Once again the academic year is over and the 10th class of students has graduated. This year 78 students in 7 different programs graduated, including 4 graduates on the deans' honors list and 12 magna cum laude graduates.

It was a year full of teaching activities, research, conferences and workshops. The ISF funded workshop hosted 12 researchers from around the world as well as Israeli researchers and practitioners who deal with the issue of inequalities in health promoting environments in the context of physical activity and diet. The workshop was held at the Haifa University in June. Creating a health promoting environment that enables physical activity and consumption of healthy food options is an important strategy for promoting health and reducing health disparities. Creating a health promoting environment also allows populations with few material resources to foster their health even without investing these few resources. For example, hiking trails in residential areas for encouragement of physical activity, sports fields and sports facilities make physical activity more frequent, this eventually becoming a social norm. Public policy that includes the designation and implementation of health promotion environments can reduce social disparities. During the workshop a study conducted at the School of Public Health was presented. The study revealed a strong correlation between socioeconomic status of towns in Israel and prevalence of adolescent overweight and obesity. In the poorest towns (clusters 1-4) the rate of overweight and obese teenagers was found to be higher than in the richer towns, but in the towns that belong to clusters 5 to 10 (more established towns) the proportion of overweight and obese teenagers was found to be lower in the richer towns. Overweight and obesity rates also depend on the level of peripherality, while in Jewish
peripheral towns, overweight and obesity rates are higher, higher overweight and obesity rates are found in the Arab towns closely located to large metropolis areas. Other interesting studies which were conducted both in Israel and all over the world were presented at the workshop. The abstracts of all the studies are presented in the abstract book, which can be obtained in the offices of the School of Public Health or by e-mail.
We held two conferences this year as part of the Health Promotion Program and I am pleased to tell you about them. The first conference, on February 25, 2015, was about “Partnerships in Health Promotion.” The conference was attended by dozens of participants who filled the auditorium in the Eshkol Tower Observation Gallery. Most of the audience consisted of health promoters from the community and hospitals, in addition to members of different health professions and students from the School of Public Health.

We chose the subject of partnerships this year because it cuts across fields of interest and is relevant to anyone dealing with health promotion. Partnerships are at the heart of the success of intervention programs while also raising professional and sometimes ethical challenges and dilemmas. The conference had four parts: the first was theoretical, dealing with the role and use of partnerships in health promotion programs. The second part presented case studies of inter- and intra-organizational collaborations in Israel and abroad. The third part was about challenges and dilemmas that arose in the collaborations in EfshariBari (“Health is Possible”), the Israel National Program for Active and Healthy Living. The fourth part was about collaborations between multidisciplinary teams on the therapeutic level.

The conference began with a theoretical lecture by Prof. Craig Lefebvre, who wrote and recorded it especially for the conference. Prof. Craig Lefebvre is one of the world's leading researchers on social marketing. He is a Research Professor at the George Washington University School of Public Health and Health Services and the University of South Florida College of Public Health. His current research focuses on applying design thinking, social media and mobile technologies in social marketing and public health programs. Professor Lefebvre presented the principles on which most collaborations are based, which address the following subjects: The social and cultural context of the collaboration, the careful planning and expectations while creating the partnership, research and mapping of all the different groups among the partners, the ups and downs of the relationship between the partners that need to be taken into account and contained, developing inter- and intra-organizational dialogue and evaluation in the course of designing a health promotion plan, and preconception of the expected outcomes and products of the partnerships. Lefebvre argues that collaborations should be treated as social systems that need to be studied and designed throughout the entire process. The success of maintaining collaborations stems to a large extent from coordinating the partners’ expectations, their mutual trust and the commitments they each undertake.

Dr. Efrat Elron from SID Israel and a Research Associate at the Center for Global Workforce Strategy at Simon Fraser University, brought examples of collaborations from the military and diplomatic arenas, which can be compared to the field of healthcare, and emphasized the importance of indirect communication channels in maintaining partnerships.
In the following session I headed a panel of experts about EfshariBari (“Health is Possible”), the Israel National Program for Active and Healthy Living, which is a challenging test case of collaboration on the national and inter-ministerial levels in Israel. The panel included Mr. Rami Hasman, the Director of Strategy for EfshariBari, Ruth Weinstein, Director of the Department of Health Promotion at the Ministry of Health, Irit Livneh, Head of the Ministry of Education’s Health Unit, and Dr. Irit Rand, Head of Strategic Planning and Research at the Municipality of Haifa. At the beginning of the panel Ms. Weinstein presented the main elements of the EfshariBari program. The panel provided a fascinating look “behind the scenes” of collaborations between government ministries. It was interesting to hear about the doubts, dilemmas, disputes and mishaps of the representatives of the different ministries, which were openly addressed in the panel. According to the feedback of many members of the audience, the exposure of the difficulties and obstacles was an illuminating experience because academic conferences often choose to focus on successes.

The last panel of the conference was about collaboration from the therapeutic angle and looked at the challenges and opportunities of collaboration in multidisciplinary teams. At the beginning of the session, Dr. Ronit Endevelt, Director of the Nutrition Department at the Ministry of Health and a faculty member at the School of Public Health, gave an interesting lecture about common myths about team work along with its challenges and opportunities. Dr. Endevelt said the need for teamwork is growing for several reasons, including the reality of the prevalence of complex chronic illnesses, an increase in specialization in the medical and health professions, and the inability of a single profession to address all of the patient’s complex needs. Dr. Yossi Kushnir, Head of the Family Medicine Department in Maccabi Healthcare Services, Sharon-North District, presented two interesting simulations with different professionals. In these simulations the conference participants were exposed to the “behind the scenes” of a multidisciplinary team including Ms. Eliana Perach (nursing clinic, Carmel branch), Mr. Noam Evron (diabetes nurse, Carmel branch), Ms. Yael Duner (social worker, Carmel branch), Ruth Freund (clinical pharmacist, Northern District), and Elinor Friedman (clinical dietitian), all from Maccabi Healthcare Services.

The second conference was of graduates of the Health Promotion Program in honor of its tenth anniversary, and took place on March 12, 2015. Dozens of graduates of the program's different classes filled the auditorium in the Rabin Observatory. The conference was a social-professional gathering. Possibly even more excited than the graduates were the faculty members of the Health Promotion Program. The first speaker was Prof. Orna Baron-Epel, Head of the School of Public Health and the founder and life and soul of the Health Promotion Program.

The conference program was created with a steering committee of graduates of the Health Promotion Program: Dr. Shiran Bord, Dr. Carmit Satran, Dr. Riki Tesler, Ms. Elinor Tiram, Ms. Ahlam Khamis and Ms. Chen Zaretsky.

The conference included lectures by graduates who shared with their colleagues the journey they made from being students in the program to the reality on the ground. Ms. Vicky Cohen gave a lecture about promoting adolescent health in the community. Vicky described a unique project for adolescents in South Tel Aviv neighborhoods (Hatikva, Ezra and Haargazim), that customizes programs for each adolescent according to their needs. Dr. Samira Ovadia lectured on “From Theory to Practice: Health Promotion Studies as a Catalyst for Professional
Success." She shared her experiences as the Director of the Department of Health Promotion in the Ministry of Health’s District Office and the application of the theoretical and practical tools she acquired as a student in the Health Promotion Program. Ms. Chen Zaretsky described her work as a health promoter as the Director of the EfshariBari Program in the Jezreel Valley, and how both her superiors and the population underwent a radical change of heart about the program's importance. Chen described the cold welcome she received until one day everything turned around and there was enthusiasm and a tremendous desire to continue the program in the region.

Mr. Golan Benisti, head of combat fitness in the IDF, told of the revolution he was beginning to achieve in positioning health promotion in the army, with examples of the personal stories of people who dramatically changed their lifestyles.

Dr. Riki Tesler lectured about the Research Center for the Evaluation of Health Promotion Intervention Programs headed by Prof. Orna Baron-Epel in the School of Public Health. It is an interdisciplinary center that emphasizes the importance of evaluation and research in designing diverse health promotion programs for different populations. The center includes numerous research fellows from different fields who conduct health promotion studies on a range of subjects.

Besides the graduates' lectures, the conference was also an exciting social reunion in which we ate, talked, had our pictures taken, moved to rhythmic music and played games under Dr. Riki Tesler’s direction.

On this opportunity I want to thank all of the conference participants and organizers, especially Ms. Gila Filosof- Asas.
See you all in the following conferences!
Poor cognitive performance and brain MRI measures in young adults with diabetes – Dr. Galit Weinstein

Individuals with type 2 diabetes are known to be at higher risk of cognitive impairment and dementia in late-life compared to healthy persons. Even when diabetes is not clinically diagnosed, hyperglycemia and insulin resistance are related to poorer cognitive performance and worse brain measures, particularly atrophy of the hippocampus. Nevertheless, early implications of impaired glucose metabolism on cognitive function and structural brain aging in young adults are scarce. Moreover, many investigators believe, that substantial exposure to diabetes is necessary in order to cause impairment.

In a research I have conducted with the neuroepidemiology group at the Framingham study, we have explored the relationships of diabetes, hyperglycemia and insulin resistance with cognitive performance and brain MRI measures among young adults. The study included 2,126 participants with cognitive evaluations, 1,597 of them also underwent brain MRI examination. This is one of the first studies conducted among the third generation of the Framingham study. The mean age at baseline was around 40 years.

We have found that young adults with diabetes perform worse than healthy individuals on cognitive tasks, specifically in the memory, visual perception and attention domains. Furthermore, their total cerebral brain volume was smaller, indicating atrophy of the brain tissue. Using advanced MRI technologies and statistical methods we were able to demonstrate the specific brain regions which are affected by diabetes or high glucose levels. Structural brain changes linked to diabetes and high glucose levels found in our study are characteristics of Alzheimer’s disease.

Changes in brain structure occur gradually with age, but it seems that changes due to diabetes concentrate in specific brain regions such as the corpus callosum and the temporal/occipital lobes. Furthermore, the relationship between diabetes and poorer attention performance (TrA) was mediated through smaller total cerebral brain, frontal lobe and occipital gray volumes. The association of diabetes with deficit in visual memory was mediated through the same brain measures and also by hippocampal atrophy, the latter is known to manifest in the early stages of Alzheimer’s disease. Finally, we were able to show that the brain of a person with diabetes is about 20 years “old” compared to a person at the same age free of diabetes.

As expected, diabetes was more strongly related to cognitive and brain MRI measures compared to fasting glucose levels, since it’s a more extreme phenotype. Insulin resistance was not related to any outcome in our study, perhaps because of the relatively young ages of the participants.

In summary, these results reaffirm the notion that like the heart and the kidney, the brain is an important end-organ of vascular disease. Early and intense treatment of diabetes and glycemic control may prevent brain injury and result in reducing the risk of late-life Alzheimer’s disease.
The recent earthquake in Nepal raised the public awareness regarding the danger of this natural phenomenon. In Israel too, a strong earthquake is inevitable and without appropriate preparedness it is expected to have a major physical, social and economic impact for a long period. According to a government estimation, 810,000 residential units do not meet the Building Code for earthquakes in buildings of three stories and above. The Israeli government is preparing for an estimation of 7,000 casualties and hundreds of thousands ruined apartments in the scenario of a strong earthquake.

Strengthening buildings is a complex policy problem, since it is multi-disciplinary, there are market failures for a civil solution without government intervention, it relates to several government authority systems, and there are complex synergies with issues such as missile protection. Empirical experience in the world shows that government interference is crucial for stimulating strengthening of private properties. The Government of Israel has adopted only one policy measure: National Outline Plan 38. This Plan has two critical deficiencies: it is not relevant for areas where land value is low, including those closest to geological rifts, and even where land value is high, there are many barriers for implementation. Moreover, this Plan increases inequalities as only affluent populations enjoy the incentives.

The aim of this research is developing policy packages for solving the complex problem of strengthening buildings in the periphery. Public policy often fails to solve complex problems, due to the limited effectiveness of single policy instruments, or a few instruments without examining the connections between them, their effectiveness and acceptability. The approach of policy packages was developed to provide a multi-dimensional, social and political acceptable solution for complex problems. A policy package is a combination of synergetic policy instruments, which makes the package more effective and addresses market failures.

The research included gaining knowledge of the Israeli characteristics of the issue, an international review of relevant policy, and three expert workshops: the first workshop, with 34 experts, identified and listed all the relevant policy instruments, the second evaluated their characteristics (effectiveness, cost, complexity, implementation time etc.), and the connections between them (e.g. instruments that are required prior to implementing other instruments). Then, three policy packages were formulated, depending on who is the responsible agency for building strengthening: government, local authority or homeowners. Finally, the third workshop estimated the political acceptability, and interviews were conducted with policy-makers. The government package is a combination of policy instruments that express government efforts for strengthening.
buildings in high risk. A government administration is responsible to work with homeowners. In the **local authorities package** the responsibility for promotion and implementation is within the scope of the local authorities, through local economic corporations that will establish neighborhood administrations including promotion, public participation and implementation. In the **civil package**, homeowners are obliged to strengthen buildings above a specified risk level during a specified number of years, and the package includes incentives such as low interest mortgage.

In conclusion, the research presents three multidimensional packages for strengthening private properties. Each package is a coherent and synergetic combination of instruments. Due to the extended time elapsed since the establishment of a government committee on the issue in 2006, we recommend to first implement the government package for high-risk buildings. This package will be implemented by the Ministry of Construction and Housing, together with the Ministry of Defense, due to the combination with protecting against missiles. Lack of action at this stage is a government failure that damages the national resilience, and should be solved before a disaster happens.

The research was conducted in collaboration Prof. Eran Feitelson (CO-PI) and Mr. Ehud Segal, the Hebrew University, for the inter-ministerial committee for preparing for earthquakes, funded by the Ministry of Science.
Invasive breast cancer is a leading cause of morbidity and mortality and the most common malignancy among Israeli women, Jewish and Arab, with an age-standardized rate of 95.4 and 60.44 per 100,000, respectively, in 2012. The role of smoking, active and passive, in breast cancer etiology is controversial. Arab women in Israel who have very low rates of active smoking (appr. 6%) are highly exposed to passive smoking due to the high active smoking rates of Arab men (40%): fathers, brothers, husbands, employers, employees, colleagues etc. and therefore may present a unique population for exploring the association between passive smoking and breast cancer. Furthermore, due to their unique cultural and social background, Arab women are not likely to be able to avoid being exposed to passive smoking.

Previous epidemiologic work implicates that certain variants of the enzyme N-Acetyltransferase 2 (NAT2), which is involved in the metabolism of aromatic amines, a major class of tobacco carcinogens, may be involved in smoking-related cancer etiology. NAT2 genotype may modify the risk for cancer based on the ability to activate or detoxify heterocyclic and aromatic amines. A recently published meta-analysis summarizes the potential effect of the NAT2 acetylation phenotype (slow or fast) on breast cancer risk and discusses evidence for an interaction of NAT2 with exposure to smoking.

In order to evaluate the relationship between passive smoking and breast cancer risk by N-Acetyltransferase 2 (NAT2) status among Arab Israeli women residing in Northern Israel, we used a population-based case-control study design. The study population consisted of Arab Israeli women, age 30-70 years, residing in Northern Israel (where 60% of the Israeli Arab population reside). The cases included 137 prevalent primary breast cancer patients, diagnosed in two medical centers in Northern Israel. The controls consist of 274 population–based Israeli Arab women, selected at random from the general population in the residence area of the cases.

The main study hypotheses were: (1) Passive smoking is associated with increased risk for breast cancer in Israeli Arab women; (2) The association between passive smoking and breast cancer in Israeli Arab women has a dose–response character; (3) Age at exposure to passive smoking is a modifier of the association between passive smoking and breast cancer risk in Israeli Arab women; (4) NAT2 genotyping acts as a modifier in the association between passive smoking and breast cancer: slow acetylators exposed to passive smoking are at a higher risk for breast cancer compared to fast acetylators.
Each participant was interviewed using a detailed questionnaire tracing demographic details, lifestyle and established risk factors for breast cancer as well as detailed information on exposure to passive smoking. Each participant provided oral mucosal DNA using buccal swab for genetic analyses of NAT genotype. Genotyping for NAT2 was carried out in Safed hospital laboratory, NAT2 genotypes were translated into a dichotomous variable of slow or fast acetylators using a combination of SNPS found in the NAT2 gene positions. Validation of the current passive smoking home exposure was carried out through passive samplers, left in the house for 14 days and is known to be a sensitive measure of vapor phase nicotine.

Main results: Passive smoking was associated with increased risk for breast cancer in Israeli Arab women, after adjustment for potential confounding factors (OR=2.14, 95%: CI=1.21-3.78). The association between passive smoking and breast cancer in Israeli Arab women had a dose – response character: exposure for longer duration passive smoking showed statistically significant increase in risk for breast cancer. After adjustment for potential confounding factors, women who had a high level of exposure to passive smoking seemed to be at the greatest risk: being exposed at all time periods (age: 0-12, 13-18 and currently) was associated with an OR = 3.6 (95% CI: 7.21-1.85) compared with those who had never been exposed to passive smoking. Compared with never exposure to passive smoking, current passive smokers and exposure to passive smoking at age 13-18 had odds ratios of 1.73 (95% C: 11.05-2.86) for breast cancer. There was no significant difference in risk for breast cancer development among women with rapid and slow acetylators, with adjusted OR=1.04 (95% CI: 0.65-1.65).

These results suggest that passive smoking may be associated with increased breast cancer risk. In this study population no association between NAT2 polymorphism and breast cancer susceptibility was found. Additional studies are needed in order to support these findings.
According to the study’s findings, 70% of young adults consume alcohol at least once a week, 45% of which consume more than 3 portions of alcohol during a single event. In terms of Alcohol Impaired Driving, different results were obtained depending on the measurement technique of AID. However, it is safe to say that the rate of AID among young adults is between 9%-30%, where the lower end represents young adults who were found to have higher alcohol concentrations than maximum allowed by law for AID in exhale tests, and had stated they intent on driving once they leave the pub; and the higher end represents the rate of self-reported AID often after having consumed 3-4 portions of alcohol, in the survey questionnaire.

The only variable found to be consistently predictive of AID, in all measuring techniques used for AID evaluation, was the attitude of the subject in regard to such behavior. As expected, young adults believing alcohol does not have an effect on their driving skills, and that the risk in such behavior is low, are more likely to drive under the influence of alcohol. Another key factor found to be related to AID in most of the tested models is the subjects’ subjective norms. Young adults believing their social environment approves and endorses AID, are more likely to show such behavior than others. The availability of public transportation within the immediate vicinity of the pub was found to be a protecting factor against AID. This is a key finding, as it is applicative in creating an AID preventing environment.

Exploring the factors related to alcohol-impaired driving among young adults in Israel by applying the Behavioral-Ecological Model – Dr. Shiran Bord

It is well known that Alcohol Impaired Driving (AID) is a leading risk factor for Motor Vehicle Accidents. The law regarding AID in Israel, similarly to EU countries, states that a driver is considered impaired if the alcohol concentration found in his blood is above 50 mg per 100 ml blood, or 240 microgram per 1 Liter exhaled air (0.05%).

The current study aim was to characterize the factors contributing to AID among young adults ages 19-35 in Israel by using Behavioral-Ecological Model (BEM). According to the BEM individual’s behavior is influenced by factors of four levels: The individual level, the local level, the community level and the socio-cultural level. For this purpose, a mixed methods research was designed, including qualitative and quantities research methods.

The data collection included eight focus groups, seven in-depth interviews, forty semi-structured interviews with pub owners and twenty-six observations on pubs’ physical environment. In addition, data were collected from 1079 pub patrons upon their exit from 31 pubs in 13 cities in Israel, and from 833 students at nine universities and community colleges in Israel.
The findings of the study among pub owners show that pub owners do not assume responsibility for AID among their clients. Furthermore, they even testify that as far as they’re concerned, a pub is a place of business, and that their job and the job of their staff is to sell as much alcohol as possible. Nevertheless, and despite these findings, a small number of pub owners testified to policies upheld in their pubs, intended to prevent AID.

In conclusion, the prevention of AID demands multi-system intervention programs, acting on several levels. Based on the findings of this study, such programs must focus on altering young adults’ attitudes towards AID, especially on raising the perception of risk involving such behavior. Additionally, it is imperative to transform the recreational surroundings to more supportive ones for “making the right choice”, by making public transportation accessible and convenient as possible.
Publications at the School of Public Health - 2015

Prof. Orna Baron-Epel

Publications:


Active Grants:

Baron-Epel, O., Endevelt, R., Hatib, M. & Harel-Fish, Y. Educating for a healthy lifestyle in schools. Funded by The Ministry of Education.

Baron-Epel, O., Plaute, P., & Endevelt, R. Inequalities in health promoting environments: physical activity and diet. Funded by ISF -Israel Science Foundation workshop.

Baron-Epel, O., & Rishpon, S. Barriers and enhancing factors effecting decisions of parents to vaccinate their children in Tel Aviv and in district of Haifa. Funded by The National Institute for Health Policy.

Baron-Epel, O., Tesler, R., & Bord, S. Evaluation of Reach out and Read- reading for infants. Funded by Maccabi Healthcare Services.


Baron-Epel, O., Zur, S., & Elias, W. Participatory research and intervention to reduce road accidents in Arab towns. Funded by Ran Naor Foundation.
Dr. Jonathan Dubnov

Publications:


Dr. Ronit Endevelt

Publications:


Active Grants:

Baron-Epel, O., **Endevelt, R.,** Hatib, M, & Harel-Fish, Y. Educating for a healthy lifestyle in schools. Funded by The Ministry of Education.

Baron-Epel, O., Plaute, P., & **Endevelt, R.** Inequalities in health promoting environments: physical activity and diet. Funded by ISF -Israel Science Foundation workshop.

Gal, I., & **Endevelt, R.** Mathematic literacy in diabetes patients. Funded by Maccabi Health Medical services.
Dr. Anat Gesser-Edelsburg

Publications:


Active Grants:


Prof. Manfred Green

Publications:


Active Grants:

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Prof. Raphael Carel

Publications:

Active Grants:
Carel, RS., & Portnov, B. Air pollution effect on the population health in the Bay area. Funded by Haifa District Municipal Association for Environmental Protection.
Dr. Lital Keinan-Boker

Publications:


Prof. Yael Latzer

Publications:


Dr. Maya Negev

Publications:


Active Grants:

Negev, M., & Davidovitch, N. Health Aspects in the National Ecosystem Services Assessment. Funded by HaMaarag, under the auspices of the Israeli Academy of Sciences.
Dr. Liora Ore

**Publications:**


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Dr. Maya Peled-Raz

**Publications:**


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Prof. Shmuel Rishpon

**Active Grants:**

Baron-Epel, O., & **Rishpon, S.** Barriers and enhancing factors effecting decisions of parents to vaccinate their children in Tel Aviv and in district of Haifa. Funded by The National Institute for Health Policy.
Dr. Sharon Sznitman

Publications:


Active Grants:

Sznitman, S., Oshry, A., & Bord, S. Examining individual differences in drinking motives and drinking patterns among Arab and Jewish young adults in Israel. Funded by Pfizer Public Health Policy Forum.

Sznitman, S., & Vulfsons, S. A Cross Sectional study of Factors Influencing Physicians’ Intention to Recommend Medical Cannabis (MC) to Patients in Israel. Funded by The Israeli National Institute for Health Policy Research.


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Dr. Galit Weinstein

Publications:


Dr. Shira Zelber-Sagi

Publications:

