A Message from the Head of the School of Public Health – Prof. Orna Baron-Epel

Upon starting my new position, I would like to briefly introduce my perspective of public health that is very much derived from the health promotion discipline, which is my subject of interest. Public health is a key factor in our lives nowadays, even though we treat it as obvious. The clean water we drink, the vaccines we are immunized with, the laws against smoking in public places, etc. - are all products of activities that are in the public health domain. All these have brought our society to have one of the highest life expectancies and one of the lowest infant and maternal mortality rates in the world. However, we must not rest on our laurels, much more work is needed; only activities at all levels of the community will reduce the gaps between different population groups and bring about a continued increase in the quality of life and life expectancy. These activities must be carried out in full cooperation between the various components that influence public life. It is obvious that the public health system and medical services cannot handle all the problems on their own. For example, the education system and the environmental and economic systems must be part of the interventions to enhance health in order to achieve the best results in our community.

The Socio-Ecological Model clearly displays the various levels of society for which different activities are needed in order to improve the health of the individual, starting from the individual's personal level up to the level of society as a whole. The model is based on the idea that the interaction between the different levels ultimately affects the health of the individual. Simultaneous operation of all systems, at all levels, can improve health indices of the society at large and reduce health disparities, that exist between different population groups.
Socio-Ecological Model in Public Health – Social Levels of Health Affection

First Year Students Number at the School of Public Health, 2006-2014

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The School of Public Health at the University of Haifa, was established in 2003 under the leadership of Prof. Shai Linn who led it to remarkable achievements. Between 2008 and 2014 I had the privilege to manage the school. During these years, our school continued to grow with more than 500 master's graduates. We have also established a doctoral program and so far 11 doctoral students have received their degrees from our school. We recruited new faculty members and we have developed research at both international and local levels. Our school is one of the leading institutions of training professionals for senior positions in the health system. During the last year, there were about 120 new students in the master's program and five doctoral students.

During my tenure, I benefited from cooperation from all faculty members and the university administration. When giving feedback, our students emphasize how rich and interesting the program is.

Beyond the ongoing studies, scientific conferences were held annually, with hundreds of participants, and positive feedback was received. We do our best to promote health equality and to support our students. The Pfizer Foundation, which was established a few years ago in our school, allows us to give grants to support students’ research and to fund scientific conferences.

Regarding the international aspects, we've progressed as well: during the past three years we have held annual international summer programs in the field of global public health, in partnership with Athens University at Georgia, United States. The latest session was attended by 21 students, 15 of them from the United States, and we continue to grow: in 2015, we are going to open an international English MPH Program in Administration Health Systems and Global Health Leadership. In addition, we have signed cooperation agreements with three universities in the US, and we are members of the European Public Health Association.

I am grateful for the privilege to be involved in the school and its development, and I'm sure that Prof. Orna Baron-Epel will lead the school forward.

I am always with you and proud of you!
As of 2012, a summer program takes place at Haifa University jointly with the University of Georgia in the United States. The aim of this program is to identify and develop a future generation of people who will lead health systems around the world. The courses are conducted in English, while program participants develop life-long relationships with their colleagues from around the world and then return home to promote best practices in health care. The curriculum involves courses offered in three-week units throughout a two-month period between mid-June and early August. Students from the University of Haifa and other universities in Israel can register for any of the courses which include:

- Leadership in Public Health
- Global Maternal – Child Health
- Sociology of Health and Illness
- Internship – Practicum in Public Health
- Global Health Systems

At the completion of the program, students acquire new skills in leadership and new knowledge of health care delivery. They receive credits from either the University of Haifa or the University of Georgia (depending on enrollment).

The program is designed to train students to become the future leaders of global health and is targeted to a broad range of students varied by different degrees and subjects of interest, e.g: public health, global health, health care administration, health services research, medicine, international affairs, health policy, and public administration.

In 2016, this program will become part of the 3 semester English **MPH in Global Health Leadership and Administration** offered by the University of Haifa.
Psychological Distress among Sisters of Young Females with Eating Disorders: The Role of Negative Sibling Relationships and Sense of Coherence – Prof. Yael Latzer

There is limited research on sibling relationships in families with ED child. In recent decades, there has been a significant increase in the prevalence of eating disorders (EDs), the most common of which are anorexia nervosa (AN), bulimia nervosa (BN), and eating disorders not otherwise specified (EDNOS). EDs are especially common among teenage girls and young women in the modern Western and are associated with high morbidity and mortality rates. The etiology of EDs is multifactorial and includes psychological-familial factors. Considerable attention has been paid to the family’s role, particularly the parent-child interaction, in the etiology of EDs.

The importance of the sibling subsystem in general, and in EDs in particular, has also gained increasing recognition over the years. Sibling relationships are among the longest-standing relationships in a person’s life and are considered to be one of the most significant, second only to the parent-child relationship. These relationships have an impact on personality and coping abilities in crisis situations, such as illness.

Research regarding the influence of a child’s illness or disability on other family members has shown that healthy siblings who are living in the shadow of the illness experience various difficulties that can have emotional, structural, familial, and social ramifications. Only a few studies have been conducted on sibling relationships in families that

females with an ED project onto the relationships with their siblings in general and with their sisters in particular. Although rivalry exists, mainly between sisters, the sisters without the ED are significantly less competitive than those with the ED. In addition to the quality of the sibling relationship, a “sense of coherence” is also considered to be an internal resource that can influence the coping strategies of individuals in various stress situations.

To the best of our knowledge, no studies have examined the correlations between the quality of sibling relationships, either positive or negative, sense of coherence, psychological distress, and depression among the sisters of young females with EDs. Moreover, whereas other studies have examined the sibling relationship from the point of view of the sister with an ED, the current study aims to focus on the perspective of the healthy sibling.

Thus the aim of the study was to examine the association between sibling relationships, sense of coherence, psychological distress, and depression among healthy sisters of females with or without EDs.

**Method:** Participants were 60 females, (13-31), 30 who had a sister with an ED (study group) and 30 without (controls). Participants completed self-report questionnaires: depression, psychological distress, sibling relationships, and sense of coherence.

**Results** showed that the study group had significantly higher levels of depression and negative sibling relationships than the control. A significant negative correlation was found between sense of coherence and depression. The study model shows that belonging to one of the groups, sense of coherence, and sibling relationships were significant predictors of the healthy sisters’ depression level.

It is suggested that when sister has an ED, negative sibling relationships can influence the psychological condition of her healthy sister.
Clinical trials represent one of the most important activities carried out by biopharmaceutical companies today. Achieving high levels of clinical trials supports needed biopharmaceutical research and provides direct benefits to patients in host countries and to national economies. This report explains and quantifies key factors for attracting investment in clinical research. The report also benchmarks performance in the level of scope of clinical trial activity, providing a “who’s who” in global clinical research among countries and biopharmaceutical companies. The report presents a number of policy lessons for countries seeking to enhance their level of clinical trial activity:

1) The creation of a pro-innovation culture, as measured by strong R&D (Research & Development) spending and IP (Intellectual Property) protection, is just as, if not more, crucial as improvements to infrastructure, number of physicians and health spending for attracting clinical trials.

- The clinical trial activity in 25 developed and developing countries is better explained by the level of the countries’ IP protection ($R^2 = 0.44$) and R&D spending ($R^2 = 0.41$) than by their number of hospital beds ($R^2 = 0.27$) or investment in health ($R^2 = 0.30$).

- Countries that invest more than 1.5% of their GDP in R&D tend to be more active in terms of clinical trials relative to other countries. For example, the top 5 countries in terms of R&D spending host, on average, six times more clinical trials than the rest of the countries.

2) There is a positive correlation between a country’s IP environment and the level of clinical trial activity it tends to experience.

- Countries scoring highly in current standards for measuring biopharmaceutical IP protection (such as the GIPC Index’s life sciences-related indicators) host 10-20 clinical trials per million population.

- In contrast, countries with low scores (below 60%) have 4 trials per million population or fewer.

The report also provides several insights concerning international clinical research activity:

3) North America and Northern Europe lead in global clinical trial activity.

- The US, Canada and the EU-5 host the highest gross number of clinical trials worldwide.

- Considering instead the number of clinical trials per capita, it is the Scandinavian and Northern European countries (along with the US) that hold the top positions globally.
4) Population density does not necessarily affect clinical trial activity.
   - The BRICs are among the world’s leaders in population size, yet are among the weakest performers in clinical trial activity (with as little as 2 trials per million population).
   - Conversely, countries with large populations still achieve a high level of clinical trial activity relative to population, for instance the US, UK, Germany and France.

6) Cutting edge clinical trials are mainly conducted in developed countries, but the more active developing countries also experience a relatively high concentration of advanced Phase I and II trials.
   - On average developed countries host double the amount of early stage trials hosted by developing countries.
   - Increasing the volume of total clinical trial activity is associated with an increase in the concentration of more advanced trials hosted in any given country: the greater the total volume of clinical trials the more likely a country is to host Phase I and II trials.

5) Clinical trials today focus on increasingly complex and diverse disease areas.
   - Cancer, nervous system diseases and rare diseases have become equally, if not more, important as cardiovascular and digestive system diseases in terms of the rate of human testing of drugs for these diseases.
   - Oncology treatments capture more than double the share of global clinical trial activity focused on cardiovascular diseases.

7) A small number of industry sponsors dominate global clinical trial activity.
   - Worldwide investment in clinical trials is concentrated among 10 multinational biopharmaceutical companies.
   - The top 3 companies have a substantial lead over the rest of the group, sponsoring 70% more trials than the following 3 companies.
**Implementing the Ban on Smoking in Israeli Pubs: Measuring Airborne Nicotine and Enforcement by Local Authorities – Dr. Carmit Satran**

**Background:** In 2007 an amendment to the law restricting smoking in pubs and bars (P&Bs) was enacted in Israel. However, a year after the ban only slight decreases in airborne smoke in P&Bs in one city have been reported.

**Purpose:** To assess levels of airborne nicotine in Israeli P&Bs and to measure if self-reported enforcement of the law by the local authorities officials was associated with levels of airborne nicotine in P&Bs.

**Methods:** Airborne nicotine levels were measured in 72 P&Bs in 29 towns in Israel; this consisted of 90% of eligible towns. In addition, 73 local authority officials were interviewed in 25 of these towns. The officials were asked to assess the local authority’s level of enforcement of the law banning smoking in P&Bs. The association of levels of airborne nicotine with the levels of enforcement of the law was calculated. Data collected during 2009-2010 and analyzed in 2010-2011.

**Results:** Levels of airborne nicotine were comparatively high in P&Bs. No association was detected between levels of nicotine and the P&Bs characteristics. In the larger towns, levels of airborne nicotine were higher. In 16% of towns the local authority officials reported high levels of law enforcement. Generally, levels of reported enforcement by local authorities were low and did not predict levels of airborne nicotine in the P&Bs.

**Conclusions:** Self-reported local authorities' law enforcement was not associated with levels of airborne nicotine in P&Bs in these towns. There is a need to develop ways to increase law enforcement by the local authorities or other agencies.
Israel has long been a low alcohol prevalence country, but recent research shows that alcohol use among Israelis is on the rise. It is thus important to closely monitor Israeli drinking patterns and identify potential subpopulations that may be in need of tailored prevention efforts. University and college students have often been identified as a high risk population as they tend to drink heavily. Furthermore, studies suggest distinct drinking patterns in Arabs, with high rates of abstinence but also high rates of heavy drinking among current drinkers. Based on this background we wanted to reach a better understanding of drinking patterns and particularly heavy drinking patterns among Jewish and Arab Israeli university and college students. We recruited 1310 respondents from higher education institutions across Israel who participated in the survey that included standard socio-demographic questions, questions about drinking patterns and alcohol expectancies. Alcohol expectancies are beliefs a person has about the effects of alcohol consumption and it has been shown that they influence alcohol consumption. Therefore, we wanted to examine whether alcohol expectancies may help us understand differences in Jewish and Arab Israeli drinking patterns.

Confirming previous research, our results show that Arab Israeli students are more likely to abstain from alcohol than Jewish Israeli students. The study also found that among current drinkers, Arab Israeli students are at particular high risk for heavy drinking. Finally, our results show that the tendency for Arab students to drink heavily is partly explained by the expectancy that alcohol only influences the drinker at high levels of intake. Previous studies have found that interventions aimed at changing alcohol expectancies reduce alcohol consumption. Interventions aimed at reducing university student drinking patterns through altering alcohol expectancies are underdeveloped in Israel. Our study suggests that there is a need for such interventions and that they should be developed to address differences in alcohol expectancies across ethno-religious groups.
In the last 30 years there has been an increase of 0.9% each year in the incidence rate of childhood cancer in the western world, and although the 5 year survival rate from childhood cancer has increased significantly due to advancement in treatment technologies, cancer is still one of the leading causes of death among children – second leading cause in the US among 1-14 year olds, and third leading cause among young Israelis aged 0-24.

Childhood cancer is also emerging as a major cause of death in the last years in Asia, Central and South America, Northwest Africa and the Middle East, where death rates from preventable communicable diseases are declining.

Leukemia, a cancer of the bone marrow which damages blood cell formation, is the most common and accounts for about 26% of all childhood cancers. Lymphoma, a cancer of the lymphatic system, is the third most common type (after brain tumors) and accounts for around 14% of all childhood and adolescent cancers.

Leukemia and lymphoma are two of the most common cancer types in children and account together for about 45% of all childhood cancers.

Nevertheless, very little is known about the causes of childhood leukemia and lymphoma. Thus far, ionizing radiation, exposure to benzene and certain chromosomal abnormalities have been identified as risk factors for childhood cancer. In the last three decades many studies focused on other early childhood exposures that affect the immune system, but results are still inconclusive.

My PhD study, supervised by Dr. Lital Keinan-Boker, examined infant nutrition, focusing on one of the most important and influential factors for young children – breastfeeding or lack of it, while also investigating other important early-life exposures such as attending day care, immunizations and home environment diversity, as part of the "Infective agent" theory proposed by Greaves as a possible explanation for childhood leukemia and lymphoma.

The main hypothesis of the study, that breastfeeding is associated with a lower risk of childhood leukemia and lymphoma, was addressed by conducting a case control study, focusing on mothers of Israeli children and teens who were diagnosed with childhood leukemia and lymphoma aged 1-19 (prevalent cases) in 2005-13, and were treated in a hematological department of five major Israeli hospitals that participated in the study: Meyer Children's hospital (Rambam Medical Center, Haifa), Dana Children's hospital (Sourasky Medical Center, Tel Aviv), Safra Children's hospital (Sheba Medical Center), Hadassah Ein-Kerem in Jerusalem & Soroka Medical Center in Be'er Sheva. Their cooperation offered a unique possibility to include the diverse population of Israel.
The study is based on face-to-face and telephone interviews using a structured questionnaire with mothers to 190 children diagnosed with leukemia or lymphoma and 384 controls – mothers to children who were not diagnosed with any type of cancer. The controls were chosen from the children’s home communities and the general population, group matched to the cases based on gender of the child, age (plus-minus one year) and population group (Jewish, Arab).

The main hypothesis of the study, that breastfeeding is associated with a lower risk of childhood leukemia and lymphoma, has been fully corroborated by the study results. Compared to no breastfeeding at all, breastfeeding was found in this study to be associated with a 64% lower risk of childhood leukemia and lymphoma. Breastfeeding for 6, 12 and 18 months or over, compared to shorter durations, have also been found to be associated with lower risks of childhood leukemia and lymphoma by 38%, 40% and 46% respectively, thus also indicating a dose-response effect.

In addition, it was found in this study that administering iron supplement to the child according to the Israeli Ministry of Health’s recommendations was associated with a 61% lower risk and having a pet at the child's first home was associated with a 50% lower risk for childhood leukemia and lymphoma.

Other infant exposures were found to be associated with an increased risk for these cancers among which are paternal smoking at home in the three months prior to the pregnancy with the child, which was associated with a 93% increase in the risk for cancer and having older siblings, that was associated with an increase of 18% in the risk for childhood leukemia and lymphoma for each additional older sibling. Results were similar when analyses were conducted separately for lymphoma.

In conclusion, based on this study, there is a strong inverse association between breastfeeding and childhood leukemia and lymphoma, with a clear dose-response effect. Nutrition is essential to health and breastfeeding is dimmed the gold standard of infant nutrition with many health benefit including lower risks for many childhood illnesses; the results of this study add evidence to the protective effect of breastfeeding also against childhood leukemia and lymphoma. The advantages of breastfeeding as a public health preventive measure are very high accessibility and low cost.

The other exposures, besides breastfeeding, that were found in this study to be associated with childhood leukemia and lymphoma risk, such as having a pet, parental smoking and administering vitamin supplementation, are also controllable exposures which play a role in the risk of childhood cancer as well as influence the general health and wellbeing of children and parents alike, and should be communicated by public health authorities to medical professionals and the general public.
MA Studies in Health Promotion – Where did they get me? – Iris Dagan

I was asked to write an article for the newsletter and to share with you, dear readers, my insights, experiences and professional development acquired during my studies in the department of Health Promotion at the School of Public Health.

A decade ago, a new program of Health Promotion opened at the School of Public Health at the University of Haifa. At that time, I started a new position as the director of Health Promotion in the Northern district of Maccabi Healthcare Services. I knew that the knowledge and experience I had gained both during my undergraduate studies and my job in the field of Health Promotion several years ago, were inadequate, and that as the manager of this field in a whole district, more professional knowledge, skills and confidence were required. I enrolled in this newly opened program, when I was nine months pregnant ... and I started an academic year with a month-old baby girl arriving with me to the university almost throughout the whole first semester...

The studies were very interesting; they have enriched my knowledge in a variety of topics, and broadened my understanding and insight about what is health promotion, how to promote health within an organization, who are the health promotion partners inside and outside the organization, how to develop and lead targeted intervention programs which can be assessed and how to prove their effectiveness.

Fortunately, an awareness of health promotion is on the rise among both decision makers and population. Nowadays, we need to address a variety of issues, such as a rising awareness, behavior change, providing skills for caregivers to empower policy makers and many other issues which will provide a high standard of service to the population in order to maintain their health and quality of life.

After many years of studies and up to this day when I convince workers and acquaintances to study the discipline, I always point out that the studies contributed to me far beyond what I had expected. It is important to realize that Health Promotion is defined in Israel as an occupation, but it is actually aiming to professionalism and recognition which are on the rise in these days; and as members of the National Committee in the Israeli Association of Health Promotion, we think how to promote it and to develop it further on.

I wish all the best to the current students, and that the studies will help them make an impact on health promotion and on public health in Israel in various organizations.

Sincerely yours, Iris.
Prof. Micha Barhana


Prof. Orna Baron-Epel


**Prof. Orna Baron-Epel (continue)**


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**Dr. Jonathan Dubnov**


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**Dr. Ronit Endevelt**


Dr. Anat Gesser-Edelsburg


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Prof. Manfred Green


**Dr. Lital Keinan-Boker (continue)**


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**Prof. Yael Latzer**


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Dr. Liora Ore


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Prof. Meir Pugatch


**Prof. Shmuel Rishpon**


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**Dr. Yaakov Rosenfeld**


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**Dr. Sharon Sznitman**


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Dr. Shira Zelber-Sagi


