcohol and drug treatment.

Methods
VIP project consists of VIP Screening and VIP RCT. VIP Screening: 400 adult men and women with alcohol and drug dependency are screened. Lifestyle factors, comorbidity, socioeconomic factors are recorded and analysed. VIP RCT: 2 x 120 patients are included after screening, if they have at least one health determinant (HD) and at least one co-morbidity. Primary outcomes are compliance to addiction treatment and alcohol or drug-free days. Secondary outcomes are health status, health-related quality of life, harm reduction, use of health services, time to return to work (or similar activity). Patients are randomized to control group with conventional treatment or intervention group with 6 weeks VIP program. Both groups will be followed up for two years.

Results
VIP screening: 322 patients were screened; age 51 years (range 23-79), 67% men and 33% women. 71% were alcohol dependent, 53% drug dependent and 25% both. The 93% had at least one HD, 54% had two and 22% had three HD. 75% were smokers (17% also snuff), 59% had overweight and 35% were physically inactive. 70% of the screened patients had at least one co-morbidity and 25% had two or more. 41% had heart disease, 25% respiratory disease, 26% liver disease and 7% had diabetes. VIP RCT: 213 patients (66%) were subsequently included in the RCT, which is ongoing. Data is not yet analysed.

Conclusions
The preliminary conclusion is that there seems to be a major need for additional health promotion activities among substance abusers.

Research and Best Practice

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Effectiveness of a lifestyle counseling intervention on the abdominal obesity and cardiovascular disease risk factors: 3-month results of a randomized clinical trial

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Introduction
Abdominal obesity is a major risk factor for cardiovascular diseases and type 2 diabetes. It is therefore important to recognize and reduce abdominal obesity. Abdominal obesity is caused by the complex set of factors within personal control (e.g. overeating, lack of exercise, etc.). But there is little trial-based evidence regarding how to tackle this problem. Thus, MEDICHECK health promotion centers at Korea Association of Health Promotion (KAHP) have provided an intervention program for changing the lifestyle of the individual.

Purpose
The purpose of the study was to evaluate the short term effects of a 12-month trial of lifestyle intervention on the improvement of abdominal obesity and cardiovascular risk factors among Korean adults.

Methods
The participants in this study were 447 abdominally obese adults with cardiovascular risk factors. They were randomly assigned to either an intervention group or a control group. The participants in the intervention group (n=215) received a 12-month lifestyle modification intervention composed of individual counseling sessions, prescriptions for nutrition and physical activity, a health booklet, and a health diary.

Individual counseling with clinical nutritionists was the main strategy for motivating and enabling healthy behavior changes of the participants. The participants in a comparison group (n=232) were in contrast provided minimal health information at baseline. Health examination and self-administered survey were conducted at baseline and 3 months from the baseline to determine the short term effects of the intervention program.

Results
After the first 3 months of the intervention, significant improvements in waist circumference ($p < 0.001$), percent of body fat ($p < 0.001$), BMI ($p < 0.001$), blood pressure ($p < 0.01$ for SBP and DBP), total cholesterol ($p < 0.01$), LDL cholesterol ($p < 0.001$), fasting blood glucose ($p < 0.05$), and HbA1c ($p < 0.001$) were seen in the intervention group. Significant improvements were also seen among the participants of the control group in waist circumference ($p < 0.01$), percent of body fat ($p < 0.001$), BMI ($p < 0.001$), blood pressure ($p < 0.001$ for SBP, $p < 0.05$ for DBP), LDL cholesterol ($p < 0.001$) and HbA1c ($p < 0.05$). However, compared to those in the comparison group, the participants in the intervention group reduced their percent of body fat ($p < 0.05$), BMI ($p < 0.01$), and fasting blood sugar ($p < 0.01$) significantly more. Significant reduction in the prevalence of abdominal obesity was also observed in the intervention group compared with the control group (25.12% vs.17.67%, $p = 0.055$).

Conclusions
Both intensive and minimal lifestyle modification programs were found to be effective in improving central obesity and cardiovascular risk factors of Korean adults in the short term. Further trials should be conducted over a longer period in order to identify the factors which contribute to health improvement, and, more importantly, to the maintenance of improved health status.

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News from the International HPH Network

Health Promoting Hospitals in Canada: a Proud Past, an Uncertain Future

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Nearly thirty years ago, a cadre of international experts met in Toronto, Canada to discuss strategies to improve population health. They discussed a future where hospitals have a "community conscience" (1) and "move increasingly in a health promotion direction, beyond [their] responsibility for providing clinical and curative services" (2). These discussions were held at the Beyond Healthcare Conference in 1984. Two years later, similar discussions occurred at the first International Conference on Health Promotion in Ottawa. The idea that the "major determinants of health lie beyond healthcare" (3) was translated into the fifth principle of the Ottawa Charter for Health Promotion: Reorient Health Services (2). This was also the beginning of the global Health Promoting Hospitals (HPH) movement (4).

The fifth principle aims to maximize the influence of healthcare resources (including social capital) on the foremost determinants of health: the social, economic, ecological and built environments (5). This can be achieved by "reorienting" resources from downstream treatment interventions to upstream health-promoting, determinants-focused interventions. As the largest consumer of healthcare resources, hospitals became the natural initial focus for system reorientation (6). The HPH movement operationalizes the fifth principle and has shown the potential that hospitals have to improve community health by (a) using health promotion strategies with patients, (b) becoming healthy workplaces and (c) advocating for environmentalism, social justice and healthy communities (3;6-8).

The 1984 and 1986 conferences established Canada's "leadership in the development of health promotion concepts" (9). However, progress toward achieving the fifth principle (including the adoption HPH concepts) has remained a challenge (9;10): "The current illness care system continues to be largely focused on hospitals" and "there has been little evidence of a significant increase in funding for prevention or a shift of resources away from illness care and into prevention and promotion" (10). This has prompted some to call for a "profound re-orientation of [Canada's] current illness-care system" (10).

To explore the challenges of advancing HPH concepts in Canada, we have attempted to identify and report key historical milestones from the Ottawa Charter to the present day. This was done to catalogue the strategies that have been used to advance HPH (as well as the barriers to its advancement) over the past 30 years. This summary of Canada's HPH history should also support comparisons between Canada and the over 40 other countries that are members of the International Network of Health Promoting Hospitals and Health Services (International HPH Network) (4). The HPH concept lies at the intersection of public health, health promotion, hospital administration and health policy. Thus the history of HPH is strongly tied to the history of these fields. Since we have chosen to focus on key HPH milestones, this paper is not meant to provide a comprehensive historical overview of the related fields. We encourage those interested to investigate the history of public health and healthcare in Canada for a more fulsome understanding of the context surrounding the HPH movement (11;12).

Clin Health Promot 2014; 4:70-75

Methods

A historical review (13) of key milestones (i.e., pivotal structural changes, interventions and publications) within HPH discourse in Canada was conducted. This was done to recount historical events in an intelligible way, with emphasis on how an understanding of the past can be useful for future HPH research and practice. To our knowledge, this type of review has never been conducted regarding HPH in Canada. In keeping with this approach, we gathered evidence on the history of HPH in Canada and then critically examined what we found to produce an understandable historical narrative that is meaningful to health system researchers and decision-makers (14). A "snowball" approach was used to locate relevant documents. A database search for published peer-reviewed literature from 1986 to 2014 was conducted, as well as an internet search for unpublished literature (e.g., reports, unpublished manuscripts, conference proceedings). The references cited in key articles and reports were then reviewed. It was necessary to contact several organizations (including the Canadian Healthcare Association, Accreditation Canada, the Quebec Network of Health Promoting Institutions, the Ontario HPH and Health Services Network) and individuals (including former members of the Working Group on Health Promotion in Healthcare Facilities) to retrieve unpublished reports referred to in the literature. These contacts often provided additional contextual information.

Following the search, documents were reviewed and data were extracted about key events, structural changes and initiatives related to HPH in Canada. A timeline (Table 1) was compiled to capture the temporality of milestones in Canada's HPH history. Contextual factors were noted about each milestone. Notes about key themes that emerged from the document review were also maintained. The process was led by the first author. The team met on several occasions to discuss the narrative, including key milestones, and analyse the results in the current Canadian health system context.

Results

Ten items were identified as key historical milestones in the HPH movement in Canada since the launch of the Ottawa Charter (Table 1). These milestones along with an analysis of their meaning in the current Canadian health system context are described.

National Survey

Similar to what occurred in Europe after the signing of the Ottawa Charter (4), significant work began in Canada to better understand the role of health promotion in hospitals. This included a national survey in 1986 of health promotion activities in Canadian hospitals, as well as how these activities were incentivized by provincial/territorial ministries of health (note: healthcare is largely a provincial responsibility in Canada). The survey included an organizational questionnaire, hospital site visits and a ministry questionnaire. The study was coordinated by the Canadian Hospital Association (CHA) and funded by Health and Welfare Canada (HWC) (the federal government's ministry of health now called Health Canada).

Table 1 Key Milestones of the HPH Movement in Canada

1984	Beyond Healthcare Conference, Toronto, Ontario
1986	International Conference on Health Promotion, Ottawa, Ontario
1986	National survey of health promotion activities in Canadian hospitals
1988	National Focus Group on Health Promotion in Health Care Facilities recommendations published
1990	A Guide for Health Promotion by Health Care Facilities published
1994	National health promotion accreditation standard developed
1995	Ontario Hospital Health Promotion Network founded
1996	Wellness Institute opens at Seven Oaks General Hospital, Winnipeg, Manitoba
2005	Montréal Regional HPH Network founded & joins the International HPH Network
2008	Ontario Regional HPH Network founded & joins the International HPH Network
2008	Resource Guide for Hospital-Community Collaboration published
2012	Montréal Regional HPH Network becomes Québec Regional HPH Network

The survey made four key contributions to the HPH movement in Canada. First, an operational framework for clinical and community health promotion activities in Canadian hospitals was developed to guide the survey. The framework was developed through "much discussion with the advisory committee and a tour of Ottawa area hospitals to determine the range of activities that the definition should encompass" (15). Second, national data was obtained about the state of health promotion in Canadian hospitals. These data indicated that health promotion was indeed occurring in many Canadian hospitals and that individuals working within hospitals perceived health promotion as part of the hospitals' role (16). Third, 11 case studies were developed with descriptive accounts of health promotion activities

in 11 hospitals across Canada. These cases demonstrated varying states of health promotion in hospitals across (including the provinces of Alberta, Manitoba, Ontario, Quebec, Nova Scotia and Newfoundland) characterized by variations in the types of interventions being delivered, and organizational responsibility for interventions (17). Fourth, data were obtained from nearly all the ministries of health on incentives for hospital-based health promotion. These data indicated that reimbursement schemes set up between the provincial governments and hospitals did not compensate for health promotion programs with health promotion being recognized as the responsibility of the public health department or department of community health/social services (16).

The CHA and HWC responded to the survey results by establishing a national focus group on health promotion in health care facilities. Given the deputy ministers' responses, however, the focus group concluded that there were too few incentives to encourage health promotion (18). Despite this barrier, the focus group identified 21 national strategies to facilitate the advancement of HPH in Canada including the need for national guidelines and a national steering group to oversee the guidelines' implementation (18). These recommendations led to the creation of a national, multidisciplinary working group on health promotion in healthcare facilities within HWC.

National HPH Guide

The national working group produced A Guide for Health Promotion in Healthcare Facilities (19). The guide was based on three principles: "(a) health promotion is not a separate and distinct service, (b) health promotion activities are joint ventures and (c) health promotion presents a challenge and an opportunity for healthcare facilities" (19). The 76-page guide provided hospitals with an overview of health promotion concepts, an explanation of the rationale for health promotion in hospitals, example activities taken from the 1986 case studies (as well as implementation advice) and a model for evaluating these activities. The guide was quite progressive compared to what was happening in Europe during the same period (4). However, it was the first and last product of the working group, which, after the guide's publication, never met again.

Accreditation and Health System Reform

While the impact of the guide is unclear, other national strategies were used in the 1990s in attempt to advance the fifth principle and HPH concepts. This included the introduction of a health promotion standard by the Canadian Council on Health Facilities Accreditation (now called Accreditation Canada) in 1995 (9). However, this standard was only used to accredit primary care providers (and later public health services). The fifth principle also appears to have been peripherally considered in various provincial health system reforms that occurred throughout the 1990s: "...it appears that generally the public health/health promotion voice is weak and the hospital and biomedical perspectives continue to dominate..." While most provincial/territorial plans on health reforms include statements in support of health promotion, the driving force continues to be cost reduction (20). While health system reforms across Canada certainly led to some HPH-related progress, there is consensus that significant reorientation of health services toward health promotion, as described by the fifth principle, did not occur (10;21-23).

Seven Oaks General Hospital's Wellness Institute

During the health reforms of the 1990s, a notable HPH milestone was that Winnipeg's Seven Oaks General Hospital (SOGH) opened a Wellness Institute. While SOGH certainly was not the only Canadian hospital engaged in health promotion activities (as demonstrated by the 1986 national survey), the SOGH Wellness Institute is worth profiling given its extensive adoption of the HPH concepts. In fact, since opening in 1996 the Institute has become Canada's leading certified medical fitness facility (24). Referred to as a "health-promotion facility," (25) the Wellness Institute offers extensive health promotion, wellness, fitness and recreation services to SOGH patients, staff and the community. This dedication to health promotion has led SOGH to receive numerous national best employer and health promotion awards (26) and it is the only Canadian hospital that has ever been recognized as fully compliant with the five International HPH Network standards (27). SOGH's adoption of health promotion practices is even more notable as it was done without the support of a regional HPH network.

HPH Networks

Another HPH milestone during the 1990s resulted from the action of a small group of Ontario hospital staff. In

1994, a social worker at Cambridge Memorial Hospital organized a conference about HPH for four hospitals in Waterloo Region. Over the next two years, a group of interested practitioners met to discuss HPH concepts, offer HPH workshops across southern Ontario and publish the Health Promotion Exchange newsletter (28;29).

This group called itself the Ontario Hospital Health Promotion Network (OHHPN), and their mission was "to stimulate and influence hospitals to undertake an active role in the promotion of health and wellbeing within both the hospital and the community, in addition to their responsibility for the provision of curative, rehabilitative and palliative services" (28). From 1996-2007, the OHHPN began to engage in various research, advocacy and outreach projects. In 2008, the network formally joined the International HPH Network as the Ontario Health Promoting Hospital & Health Services Network (29). This made them the second Canadian member of the IHPHN, as a new Montréal HPH Network had joined the International HPH Network three years prior (4).

Created in 2005, shortly after the integration of Québec's health and social service systems, the Montréal HPH Network worked to advance HPH concepts, including publishing the Guide for Integrating Health Promotion into Clinical Practice (30) as well as a comparison between the five International HPH Network standards and related frameworks (31). An important distinction between the Ontario and Montréal HPH networks, was that the Montréal network was situated within (and supported by) government. The Ontario network was maintained voluntarily by member hospitals, without direct support from government (32).

Current State

Since 2005, a number of initiatives have attempted to advance the HPH movement in Canada. This includes the Hospital Involvement in Community Action (HICA) project in Ontario (33), numerous studies and interventions to advance workplace wellness in Québec hospitals, as well as the use of population health and health inequities concepts to advance the HPH movement in various provinces (34-37). Worth noting is the novel HICA project that examined "how hospitals and community organizations worked together on community health issues" (33). After conducting case studies of four Ontario hospitals and surveys of those hospitals' community partners, the authors found 88 examples of hospital-community collaboration that ranged from addressing clinical issues to influencing upstream determinants of health. These results were translated into the Resource Guide to Hospital-Community Collaboration (33) for use by Ontario hospitals. Recently, the Montréal

and Ontario HPH networks have taken different paths. In 2012, the Montréal network transitioned into a provincial network (with 33 member hospitals) and has focused predominantly on the healthy workplace aspects of HPH (32). In contrast, the Ontario HPH Network has struggled to maintain momentum and has been on hiatus since 2011. However, this is largely due to core member hospitals (all from downtown Toronto) shifting their focus toward an equally worthy cause: reducing health inequities (34).

As of early 2014, the current state of the HPH movement in Canada is not a single milestone or national initiative, but rather many smaller projects happening across the country that aim to advance the fifth principle and HPH concepts. These projects often use population health concepts and indicators and/or health inequities concepts as strategies to influence hospital policy and practices. A notable example was the recent study of healthcare executives' conceptualization of "population health" in order to better integrate health promotion and health equity concepts into healthcare practices (36;37).

Discussion

This historical review aimed to describe key milestones in the Canadian HPH movement since the release of the Ottawa Charter nearly 30 years ago. The results support the claim by Hancock (10) and others that despite the abundance of initiatives, guidance documents, scholarly articles and model hospitals (such as SOGH), the lack of policy support for the fifth principle has limited any significant system reorientation. We suggest the reason for this is the same today as it was in 1986: As treatment costs and demands outpace hospital funding, Canadian hospitals have struggled to dedicate resources toward upstream activities for which they receive no compensation.

Canadian hospitals have not reoriented resources toward health promotion activities because they have not been incentivized or required to do so. The National Focus Group on Health Promotion in Health Care Facilities identified this issue in 1988 and it remains an issue today. Shortly after the release of the Ottawa Charter, Marc Lalonde (the Minister of National Health and Welfare from 1972-1979 and author of the famed Lalonde Report) reported that Canadian hospitals were ignoring the pressure to embrace a health-promoting role; reporting their attitude as "let somebody else do it; we already have too much to do" (38). We predict many Canadian hospitals would have a similar response if asked today.

Québec is the exception. With government support, Québec has achieved the largest and most active HPH network in Canada, as well as produced a significant amount of HPH-related research and guidance documents to support its member hospitals. It is hardly shocking that dedicated resources and government support facilitated such progress. Other Canadian provinces that wish to move beyond supportive rhetoric for HPH would be wise to follow the Québec model as the value of government and network support for HPH is supported by literature (39) and experiences of other jurisdictions. In the United States, for example, the Patient Protection and Affordable Care Act (2010) now requires all non-profit hospitals to demonstrate "community benefit" beyond being providers of medical treatment in order to remain exempt from certain taxes (40).

QUEBEC NETWORK OF HEALTH PROMOTING INSTITUTIONS

Analysis in Current Context

While progress outside of Québec has been sporadic, there are still reasons to be optimistic about increased health promotion in Canadian hospitals. An international comparison reveals that Canada is one of the largest members of the International HPH Network (though this is almost entirely due to the Québec network) and that some Canadian hospitals have made significant progress toward achieving at least one of the International HPH Network standards. There are various innovative approaches being explored (e.g., [37]) and hospitals, such as SOGH, that lead-by-example how to successfully implement HPH concepts. There are also many guidance documents available for Canadian hospitals to support the adoption of HPH concepts (19), hospital-community collaboration (33), and hospitals as healthy workplaces, for example. However, the decentralized nature of current HPH-related advances makes it difficult to determine exactly how much progress has been made toward health system reorientation (as set out in the Ottawa Charter). Our review suggests that commitment at the national level was strongest from 1986-1990, when the CHA and federal government studied, promoted and developed guidance documents to support health promotion in Canadian hospitals. In fact, there has been no national initiative to advance HPH since. Conversely, there may be more HPH-related work occurring in Canada now that ever before. However, this is very difficult to tell as it occurs-sporadically and is rarely affiliated with an HPH network, outside Québec. Although 44 Canadian hospitals are members of the International HPH Network, this is small considering Canada has ~800-1200 hospitals (depending on the definition). The creation of HPH networks in the other eight provinces and three territories (or perhaps a national network) would likely support more HPH activity and knowledge-exchange.

The results of this review also suggest that the hospitals and current initiatives that have been most successful at advancing HPH in Canada have capitalized on (a) how HPH (and related concepts) can support the prevention of chronic diseases and reduction of health inequities, and (b) how progress in these areas will reduce demand for (and cost of) healthcare services (and lost productivity). Although these are longstanding attributes of HPH, emphasizing these health and economic benefits is a wise strategy. Preventing chronic diseases (e.g., diabetes, cancers, chronic respiratory disease, cardiovascular disease) is arguably more important now than ever (as they have outpaced communicable diseases as the leading cause of death and disability in Canada, similar to most developed countries). The economic impacts of chronic diseases on the health system often dominate health policy discussion in Canada (22). Perhaps the lack of policy support for HPH in Canada is because too little has been done to demonstrate it potential for cost-savings. Future cost-benefit research of the workplace wellness interventions in Québec hospitals or the Wellness Institute at SOGH, for example, could provide valuable information for advancing HPH across the rest of Canada.

Conclusion

Canada was once regarded as a leader in advancing health promotion concepts and practices. This included significant national attention on the reorientation of Canadian hospitals toward health promotion in the late 1980s. However, this vision was never realized. This review found that although various strategies have been explored over the past 30 years, a lack of policy support has impeded progress in this area. Without incentives or requirements to advance HPH, Canadian hospitals justifiably focus

their energy on treatment and illness. This paper supports previous claims that despite consistent political rhetoric on the importance of health promotion, there is still a need for significant reorientation of health services across Canada. Perhaps the desire to reduce healthcare costs will support the advancement of HPH. However, at this point, HPH in Canada has an uncertain future. We hope this article encourages Canadian health researchers, administrators and policymakers to explore HPH concepts as a strategy for achieving the fifth principle and elevating Canada to its former status as an international leader in the field of health promotion.

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News from the International HPH Network

The 22nd International HPH Conference attracts 740 participants

The 22nd international HPH Conference was held in Barcelona from April 23-25, 2014.

About the INT. HPH CONFERENCE

The annual International Conference on Health Promoting Hospitals and Health Services is the main event of the International HPH Network's calendar.

Each year health professionals meet to exchange knowledge and experience on health promotion.

Learn more about the Internatinal HPH Conference at: www.hphconferences.org

The conference program focused on developing the organizational culture of healthcare organisations towards better embracing health promotion.

Around 740 people from all over the world participated at the conference. Despite the European conference venue, around 50% of delegates came from Asian, with an specially high attendance from Taiwan. Remaining 43% of participants were from Europe, while 7% came from the rest of the world.

The high attendance is a success for the International HPH Network and so was the level of the scientific presentations and discussions at the conference.

An extended report on the conference was published in the HPH Newsletter #67 http://www.hph-hc.cc/fileadmin/user_upload/HPH_Newsletter/hph_newsletter_67.pdf, and virtual proceedings of the conference are available online at http://www.hphconferences.org/barcelona2014/proceedings.html

We welcome the new HPH Governance Board

At the 20th Meeting of HPH General Assembly on April 23, 2014 in Barcelona, a new HPH Governance Board was elected by the General Assembly.

Until 2016 the HPH Governance Board consist of the following National/Regional HPH Coordinators:

- Chair, Raffaele Zorrati (Italy)
- Vice-chair, Ida R K Bukholm (Norway)
- Bożena Walewska-Zielecka (Poland)
- Jerneja Farkas-Lainscak (Slovenia)
- Suzan Frampton (Connecticut, USA)
- Manel Santiñà (Catalonia, Spain)

Besides the elected National/ Reginal HPH Coordinators, the GB includes the following observers:

- Shu-Ti Chiou (Taiwan)
- Dr. Elke Jakubowski, Senior Adviser, WHO Europe
- Jürgen Pelikan, CEO, HPH Conference Secretariat, WHO CC Vienna
- Hanne Tønnesen, CEO, International HPH Secretariat, WHO CC Copenhagen

Call for papers for the 23rd International HPH Conference

In 2015, the International HPH conference will take place on June 10-12 in Oslo, Norway. The conference has the title: *Person-oriented health promotion in a rapidly changing world: Co-production – continuity – new media & technologies.*

The Scientific Committee invites especially abstracts on one of the main topics of the conference:

- The somato-psycho-social health needs of people
- Co-producing health – techniques and examples
- Health promotion in continuous and integrated care
- New media & technologies to address health and health promotion

Additionally, you can also choose from a wider range of topics, see full list at http://www.hphconferences.org/oslo2015/scope-purpose/call-for-papers.html

Deadline for abstract submission to the 23rd International HPH Conference is December 20, 2014.

Photo: VisitOSLO Matjaz Intihar

European WHO members met at RC64

The 64th session of the WHO Regional Committee for Europe took place on 15-18 September 2014 in Copenhagen, Denmark. Delegations from the 53 Member States in the WHO European Region met to discuss and agree on issues relating to public health in the Region, as well as the management and organization of WHO/Europe.

Among the official partner NGOs, the international HPH Network took part of the 64th session and delivered a written statement about the work and commitment of the HPH Network and the WHO-HPH collaboration under the official Memorandum of Understanding (re-signed in 2014).

The statement covered three examples on Health Promoting initiatives:

- Implementing Hospital Health Promotion in the Czech Republic – a WHO HPH Research Project on Implementation
- Smoke-free operations in Sweden – an initiative by the Swedish HPH Network and orthopaedic surgeons across Sweden
- Cross-sectional collaboration in Denmark to assess and improve quality of smoking cessation intervention

You can browse the content and decisions of the RC 64 at the following link: http://www.euro.who.int/en/about-us/governance/regional-committee-for-europe/64th-session

News from SEEHN

SEEHN Ministerial Meeting under Macedonian Presidency Planned for November 2014

About SEEHN

The South-eastern European Health Network (SEEHN) is a governmental sub-regional cooperation established in 2001. SEEHN consists of ten countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, State of Israel, Republic of Macedonia, Republic of Moldova, Montenegro, Romania, and Republic of Serbia.

WHO, Regional Office for Europe is one of SEEHN's founders and has supported the SEEHN from its establishment.

For more information: www.seehn.org

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The Republic of Macedonia is the head of the presidency for SEEHN in the term July-December 2014. A major cornerstone is on the agenda during the Presidency as a meeting with all the SEEHN Ministers is to be held mid November in Skopje. Thus, Mr Nikola Todorov, Minister of Health of the Republic of Macedonia, met with the Ambassadors of the SEEHN Member States in September in order to invite the Ministers to the November meeting, informing on and stressing the role of the SEEHN as a health diplomacy tool and inviting the ambassadors to take active part in its promotion.

Furthermore, the SEEHN President met with WHO Regional Director, Dr Zsuzsanna Jakab in September 2014 during the 64th Session of the WHO Regional Committee for Europe. Mr. Todorov informed Dr. Jakab about the current developments, achievements and challenges of the SEEHN as these have to be reflected upon during the meeting in November and form the basis for ministerial decisions, thus providing a strong and timely political guidance for the future SEEHN developments.

Mr. Todorov also underlined the importance of the presence of WHO European Regional Directors at the Ministerial meeting in order to ensure both WHO support and technical guidance to the SEEHN. This is very important, especially in terms of encouraging the SEEHN member states to be active in the implementation of Health 2020 and applying the Whole-of-Government approach to health reforms.

The Macedonian Presidency has focussed its action on three main topics, which are of immediate relevance to the SEEHN, and which will be the issues to discuss at the Ministerial meeting: 1) Crisis management and coordination aid, in the light of the recent flooding in the sub-region; 2) An education and training initiative aimed at the SEE area in order to become a region of free professional exchange and movement of health professionals. This will contribute to the networking in South East Europe and to the mobility of the human resources in health (HRH); and 3) Health reforms in the SEEHN member states, implementing the Health 2020 Policy framework, with a focus on applying the Whole-of-Government approach.
The Macedonian Presidency of the SEEHN follows that of Romania, during which the main focus was the implementation of the SEE 2020 Strategy.

Launching of the SEEHN Official Website

The South-eastern European Health Network will launch its website officially during the Ministerial meeting and the adjacent 34th SEEHN Plenary Meeting to be held in November in Skopje in the Republic of Macedonia.

The development of the SEEHN website is part of the new SEEHN Communication and Visibility Strategy that envisages improvement of existing and opening up new communication channels between the policy and decision makers, professionals and academia, the donor community and practitioners, as well as civil society and the general public. The communication efforts have so far yielded production of the first issue of the renewed SEEHN News-

letter, a promotional video, the website with platforms for the public and an intranet. Other products are also in the pipeline to improve the visibility and recognisability of the Network beyond the scope of the health sector.

The SEEHN website – please refer to www.seehn.org - will provide all relevant information, starting from SEEHN's structure and organization to the areas of the SEEHN work, partnerships and on-going activities and initiatives. The SEEHN website will serve as an archive of numerous activities undertaken and implemented since the establishment of SEEHN as well as a regularly updated information source about the most recent and upcoming events.

Directly resulting from the long-lasting SEEHN cooperation processes, the website will thus contribute to and facilitate further development of partnerships and institution networks. This is a clear commitment assumed by SEEHN Member States and of immense importance for the implementation of its vision of improved public health and wellbeing of all, through whole-of-government and whole-of-society approaches.

Scan the QR-kode to visit the SEEHN website: www.seehn.org

Romania organises Taiex Workshop on blood and donor safety

A workshop on increasing blood availability and providing the highest donor and patient safety in transfusion therapy in emergency circumstances was organized in Bucharest, Romania on 7–9 July 2014 by the Technical Assistance Information Exchange instrument of the European Commission (TAIEX). The workshop was organized in cooperation with the Ministry of Health, the Republic of Serbia on behalf of SEEHN and the Regional Health Development Centers (RHDCs) of SEEHN in Romania and Serbia.

The workshop promoted the implementation of the Acquis Communautaire according to the European Union' quality and safety standards for human blood and blood components. The quality and safety standards cover the collection, testing, processing, storage and distribution of human blood and blood components among the health authorities, blood centre specialists and hospital clinicians in Member States of the South-eastern Europe Health Network (SEEHN).

The event provided the continuation of a capacity-building action which started in 2005 as the SEE Blood Safety Project. The project is based on conclusions, recommendations and further developements in the field of blood availability according to best practice, the EC Directive 2002/98/EC of the European Parliament and the Council of 27 January 2003. The latter is setting standards of quality and safety for collecting, testing, processing, storing and distributing human blood and blood components and amending Directive 2001/83/EC.

Bucharest, Romania July 2014

The main outcome of the workshop was the recognition of the importance of immediate access to sufficient blood supply living up to the European Union' quality and safety standards for human blood and blood components in case of major catastrophic emergencies. In emergency incidents a close and structured cooperation should be established between the National Blood Transfusion Centers within the framework of the SEEHN and the EU Member States. At the same time, a continuous assessment of the local status should be carried out in order to identify strategic gaps for actions. The EC Rapid Alert Platform (RAP) is planned for introduction and implementation by the end of 2016 in the region.