

Newsletter – The School of Public Health University of Haifa

A Message from the Head of the School of Public Health - Prof. Shira Zelber-Sagi



The past year has been exceptional in every sense. All of us have experienced the world differently than we ever knew, including in the academic field. The university responded rapidly, accommodating to the drastic change in teaching setting and platforms. The faculty adjusted to a different teaching method and above all, the students have shown noteworthy cooperation, while quickly adopting to the new situation.

Without the wonderful cooperation of all parties involved, it would have not been possible to maintain adequate teaching, active research and the entire academic experience as a whole.

We are also deeply thankful to our wonderful administrative team, Gila, Maria and Eran, for successfully handling the day-to-day work of our school in the face of the new challenges posed by this period.

Shortly after the epidemic broke out, our school arranged the first COVID-19 conference in Israel, with the participation of leading Israeli experts in the fields of epidemiology, epidemics management, public health policy, public health media, ethics and coping with emergency situations.

Newsletter Issue No. 8

01/03/2021

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The conference took place in collaboration with the Israel Association of Public Health Physicians and with all Schools of Public Health in Israel. Back then, we could not imagine this would be the last conference in 2020 that we will physically attend.

Along this year, our faculty members have been constantly active in the area of COVID-19, whether in MOH positions, committees, etc. or in organizing and giving lectures in conferences, relevant research projects, conveying health promoting messages to the public over the media, etc. Examples to these activities can be found on the school of public health website:

<https://publichealth.haifa.ac.il/he/covid-19>. We are proud of these diverse activities and thank every one of our faculty members.

This new academic year, a number of faculty members have joined and new courses were introduced:

Dr. Geffen Kleinstern joined the team of our Biostatistics program.

Dr. Kleinstern is a biostatistician, and an epidemiologist

She is an internationally established researcher in the area of Genetic Epidemiology and she will teach courses in this area, as well as basic and advanced courses in Biostatistics.

Dr. Shmuel Klang is not a new member in our school, however this year he was admitted to a senior faculty.

Dr. Mickey Sherf joined the Health Systems Management Program and is teaching a course, which is customized to the COVID period, about practical management of health organizations in Israel.

We are much honored to have accepted this year a guest lecturer, Dr Dorit Nitzan, who holds the position of Regional Emergency Director for Europe in the World Health Organisation, and is teaching a special course on the subject of “Emergency and Epidemics Preparedness, Principles and Examples from the WHO experience”.

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Several new courses are given by other faculty members: Neta Lotterman is teaching the course: "Teamwork Management and Development" (in the Health Systems Management Program), Prof. Meir Pugatch is teaching a course on the "Foundations of Management – Introduction, Theory and Dilemmas" (in the Health Systems Management Program) and Dr. Zvika Viner – a new course on "Decision Making". Prof. Yael Letzer began teaching a new course on "Intervention and Interpersonal Consultation", which is intended for dietitians in the Nutrition, Health and Behavior Program.

Dr. Maya Peled-Raz is teaching this year for the first time the course: "Research in Humans: Ethics, Law and Public Health".

Furthermore, course curricula of every relevant course in our school has expanded with respect to topics pertaining to the COVID-19 epidemic and the management of epidemics and emergencies in general.

This year we have won a unique grant for developing a new course that deals with social involvement in the community, led by Dr. Roni Elran-Barak, head of the Nutrition, Health and Behavior program. The course topic is "Dietitians in Support of Disadvantaged Populations: Intervention Model Development and Implementation."

This course was selected among a wide variety of courses that were proposed to the university.

Additionally, it has been the first year of operation for the Biostatistics program, headed by Dr. Pavel Goldstein, with 11 new students. Opening this program substantially enriched the biostatistics courses taught in our school, that are also open to other programs and to PhD students.

The 2020-21 academic year started with record numbers of enrolled students and a growth in student numbers at all PH school's specialization programs.

This year we have witnessed a total growth of 30% in student number!

A comparison between student numbers in this year and the previous years per programs are depicted on the graphs below.



This year 153 students completed a Master's degree, among them 28 in the thesis track (including preliminary research study track) and 6 students completed their doctoral studies.

We all hope that year 2021 will be much better than its predecessor on the personal, academic and national levels. The development or implementation of the COVID vaccines gives room for optimism, but lessons have already been learnt and should never be forgotten. In his book "The Plague", Albert Camus said:

"Everybody knows that pestilences have a way of recurring in the world; yet somehow we find it hard to believe in ones that crash down on our heads from a blue sky. There have been as many plagues as wars in history; yet always plagues and wars take people equally by surprise."

Certainly, one important thing, we have learned this year, is that we must not be surprised. It is our obligation to continuously promote higher education in public health and to ensure that public health institutions in Israel and their extensions (whose crucial importance is more obvious this year than ever), are responsive to the field needs and to the labor market. Therefore, we will continue to ensure that the academic education of our hundreds students will maintain its high level, while providing practical tools, encouraging the development of independent thinking and at the same time each student will have the benefit of personal attention. This is our mission and prerogative. Thanks to all our team members and students who are stepping side by side along this important journey!

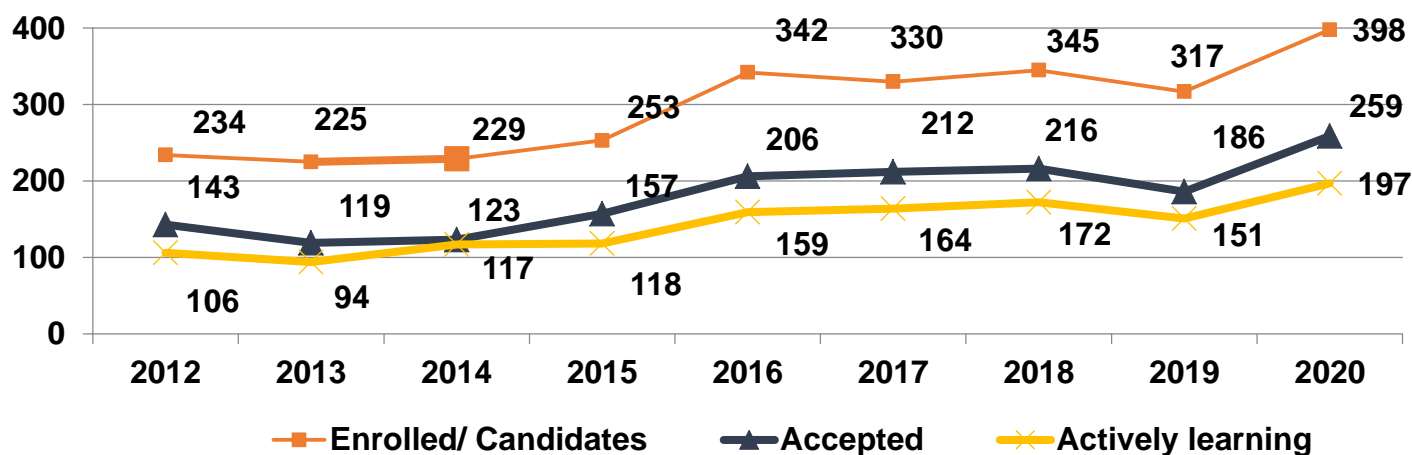




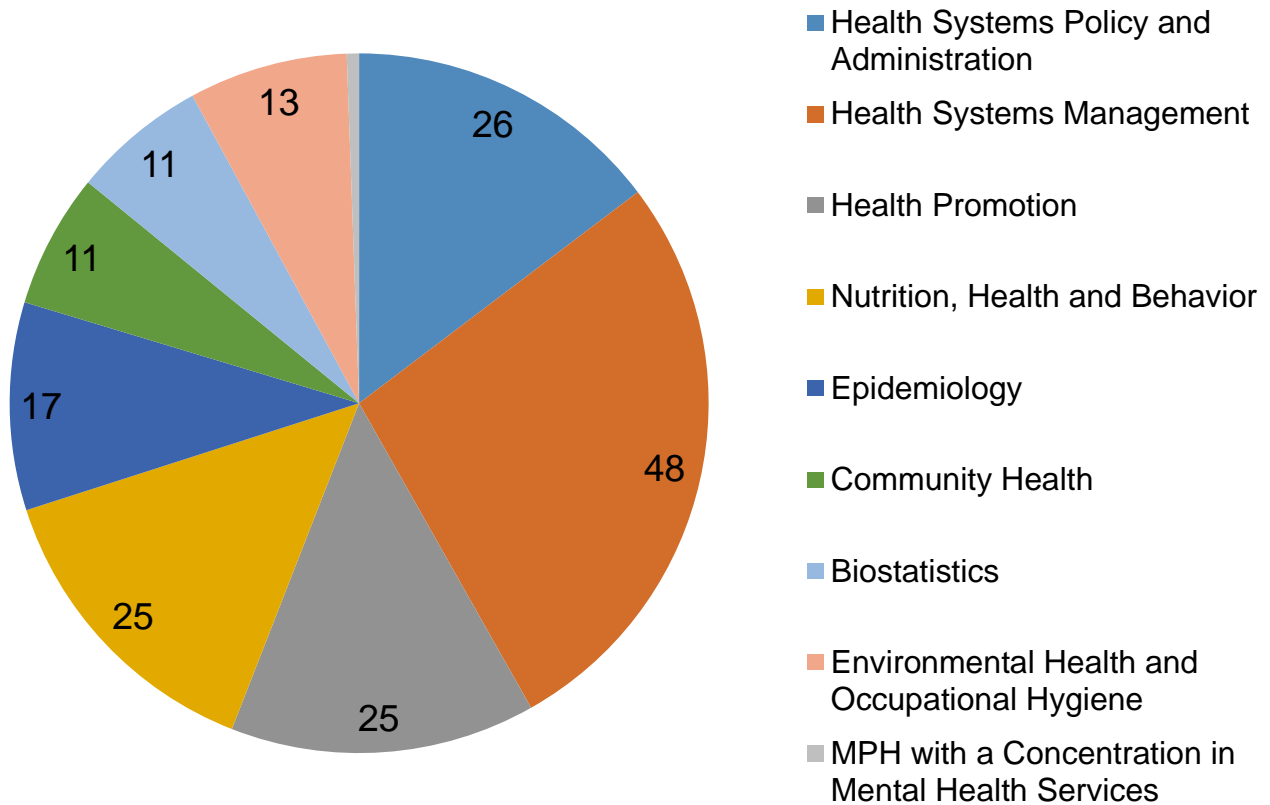
Photographed at the conference (March 2020) “The scientific basis for preparedness to COVID-19 and other epidemics” that the School of Public Health and the Faculty of Social Welfare and Health Sciences at the University of Haifa, organized together with the Israel Association of Public Health Physicians and with all Schools of Public Health in Israel.

Numbers of enrolled, accepted and active students in School of Public Health - Per year, entire school

(absolute numbers)



Active Students Distributed by Tracks (N), 2020-21



Public health professionals have a responsibility to communicate messages to the public

- Prof. Orna Baron-Epel



The year 2020 was a unique year for public health professionals: the spotlight was on us and suddenly, after a long career in public health, I don't need to explain what public health is, what I teach and study. Everyone already knows. The public is already familiar with R_0 , exponent, and more.

Despite the demystification of the field, this period brings with it an immense challenge for public health professionals. The challenge is how we communicate our public health knowledge in a clear and organized manner to the general public, and importantly, how to convince the public to adhere to our recommendations for behavioral change. The worldview and concepts that drive public health actions aren't apparent or intuitive to everyone. The global public today is one that mostly looks to its immediate surroundings rather than engaging in risk assessment of the greater public: and risk evaluation and perceptions are what outline health behaviors. However, in public health we do deal with the wider public.

Throughout the year, it became clear just how much the interests of a public sector lie within that same sector. This brought about situations, which led to political pressure preventing decision-making based on health alone, with other factors playing important roles. This should not be surprising, of course, but it's also unclear how to proceed and overcome the political pressures.

Public health professionals must explain these steps to the public, a very difficult task. Since a pandemic of this scale is unprecedented in the modern world, there is no previous experience to rely on, and there is no clear evidence as to what to do. We are in a "foggy battle," where every professional has a slightly different opinion. One clear phenomenon playing out is information overload. The public is exposed to many hours of television, radio, and online content during which many data and differing opinions are presented. For most of the public, it is difficult to handle this sort of overload and to filter out the relevant information from the presented load in order to make behavioral decisions. Studies show that information overload doesn't bring about positive change in terms of health behaviors, rather, information overload leads to frustration, disregard and sometimes lack of trust.

Despite this, it is our obligation as professionals to offer information and to explain the pandemic's driving factors, how to prevent infection and how to behave. It is our obligation to make information accessible, which we can do by appearing in the media and explaining the necessary behavioral changes from different angles. It would be best to reduce critique of and arguments with colleagues in the media, in favor of spreading a unified and clear message. Of course this is difficult at times, but I believe that any critique that isn't constructive works to degrade the trust that the public has in the profession, and lessens desire to adopt positive health behaviors. Again, it is our obligation to explain and to explain the situation again, with an emphasis on what can be done, and why.

Understanding the public's beliefs and opinions allows us to directly address these beliefs and opinions, to refute or strengthen them, and thereby to encourage the three main behaviors that we are demanding of the public: social distances, mask-wearing, and avoiding gatherings.

I call upon all of our students and alumni to see themselves as opinions shapers and as public professionals capable of making change.



Background: The COVID-19 epidemic poses multiple medical and nutritional challenges to the medical staff and the population. The state of emergency, which has been lasting for many months and caused large population to stay at home, lose work or spend available money reserves which they have, requires us to treat the nutrition of the entire population as a preventive component and as a significantly supportive therapeutic component.

Returning to routine in the shadow of the Corona emphasizes the importance of a healthy diet and the role of nutritionists in promoting this important issue for the health resilience of the public, healthy and sick and especially the elderly, disabled, special needs, home isolators, carriers, coronavirus patients. Vigorously, everyone should adhere to a healthy diet that helps in dealing with the disease and maintaining a proper nutritional status.

Rationale:

1. Proper nutrition and a healthy diet can be helpful for any person in coping with health and sick conditions as well as with the COVID-19 challenges. Nutritional deficiencies have been found to increase the risk of disease severity and its complications.

2. Weight gain, obesity and weight loss and malnutrition can also aggravate the disease and therefore, especially at this time, it is important to maintain a normal body weight. In addition, these conditions are risk factors for chronic disease that is also harmful in itself.

The act:

The complex situation of the COVID- 19 epidemic induced an abundance of documentary materials and actions concerning the food safety of the general public on the one hand in light of the fact that many countries have decided to close borders and not export food, such as the decision of the Ukraine not to export grain to Israel. Since Israel is an "island" country and most of the raw food materials are brought from different countries, we had to work with other government ministries.

We worked with the military intelligence division, the Ministry of Agriculture, the Ministry of Economics and the Ministry of Defense (Rachel) to find out what is critical to health and must be brought to Israel at all costs so that shortages do not arise.

We were also required to prepare for sufficient medical food for all hospitalized patients and to anticipate the amount of complex patients that will need medical food and central parenteral nutrition. The assessments included building a medical model together with an advisory scientific team that would try to meet the ratios of the various and parental medical foods for use in complex Corona patients. In light of the little knowledge that was available at the time, the assessment was also extremely complex.

In addition, care had to be taken to continue the nutritional treatment of patients in the health funds for those staying in home care, in hospitals and Corona hotels. Maintaining the sequence of treatment in the presence of physical limitations and Purple Badge limitations, etc. made necessary a transformation to remote medicine and the rapid approval of digital treatment tools in hospitals and health funds .

We encouraged the writing of therapeutic guidelines and conducted a number of literature reviews on the nutrition / obesity relationship between vitamin D and Corona. We have also written guidelines for taking vitamin D to the entire population in consultation with experts in the field.

In addition, the teams went through a period of intense pressure resulting both from the fear of infection and the need to go into isolation. Some also got infected in Corona and we were required to provide ongoing support to all teams and especially to support the various team managers for making it possible for them to keep on with the consecutive efforts of their teams.

The Corona plague has created new situations of food shortages and food insecurity in large sections of the population that have not previously faced such hardships. The Nutrition Division dedicated itself to issuing guidelines for healthy food baskets, attendance of numerous discussions in the Keneset, the Malal, municipal authorities and to the integration of all related activities held by the various governmental ministries. These actions were in parallel to locating all those who needed nutritional assistance through various studies of, for example, the migrant population, children of school age (for instance, through a questionnaire for parents and more and more).

Furthermore, the ongoing state of the plague has caused considerable sections of the population to disrupt their eating patterns and so many campaigns have been launched through the media and social networks to encourage healthy eating of the public.

In conclusion:

The Corona epidemic, along with the great challenge and crisis situation that has put the whole country in a complex situation, has created quite a few opportunities for improvement and diversification of treatment alongside connections between various government ministries and civil society to promote a healthy diet of both healthy and sick population. It is noteworthy to remember that the phenomena of eating patterns disruption, which emerged at the time of the corona, may increase the risk of chronic illness that may accompany us even when we may forget about the corona and therefore a healthy diet is critical at all times.

For those who are very interested in this subject, you can enter the website of the Ministry of Health, the new Corona virus section, and navigate to "materials for professionals" - All materials.

Some of the materials are also on the following site:

<https://www.gov.il/he/Departments/General/nutrition-security>

Eating disorder, Depression, and Anxiety – Dr. Roni Elran-Barak



Elran-Barak, R., Goldschmidt, AB. (2020). Differences in Severity of Eating Disorder Symptoms between Adults with Depression and Adults with Anxiety. *Eating and Weight Disorders-Studies on Anorexia Bulimia and Obesity*. Advance online publication. <https://doi.org/10.1007/s40519-020-00947-y>

IF 2019= 3.634

As a researcher and a clinician in the field of eating disorders, I have always been interested in the comorbidities of eating disorders. Many patients suffering from eating disorders have at least one other psychiatric disorder (comorbidity), such as depression or anxiety. In some cases, the eating disorder is dominant, and the comorbidity is less severe. But in other cases, the comorbidity can be so extreme that it interferes with the recovery from the eating disorder.

Therefore, as a therapist who see patients with eating disorders, it was important for me to understand the relationship between eating disorder symptoms and their main psychiatric comorbidities (i.e., depression, anxiety). Moreover, it was important for me to understand which of these two comorbidities is associated with higher levels of eating disorder symptoms.

Scientific Background:

Eating disorders (EDs) are complex psychiatric conditions that are often chronic and disabling. Clinical and community studies report that the majority of individuals with EDs suffer from at least one psychiatric comorbidity that may precede the onset of the ED, occur concurrently with the ED, and/or persist after recovery from the ED. Rates of specific comorbid psychiatric conditions vary significantly across studies, but evidence suggests that mood and anxiety disorders are the most common psychiatric comorbidities among patients with EDs, with up to two-thirds of female inpatients diagnosed with an anxiety disorder and up to 90% diagnosed with major depressive disorder. Despite these high rates, research studies investigating the presentation of ED symptoms among individuals with mood disorders versus anxiety disorders are scarce.

The present study explored the following research question:
What are the differences between adults with either, neither, or both comorbid depression and anxiety in terms of ED symptoms?

Methods:

Volunteers (N=3,780) to the project implicit mental health website


(<https://implicit.harvard.edu/>) self-reported their ED status (current ED: n=374, past ED: n=436; no ED: n = 2,970), their current depression/anxiety status, and their ED symptoms (using the EAT-26, Garner, 1982). Relations between ED symptoms and comorbid depression/anxiety status were examined among currently ill, recovered, and never ill individuals.

Results:

Participants without comorbidities had the least and participants with both comorbidities had the most severe ED symptoms. Participants with anxiety alone had more severe ED symptoms relative to those with depression alone. These results were consistent when examining participants with current ED, past ED, and without a history of EDs.

Discussion:

These findings demonstrate, in contrast with an earlier study among youth with EDs (Hughes et al, 2013), that comorbid anxiety may be linked with more severe ED symptoms relative to comorbid depression. It is possible that anxiety serves as a maintaining factor for ED symptoms such that dieting and other ED-related behaviors may function to modulate symptoms of anxiety.





During my first degree studies in statistics at the Hebrew University, I was very interested in how to apply and combine mathematical and statistical equations with real data. That is why I chose to pursue a master's degree in biostatistics, which is using statistics in the field of medicine. This degree in the Department of Statistics was very theoretical, but also included courses in epidemiology and clinical trials at the School of Public Health at Hadassah Ein Kerem. This is where I was first exposed to the world of public health and it was love at first sight. I knew I wanted to pursue a doctorate in public health and conduct medical research, and finally apply all the statistical tools I had learned on real data, which would eventually benefit public health. Indeed, I continued my doctorate at the School of Public Health and chose the field of epidemiology of lymphoma under the supervision of Prof. Ora Paltiel, a senior hematologist at Hadassah and a Prof. of Public Health, along with Prof. Ronit Nirel from the Department of Statistics at the Hebrew University.

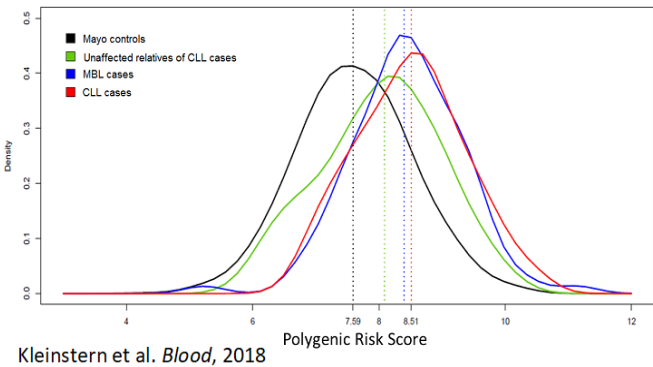
In my PhD research I conducted the first case-control study in Israelis and Palestinians on B-cell non-Hodgkin lymphoma (B-NHL), and explored the environmental and infectious risk factors for B-NHL in these populations. The most surprising findings were that the mean age at B-NHL diagnosis was 9 years younger in Palestinians compared to Israelis, and the aggressive subtype, diffuse large B-cell lymphoma, was much more common in Palestinians (71%) compared to Israelis (41%)(Kleinstern et al. *PLoS ONE*, 2017). Moreover, we found an association between persistent HBV infection with B-NHL, and a unique association between persistence HBV and family history of hematopoietic malignancies (Kleinstern et al. *Haematologica*, 2016). Therefore, we raise the possibility that hereditary factors might be associated with viral clearance that may be related both to susceptibility to lymphoma and viral persistence.

A small portion of my doctorate also included genetic epidemiology, which was of great interest to me, but was not my area of expertise. Therefore, I decided to pursue a postdoctoral fellowship at the Mayo Clinic in Rochester Minnesota in order to acquire knowledge in genetic epidemiology of cancer. I spent 4.5 years in Minnesota busy conducting research and presenting at international conferences.

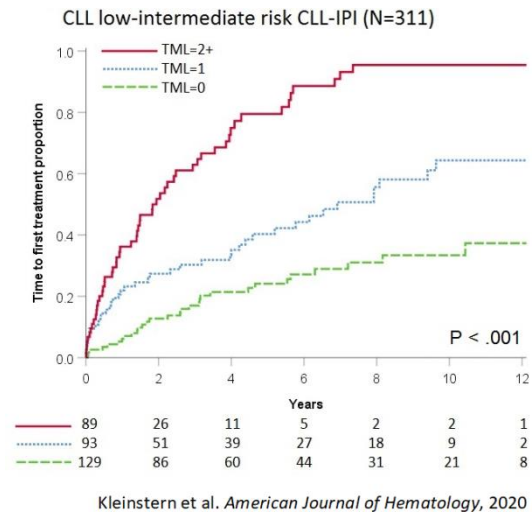
The winter there was very difficult and reached -30c degrees, and sometimes there were even days of -50c degrees, however, the research was so fascinating that it was worth “enduring” this extreme weather.

In my postdoctoral research I developed a polygenic risk score (PRS) for chronic lymphocytic leukemia (CLL) based on established common CLL variants. As an integral member of both the [International Lymphoma Epidemiology Consortium](#)

(InterLymph) and the Genetic Epidemiology of CLL Consortium (GEC), I was well-positioned to conduct this study using the largest GWAS of CLL, with ~3K cases and ~8K controls. We found that the PRS is the strongest risk factor to date for CLL, and has the ability to stratify individuals into risk groups. This is especially important to first-degree relatives of CLL patients who have monoclonal B-cell lymphocytes (MBL), a precursor to CLL (Kleinstern et al. *Blood*, 2018). These exciting findings provide insight to identify individuals with MBL who may be at greater risk of progressing to CLL.



In one of my recent studies we found that the total number of mutated CLL putative driver genes (i.e., the tumor mutational load), predicts time-to-first treatment among CLL and high-count MBL patients. The tumor mutational load provided prognostic information beyond the CLL International Prognostic Index (CLL-IPI), especially among those individuals in the low to intermediate CLL-IPI risk groups where 80% of the individuals with 2 or more genes with high-impact mutations progressed to therapy in 5 years compared to only 23% of the individuals with no high-impact mutations (Kleinstern et al. *American Journal of Hematology*, 2020). About 75% of newly diagnosed CLLs and high-count MBLs are in the low to intermediate CLL-IPI risk groups, these patients are currently routinely advised to be monitored for disease progression every 6-12 months. We believe that a focused mutation panel of CLL driver genes should be sequenced at time of diagnosis as an additional and informative biomarker to predict time to progression requiring therapy.



Canabbis and the COVID-19 epidemic-

Prof. Sharon Sznitman
Dr. Dennis Rosenberg



Dr. Dennis Rosenberg



Prof. Sharon Sznitman

Prof. Sharon Sznitman and Dr. Dennis Rosenberg conducted a two-wave online survey among adult cannabis users in Israel. Study participants were recruited via Cannabis magazine, an online forum and news portal on cannabis-related issues in Israel and worldwide.

The survey was distributed in two rounds (round 1: March-April, the first lockdown period; round 2: May when lockdown measures were eased). Based on the data provided by 759 frequent cannabis users (reported using cannabis at least once a month), the researchers wrote two articles. The first, which is currently undergoing the second review in the *Substance Abuse* journal, examined the association between stressors, cannabis use coping motives and increased cannabis use as reported by survey respondents.

Stressors examined were health-related (fear of being infected/infecting others with the coronavirus), and socio-economic (fear of economic and occupational consequences of the COVID-19 pandemic) ones.

The findings showed that 35% of the sample reported increasing their cannabis use to a high/very high extent since the COVID-19 outbreak. The inferential findings suggest that socio-economic stressors were positively, directly, and also indirectly (mediated by coping by cannabis consumption) associated with increased cannabis use. In contrast, the association between health-related stressors and increased cannabis use had only an indirect association, through coping by cannabis consumption.

The second article, which is currently under review in the *Drug and Alcohol Review* journal, examined the association between COVID-19-related risk perception (belief that cannabis use increases severity of disease following COVID-19 infection), health-related stressors, and limiting sharing of cannabis smoking products.

The findings of the study showed that the extent of severity of health-related stressors, of perceived risk, and of limiting sharing cannabis smoking products has declined between the two rounds.

The results of the multivariate analysis suggest that a positive association exists between health-related stressors and the extent respondents reported limiting sharing cannabis smoking products in both periods.

In contrast, a positive association between risk perception and the extent of limiting sharing cannabis smoking products was observed in the first data collection round (during lockdown) but not in the second round (during easing of lockdown).

The results of the first study imply that socio-economic stressors are an important factor related to the mental health of the population during the pandemic. Therefore, policy makers should treat it by development of socio-economic assistance programs. In terms of the second study, avoiding sharing cannabis products is a recommended strategy for cannabis users to prevent the virus transmission. Prevention messages may be developed that remind people of the risk of the virus and harms reduction strategies specifically related to cannabis users.

Breast Feeding Serve as a Weight Regulator or as a Bridge Towards Recovery? The Experience of Women with EDs

Ruth Bar-Nathan, Prof. Yael Lazer & Dr. Eytan Gur



Introduction

The last several decades have seen a dramatic increase in the prevalence of eating disorders (EDs) and related symptoms throughout Westernized countries/nations mainly among adolescence and young adults in their fertility period of life. Eating disorders are serious illnesses with a higher mortality rate than any other psychiatric illness.

The etiology of EDs and disordered eating is multifaceted with genetic, familial, personality, sociocultural and psychological variables playing a role in their development and maintenance. Among the psychological characteristics associated with EDs are affective influences, body dissatisfaction, and low self-esteem.

There are three major diagnostic categories: Anorexia Nervosa (AN), Bulimia Nervosa (BN), and Binge Eating Disorders, characterized by objective disturbances in eating patterns, drive for thinness and weight control

Both AN binge/purge type and BN comprise Binge-Eating Behaviours typically defined as the consumption of a large amount of food in a short period of time, accompanied by a sense of a lack of control overeating, along with compensatory behaviours accrued following the binge episodes, predominantly self-induced vomiting.

The main purpose for self-induced vomiting is to regulate control and prevent weight gain and accompanied with medical complications, from nausea to electrolyte imbalance.

Breastfeeding can sometimes be seen by women in general and with EDs in particular as another means of regulating weight after birth. That is due to high energy consumption of this physiological process. Breastfeeding is perceived by individuals with EDs as a hidden mean of purging, in order to lose weight. The only few studies examined this hypothesis, led to conflicting findings. Therefore, the aims of this study are: 1. To examine the experience of breastfeeding in women with EDs, who, prior to their pregnancy, tended to use self-induced vomiting as a way to maintain their weight. 2. To examine how they experienced their decisions whether to persist or to terminate breastfeeding. 3. To examine their experience and their perception of breastfeeding within the context of EDs.

Methods:

Qualitative research is a scientific study used to understand complex social processes, and aims to reveal beliefs, values, and motives that underlie individual behaviors. A qualitative study is conducted to explore a topic where there is, at the time, limited information. This method allows the researchers to understand the participants' experiences and perspectives in their own words. It also allows the researcher to explore the participants' beliefs and attitudes, thus enabling them to gather information to understand an understudied phenomenon.

Participants: Qualitative research is based on small sample sizes of participants who intensively experienced the phenomenon (Patton, 2002). Therefore, the sample included 9 women, between the ages of 33-39 years, (Mean age =, SD =), Israeli born, fluent in Hebrew, with a diagnosis of either AN, binge/purge type, or BN, above the age of 30 when they gave birth. All of them used purging as a means of controlling and regulating their weight before becoming pregnant and breastfed their babies at least in the first month postpartum.

Procedure: The women were recruited by using their charts from the EDs Adult Inpatient Unit, in the biggest medical center, located in Central Israel. The first connection was made via telephone. An in-depth semi-structured interview was then conducted by a clinical dietitian who worked at the EDs unit. The interviews were recorded and then transcribed.

Analysis: The qualitative research method used in this study is derived from the phenomenological-hermeneutic perspective, which observes the human world as composed of multiple subjective realities. The researcher's aim in this approach is to describe and interpret the meaning of breastfeeding as perceived by those experiencing it, thus enabling an understanding of significant, subjective processes without attempting to support or refute hypotheses. The data was analyzed using 'Thematic Analysis', which aims to identify themes and patterns. The six-step guide was adopted. This involved including the authors familiarizing themselves with the data, generating initial codes, searching for themes, and reviewing themes, the author's consensus on the themes, and formulate and interpret the themes and sub-themes. Thereafter an underlying level analysis was conducted to identify and interpret the major motives emerged from the themes.

Results:

The participants perceived breastfeeding as composed of inner and outside influences, representing the participants' viewpoint. Thematic Analysis of the interviews discovered three main themes: (1) Breastfeeding is a symbol of good motherhood (2) Breastfeeding is a way of control (3) Breastfeeding is a way to lose weight.

Theme 1: Breastfeeding is a symbol of good motherhood: "You are a better mother if you breastfeed". This theme captures one of the participants' motivations for breastfeeding, which is grounded in the concept of good motherhood. In this theme, motherhood is described as effective /successful breastfeeding. Additionally, they described the need to fulfil community expectations to be a good mother, sometimes choosing to breastfeed despite its challenges.

Theme 2: Breastfeeding is a way of control "MY decision", "My way" –This theme captures and presents another motivation for breastfeeding, which is grounded in the concept of control. Here, the game between control and loss of control is described as the transition between controlling the baby's diet during breastfeeding and the feeling of uncontrollability that sometimes accompanies these women during breastfeeding. This control can be expressed by the significance of being the mother of the baby and the dependence created between the two, in opposition to the future challenges, which will arise when the mother's control towards the end of breastfeeding will have ended.

Theme 3: Breastfeeding is a way to lose weight, - "The EDs is waiting for me ..." .This theme captures the breastfeeding as desire to lose weight. They experience that the illness is always there.

They describe the relationship between the EDs and lactation, in which symptoms like purging sometimes decrease in frequency and intensity and sometimes stop completely during breastfeeding. This theme describes the desire to lose weight, the feeling of hunger and the knowledge that the EDs is "waiting for them" at the end of the breastfeeding period.

Discussion:

To the best of our knowledge, no qualitative studies have been conducted to date on the issue of breastfeeding either as a protective factor or as an exacerbating cause of EDs. Three main themes were found: (1) Breastfeeding is a symbol of good motherhood (2) Breastfeeding is a way of control and (3), breastfeeding is a way to lose weight. Out of these themes two major motives emerged. Breastfeeding was seen both as a sign of strength and recovery from EDs and as a sign of illness, yet another symptom in the service of EDs.

The first motive addressed breastfeeding as protective shield against EDs. The choice of breastfeeding as a nutritional medium for women with EDs protected them. They felt that they were more meaningful, controlling, and were busy with other issues beyond body weight and food. Additionally, they felt that they were better mothers because they provided the best type of nutrition for their child.

The second motive presented breastfeeding as a sign of illness, yet another symptom in the service of EDs psychopathology. It addressed breastfeeding as an exacerbating factor for an EDs. Some women felt that their EDs were not present during breastfeeding, yet some breastfeed as a means of losing weight. Breastfeeding allowed them to feel in control and therefore some of them chose to breastfeed for a longer period of time. The findings may lead therapists in the field of EDs to construct a better intervention for patients with EDs during their pregnancy, upon and after delivery

This research is part of thesis submitted by Ruth Bar-Nathan in partial fulfilment of the requirements for her master's degree, supervised by Prof. Latzer Yael and Dr. Gur Eitan

**Management and Consumption of Health Resources during the
Corona Period:
Round-Table Panel organized by the Faculty of Social Welfare and
Health Sciences and Meuhedet Institute for Health Services Research**

During the period of COVID-19 epidemic, which has been lasting for more than a year, increasing attention has naturally been drawn to the condition of Corona patients, as characterized by the different states of morbidity, as well as to the overloaded hospitals and important social issues related to morbidity across sectors.

But what happened to morbidity, which did not result from Corona during this period? What are the implications of this highly exceptional event on the entire chronic morbidity in Israel?

The University of Haifa / Faculty of Social Welfare and Health Sciences in collaboration with Meuhedet Institute for Health Services Research organized a round table, which was convened to discuss the following issues:

Management of resources and needs in the areas of Nursing, Oncology, hospitalization at home and medications, in consideration of several disease waves, identification of positive points, not only dark spots. Are there insights, which could have been implemented in retrospect or for the future, in order to achieve more efficient results?

The opening speaker at the conference was the honorable Minister of Health, Mr. Yuli Edelstein, who presented an overview of the Corona period and the main activities that the Ministry has been engaged in during this complex period with respect to issues as: hospitalization infrastructure, publicity and of course the vaccination operation, where Israel stands out as a world leader. The minister put an emphasis on the efforts he is making opposite the Ministry of Finance, whose objective is to continue the building of health infrastructures that started in the Corona period after its end. This will help in closing the gaps created during the recent years.

The next speaker was Ms. Sigal Regev- Rosenberg, CEO, Meuhedet, who also participated in the round table.

The main presentation of Meuhedet Institute for Health Services Research, which is headed by Dr. Shmuel Klang, introduced the following findings:

- In the aspect of health resources management, the first wave should be differentiated from the later waves.
- The first wave can be taken to be a "shock wave", and indeed gravely affected upon the management and consumption of health resources.

- Later on, we can observe that health resources management reached trends that are similar to the previous years and some trends even strengthened.
- In relation to emergency room treatments and hospitalizations (that are not Corona), operation level in the hospital restored to normal.
- Community health services can be regarded as the true hero of the Corona period.
- The consumption of medications did not reduce at all; it even increased.

On the other hand, there is a notable deterioration in the quantity of ongoing check-ups that are taken by the public. There is degradation in public health criteria. Unfortunately, it is expected that we will see negative implications on our health in the intermediate range of time.



The panel of participants included Dr. Noam Asna, Director of the Oncological Institute, Barzilai Medical Center, Ashkelon; Dr. Roni Sabar, founder and CEO, Sabar Health Ltd; Ms. Mali Kusha, director of Nursing Division, Meuhedet; Mr. Shlomo Mena, CEO Israel, Novartis Pharma; Mr. Yoel Lipschitz, attorney, VP Medison Pharma; Mr. Yaron Itzhari, CEO, Medtronic Israel.

Dr. Roni Elran-Barak

Publications:

Elran-Barak, R., Bromberg, M., Shimony, T., Dichtiar, R., Mery, N., Nitsan, L., Keinan Boker, L. (2020). Disordered eating among Arab and Jewish youth in Israel: The role of eating dinner with the family. *Israel Journal of Health Policy Research*, 9 (1), 1-11.

Elran-Barak, R., Dror, T., Goldschmidt, A. B., Teachman, B. A. (2020). The implicit association of high-fat food and shame among females recovered from eating disorders. *Frontiers in Psychology*, 11 (1068), 1-6.

Elran-Barak, R., Goldschmidt, A. B. (2020). Differences in severity of eating disorder symptoms between adults with depression and adults with anxiety. *Eating and Weight Disorders-Studies on Anorexia Bulimia and Obesity*. Advance online publication. <https://doi.org/10.1007/s40519-020-00947-y>.

Elran-Barak, R., Mozeikov, M. (2020). One month into the reinforcement of social distancing due to the COVID-19 outbreak: Subjective health, health behaviors, and loneliness among people with chronic medical conditions. *International Journal of Environmental Research and Public Health*. Advance online publication. <https://doi.org/10.3390/ijerph17155403>.

Elran-Barak, R., Segel-Karpas, D. (2020). Dieting for weight-control among older adults: The role of perceived health and perceived overweight status. *Eating Behaviors*, 36 (101368), 1-7.

Recent and active Grants:

Elran-Barak, R. Examination of the application process for social security disability among recipients of mental disability benefits: Perceptions of clients and workers. (2019 – 2021). Funded by the National Insurance Institute.

Elran-Barak, R. Providing mental support to people with physical or mental illness: The role of online health communities. (2019 -2021). Funded by the Israel National Institute for Health Policy Research.

Elran-Barak, R. Academic community partnership – Promotion of healthy eating among underprivileged communities. (2020-2021). Funded by the Council for Higher Education.

Dr. Yonah Amster

Recent and active Grants:

Amster, Y. Biomonitoring of nanoparticles and efficacy of respirators in reducing internal dose. (2019-2022). Funded by Ministry of Science.

Dr. Nili Borochoy-Greenberg

Publications:

גרינברג בורוכוב, נ., שחם, י., פרדו, א., שרייבמן, י., עמית, נ., סהר קוסטיס, י., ועמיתיהם (2020). עקרונות למיגון עובדים חיוניים כנגד תחלואה בנגיף קורונה (SARS-CoV-2), לפי רמות חשיפה. **הרפואה הצבאית**, חוב' מס' 2 (46), יוני 2020.

Prof. Orna Baron-Epel

Publications:

Baron-Epel, O., Paldi, Y., Bord, S., Kadish, D., Guttman, E., Moran, D. S., Tesler, R. (2020). Social capital and health among participants in the Cachibol League in Israel. *International Review for the Sociology of Sport*. <https://doi.org/10.1177/1012690220968114>.

Haimi, M., Brammli-Greenberg, S., **Baron-Epel, O.**, Waisman, Y. (2020). Assessing patient safety in a pediatric telemedicine setting: A multi-methods study. *BMC Medical Informatics and Decision Making*, 20, 63. <https://doi.org/10.1186/s12911-020-1074-7>.

Puddister, S., Ali-Saleh, O., Cohen-Dar, M., **Baron-Epel, O.** (2020). Health may be compromised by social interactions depending on culture among postpartum Arab and Jewish Israeli women. *BMC Pregnancy and Childbirth*, 20, 480. <https://doi.org/10.1186/s12884-020-03168-4>.

Siman-Tov, M., Tur-Sinai, A., Kolobov, T., **Baron-Epel, O.**, Harel-Fisch, Y. (2020). Youth injury and parents' unemployment—the importance of socioeconomic status and ethnicity context. *European Journal of Public Health*, 30(5), 911-915. <https://doi.org/10.1093/eurpub/ckaa061>.

Tur-Sinai, A., Kolobov, T., Tesler, R., **Baron-Epel, O.**, Dvir, K. (2020). Associations between socioeconomic and family determinants and weight-control behaviours among adolescents. *International Journal of Public Health*. <https://doi.org/10.1007/s00038-020-01498-w>.

Zacay, G., **Baron Epel, O.**, Malatskey, L., Heymann, T. (2020). Preferences and barriers to the utilization of primary health care by sick physicians: A nationwide survey. *Family Practice*, cmaa090. Advance online publication. <https://doi.org/10.1093/fampra/cmaa090>.

Recent and active Grants:

Baron-Epel, O. Evaluation of nutritional intervention at Mikve Israel. Funded by Ministry of Health.

Baron-Epel, O., & Key, C. Characterization of the factors that influence using online services and their impact on the control of diabetes. Funded by The National Institute for Health Policy Research.

Baron-Epel, O., Mayers V. The evaluation of an intervention to decrease injuries in children in the Bedouin population in the Negev. Funded by Beterem.

Baron-Epel, O., Obid, S., Bord, S., & Kabaya, D. Development of interventions to prevent brucellosis via community participations. Funded by Ministry of Agriculture.

Baron-Epel, O., Tur-Sinai, A., et al. Attitudes and changes in lifestyle, nutrition, and physical activity patterns among adolescents: The role of social, economic, family, and peer factors. Funded by Ministry of Science and Technology.

Dr. Pavel Goldstein

Publications:

Goldstein, P., Ashar, Y., Tesarz, J., Kazgan, M., Cetin, B., & Wager, T. D. (2020). Emerging clinical technology: Application of machine learning to chronic pain assessments based on emotional body maps. *Neurotherapeutics: the journal of the American Society for Experimental NeuroTherapeutics*, 17(3), 774–783.

Goldstein, P., Losin, E. A. R., Anderson, S. R., Schelkun, V. R., & Wager, T. D. (2020). Clinician-patient movement synchrony mediates social group effects on interpersonal trust and perceived pain. *The Journal of Pain*, 21(11-12), 1160-1174.

Pan, Y., Dikker, S., **Goldstein, P.**, Zhu, Y., Yang, C., & Hu, Y. (2020). Instructor-learner brain coupling discriminates between instructional approaches and predicts learning. *Neuroimage*, 211, 116657.

Truong, H., Bui, N., **Goldstein, P.**, Vu, T. (2020). Painometry: Wearable and objective quantification system for acute postoperative pain. In *MobiSys '20: Proceedings of the 18th International Conference on Mobile Systems, Applications, and Services*, 419–433. <https://doi.org/10.1145/3386901.3389022>.

Wiener, A., **Goldstein, P.**, Alkoby, O., Doenyas, K., & Okon-Singer, H. (2020). Blood pressure reaction to negative stimuli: Insights from continuous recording and analysis. *Psychophysiology*, 57(4), e13525.

Zheng, W., Woo, C. W., Yao, Z., **Goldstein, P.**, Atlas, L. Y., Roy, M., et al. (2020). Pain-evoked reorganization in functional brain networks. *Cerebral Cortex*, 30(5), 2804-2822.

Recent and active Grants:

Goldstein, P. Painstory: objective pain assessment based on the patients' narratives.
Funded by University of Haifa Data Science Research Center.

Goldstein, P. Mobile-based chronic pain assessment. Funded by University of Haifa Data Science Research Center.

Goldstein, P. Technology-mediated human-animal human triads for promoting well-being and resilience of elderly population. Funded by the University of Haifa foundation.

Goldstein, P. SkinScanner: Objective pain assessment based on the bio-chemical biomarkers.
Funded by the University of Haifa-Technion Foundation.

Prof. Anat Gesser-Edelsburg

Publications:

Cohen, R., **Gesser-Edelsburg, A.**, Singhal, A., Benenson, S., Moses, A. E. (2020). What distinguishes positive deviance (PD) health professionals from their peers and what impact does a PD intervention have on behavior change: A cross-sectional study of infection control and prevention in three Israeli hospitals. *Epidemiology & Infection*, 148, e259. <https://doi.org/10.1017/S0950268820002484>.

Gesser-Edelsburg, A., Cohen, R., Abed Elhadi Shahbari, N., Hijazi, R. (2020). A mixed-methods sequential explanatory design comparison between COVID-19 infection control guidelines' applicability and their protective value as perceived by Israeli healthcare workers, and healthcare executives' response. *Antimicrobial Resistance & Infection Control*, 9, 148. <https://doi.org/10.1186/s13756-020-00812-8>.

Gesser-Edelsburg, A., Cohen, R., Hijazi, R., Abed Elhadi Shahbari, N. (2020). Analysis of public perception of the Israeli government's early emergency Instructions regarding COVID-19: Online survey study. *Journal of Medical Internet Research*, 22(5), e19370. <https://doi.org/10.2196/19370>.

Gesser-Edelsburg, A., Hijazi, R. (2020). When politics meets pandemic: How prime minister Netanyahu and a small team communicated health and risk information to the Israeli public during the early stages of COVID-19. *Risk Management and Healthcare Policy*, 13, 2985-3002. <https://doi.org/10.2147/RMHP.S280952>.

Keisari, S., Feniger-Schaal, R., Palgi, Y., Golland, Y., **Gesser-Edelsburg, A.**, Ben-David, B. (Epub August 6, 2020). Synchrony in old age: Playing the mirror game improves cognitive performance. *Clinical Gerontologist*. <https://doi.org/10.1080/07317115.2020.1799131>.

Keisari, S., **Gesser-Edelsburg, A.**, Yaniv, D., Palgi, Y. (2020). Playback theatre in adult day centers: A qualitative research of creative group intervention for community-dwelling older adults. *PLoS ONE*, 15(10), e0239812. <https://doi.org/10.1371/journal.pone.0239812>.

Keisari, S., Palgi, Y., **Gesser-Edelsburg, A.**, Yaniv, D. (2020). Participation in life-review playback theatre enhances mental health of community-dwelling older adults: A randomized controlled trial. *Psychology of Aesthetics Creativity and the Arts*. Advance online publication. <http://dx.doi.org/10.1037/aca0000354>.

Manheim, D., & **Gesser-Edelsburg, A.** (2020). The structure of tweets about vaccine safety between health organizations, experts and the public: Analyzing risk communication conversations. *Disaster Medicine and Public Health Preparedness*, 1-25. <https://doi.org/10.1017/dmp.2020.404>.

Prof. Anat Gesser-Edelsburg (continue)

Recent and active Grants:

Gesser-Edelsburg, A. Developing health and risk communication strategies targeting weakened and at-risk sub populations in Israel during and after the Corona crisis. Funded by The Israel National Institute for Health Policy Research.

Gesser-Edelsburg, A. Locating positive behaviors by the positive deviance approach at the Bedouin society in the Negev, to promote a safe world to the Israeli Bedouin children. Funded by Beterem - Safe Kids Israel.

Gesser-Edelsburg, A., Negev, M., Mesch, G., Miron-Shatz, T. Earthquake preparedness experiment for developing strategies to motivate the Israeli public's seismic adjustment behavior. Funded by State of Israel, Ministry of Science and Technology (MOST).

Dr. Galit Weinstein

Publications:

Kodesh, A., Goldberg, Y., Rotstein, A., Weinstein, G., Reichenberg, A., Sandin, S. & Levine, S. Z. (2020). Risk of dementia and death in very-late-onset schizophrenia-like psychosis: A national cohort study. *Schizophr Res*, <https://doi.org/10.1016/j.schres.2020.07.020>.

Li, S., **Weinstein, G.**, Zare, H., Teumer, A., Völker, U., Friedrich, N., Knol, M. J., Satizabal, C. L., Petyuk, V. A., Adams, H. H. H., Launer, L. J., Bennett, D. A., De Jager, P. L., Grabe1, H. J., Ikram, M. A., Gudnason, V., Yang, Q. & Seshadri, S. (2020). The genetics of circulating BDNF: towards understanding the role of BDNF in brain aging. *Brain Communication*, fcaa176. Shared first authorship.

Lutski, M., **Weinstein, G.**, Goldbourt, U., Tanne, D. (2020). Adherence to Mediterranean diet and subsequent cognitive decline in men with cardiovascular disease. *Nutr Neurosci*, 22, 1-9.

Schwartz, E & **Weinstein, G.** (2020). Early-life food deprivation and cognitive performance among old age Europeans. *Maturitas*, 141, 26-32.

Shuval, K., Sahar, L., Gabriel, K. P., Knell, G., **Weinstein, G.**, Gafni Gal, T., Lobelo, F., DiPietro, L. (2020). Sedentary behavior, physical inactivity, and metabolic syndrome: Pilot findings from the rapid assessment disuse index study. *J Phys Act Health*, 9:1-5.

Sznitman, S. R., Vulfsons, S., Meiri, D., **Weinstein, G.** (2020). Medical cannabis and insomnia in older adults with chronic pain. *BMJ Support Palliat Care*, 20. <https://doi:10.1136/bmjspcare-2019-001938>.

Sznitman, S. R., Vulfsons, S., Meiri, D., & **Weinstein, G.** (2020). Medical cannabis and cognitive performance in middle to old adults treated for chronic pain. *Drug Alcohol Rev* 2020, Sep 22.

Vered, S., Paz, S., Negev, M., Tanne, D., Zucker, I., & **Weinstein, G.** High ambient temperature in summer and risk of stroke or transient ischemic attack: A national study in Israel. *Environ Res*, 187, 109678.

Weinstein, G., Davis-Plourde, K. L., Beiser, A. S., Seshadri, S. (2020). Author response: Non-alcoholic fatty liver disease, liver fibrosis score and cognitive function in middle-aged adults: The Framingham study. *Liver Int.*, 40(5), 1240.

Weinstein, G., & Sznitman, S. R. (2020). The implications of late-life cannabis use on brain health: A mapping review and implications for future research. *Ageing Research Review*, 59. <https://doi:10.1016/j.arr.2020.101041>.

Recent and active Grants:

Weinstein, G., Negev, M., & Paz, S. (co-PIs). Using satellite-based spatiotemporal resolved air temperature exposure to study the association between weather conditions and risk of stroke. Funded by the Israel Science Foundation (ISF).

Weinstein, G. The neuropsychiatric implications of Covid-19- an international study. Sponsored by the Canadian friends of Haifa University.

Prof. Shira Zelber-Sagi

Publications:

Deutsch, L., Houri, I., Ben-Ari, Z., Shlomai, A., Veitsman, E., Cohen-Ezra, O., Issachar, A., Mor, O., Gozlan, Y., Bruck, R., Menachem, Y., **Zelber Sagi S.**, Katchman, H., Shibolet, O.

(2020). Ombitasvir/paritaprevir/ritonavir & dasabuvir \pm ribavirin following protease inhibitors failure - a prospective multi-centre trial. *BMC Infect Dis.*, 20(1), 264.

Eslam, M., Newsome, P. N., Anstee, Q. M., Targher, G., Gomez, M. R., **Zelber-Sagi S.**, Wong, V. W., Dufour, J. F., Schattenberg, J., Arrese, M., Valenti, L., Shiha, G., Tiribelli, C., Yki-Järvinen, H., Fan, J. G., Gronbaek, H., Yilmaz, Y., Cortez-Pinto, H., Oliveira, C. P., Bedossa, P., Adams, L. A., Zheng, M. H., Fouad, Y., Chan, W. K., Mendez-Sanchez, N., Ahn, S. H., Castera, L., Bugianesi, E., Ratziu, V., George, J. (2020). A new definition for metabolic associated fatty liver disease: An international expert consensus statement. *Journal of Hepatology*, 73(1), 202-209.

Fliss-Isakov, N., **Zelber-Sagi, S.**, Ivancovsky-Wajcman, D., Shibolet, O., & Kariv, R. (2020). Ultra-processed food intake and smoking interact in relation with colorectal adenomas. *Nutrients*, 12(11), 3507. (The first and the second authors contributed equally to the paper).

GBD 2017 Cirrhosis Collaborators, **Zelber-Sagi, S.** (2020). The global, regional, and national burden of cirrhosis by cause in 195 countries and territories, 1990–2017: A systematic analysis for the Global Burden of Disease Study 2017. *Lancet Gastroenterol Hepatol*, 5(3), 245–266.

Gotlieb, N., Schwartz, N., **Zelber-Sagi, S.**, Chodick, G., Shalev, V., & Shibolet, O. (2020). Longitudinal decrease in platelet counts as a surrogate marker of liver fibrosis. *World journal of gastroenterology*, 26(38), 5849–5862.

Hayek, S., Derhy, S., Smith, M. L., Towne, S. D Jr, **Zelber-Sagi, S.** (2020). Patient satisfaction with primary care physician performance in a multicultural population. *Isr J Health Policy Res*, 9(1), 13.

Kridin, K., Jones, V. A., Patel, P. M., **Zelber-Sagi, S.**, Hammers, C. M., Damiani, G., Amber, K. T., & Cohen, A. D. (2020). Patients with pemphigus are at an increased risk of developing rheumatoid arthritis: A large-scale cohort study. *Immunologic research*, 68(6), 373–378.

Lazarus, J.V., Colombo, M., Cortez-Pinto, H., Huang, T. T., Miller, V., Ninburg, M., Schattenberg, J. M., Seim, L., Wong, V. W. S., **Zelber-Sagi, S.** (2020). NAFLD - sounding the alarm on a silent epidemic. *Nat Rev Gastroenterol Hepatol*, 17(7), 377-379.

Schonmann, Y., Yeshua, H., Bentov, I., **Zelber-Sagi, S.** (2020). Liver fibrosis marker is an independent predictor of cardiovascular morbidity and mortality in the general population. *Digestive and liver disease*.

Prof. Shira Zelber-Sagi (continue)

Publications (continue):

Salomone, F., Ivancovsky-Wajcman, D., Fliss-Isakov, N., Webb, M., Grosso, G., Godos, J., Galvano, F., Shibolet, O., Kariv, R., **Zelber-Sagi, S.** (2020). Higher phenolic acid intake independently associates with lower prevalence of insulin resistance and non-alcoholic fatty liver disease. *JHEP Reports: innovation in hepatology*, 2(2):100069.

Sarbagili-Shabat, C., **Zelber-Sagi, S.**, Fliss-Isakov, N., Ron, Y., Hirsch, A., Maharshak, N. (2020). Development and validation of processed foods questionnaire (PFQ) in adult inflammatory bowel diseases patients. *Eur J Clin Nutr.*, 74, 1653–1660.

Schonmann, Y., Yeshua, H., Bentov, I., **Zelber-Sagi, S.** (2020). Liver fibrosis marker is an independent predictor of cardiovascular morbidity and mortality in the general population. *Digestive and liver disease*.

Zelber-Sagi, S., Ivancovsky-Wajcman, D., Fliss-Isakov, N., Hahn, M., Webb, M., Shibolet, O., Kariv, R., Tirosh, O. (2020). Serum Malondialdehyde is associated with non-alcoholic fatty liver and related liver damage differentially in men and women. *Antioxidants*, 9(7), 578.

Recent and active Grants:

Zelber-Sagi, S. (PI), Tirosh, O. (Co-PI). Novel processed food compounds leading to metabolic alterations and liver damage: Evaluation in mouse models and humans. Funded by Chief Scientist Office, Ministry of Health.

Dr. Motti Haimi

Publications:

Haimi, M., Brammli-Greenberg, S., Baron-Epel, O. *et al.* (2020). Assessing patient safety in a pediatric telemedicine setting: A multi-methods study. *BMC Med Inform Decis Mak*, 20, 63. <https://doi.org/10.1186/s12911-020-1074-7>.

Haimi, M., Brammli-Greenberg, S., Waisman, Y., Stein, N., & Baron-Epel, O. (2020). The role of non-medical factors in physicians' decision-making process in a pediatric telemedicine service. *Health informatics journal*, 26(2), 1152–1176. <https://doi.org/10.1177/1460458219870660>.

Lerner, A., Matthias, T., **Haimi, M.** (2020). The gut feeling of the eyes: Gut-eye axis. *Harefuah*, 159(6), 455-457.

Prof. Rafael Carel

Publications:

Dahar, A., **Carel, R. S.**, Dar, G., Knoll, Z., Hazan, E. (2020). The effectiveness of an aerobic exercise training on patients with neck pain during a short and long term follow-up: A prospective double-blind randomized control trial. *Clin. Rehab*, 34, 1-19.

Marom, B., Sharabi, M., **Carel, R. S.**, Razon, N. (2020). Returning to work after a hand injury. Does ethnicity matter?. *PLoS ONE*, 15(3): e0229982.

Prof. Diane Levin-Zamir

Publications:

Levin-Zamir, D., Baron-Epel, O. Health literacy in Israel. In R. A. Logan & E.R. Siegel (Eds.), *Health literacy in clinical practice and public health: new initiatives and lessons learned at the intersection with other disciplines* (pp. 220-228). Studies in Health Technology Informatics, 269, 2020.

Saboga-Nunes, L., **Levin-Zamir, D.**, Bittlingmayer, U. H., Contu, P., Pinheiro, P., Ivassenko, V. et al. (2020). A Health promotion focus on COVID-19: Keep the Trojan horse out of our health systems: Promote health for ALL in times of crisis and beyond! EUPHA-HP, IUHPE, UNESCO Chair Global Health & Education. Retrieved from (http://www.iuhpe.org/images/IUHPE/Advocacy/COVID19_HealthPromotion.pdf).

Tesler, R., Kolobov, T., Korn, K., Shuval, K., **Levin-Zamir, D.**, Marques, A., Harel Fisch, Y. (2020). Trends in tobacco use among children and adolescents in Israel, 1998-2015. *International journal of environmental research and public health*, 17(4), 1354.

Uliana Kostareva, U., Albright, C. L., Berens, E. M., **Levin-Zamir, D.**, Aringazina, A., Lopatina, M., Ivanov, L. L., Sentell, T. L. (2020). International perspective on health literacy and health equity: Factors that Influence the former Soviet Union immigrants. *Int. J. Environ. Res. Public Health*, 17(6), 2155. <https://doi.org/10.3390/ijerph17062155>.

Prof. Shai Linn

Publications:

Linn, S. (2020). The accuracy of Corona virus infection testing. *Study of the Organization and Human Resource Quarterly* (Hebrew), 2, 41-53.

Linn, S., Tzafrir, S., & Gueron, S. (2020). The sky has its limits in COVID-19 testing. *Rambam Maimonides medical journal*, 11(3), e0020. <https://doi.org/10.5041/RMMJ.10412>.

Egozy, L., Gueron, S., **Linn, S.**, Tzafrir, S. (2020). Institutional trust and the Corona crisis. *Study of the Organization and Human Resource Quarterly* (Hebrew), 2, 6-16.

Dr. Maya Negev

Publications:

Frumkin, H., Bordia Das, M., **Negev, M.**, Rogers, B., Bertollini, R., Dora, C. & Desai, S. (2020). Protecting health in dry cities: Considerations for policy makers. *BMJ - British Medical Journal*, 371. <https://doi.org/10.1136/bmj.m2936>.

Hochman, A., Abdeen, A. M., Levine, H., Pinto, J. G., **Negev, M.**, Alpert, M., Abdeen, Z. (2021). The relationship between cyclonic weather regimes and seasonal Influenza over the Eastern Mediterranean. *Science of the Total Environment*, 175, 141686.

Linares, C., Díaz, J., **Negev, M.**, Martínez, G. S., Debono, R. & Paz, S. (2020). Impacts of climate change on the public health of the Mediterranean Basin population - Current situation, projections, preparedness and adaptation. *Environmental Research*, 182, 109107.

Negev, M. (2020). Air pollution policy in Israel. *Atmosphere*, 11(10), 1065.

Negev, M., Dahdal, Y., et al. (2020). Regional lessons from the COVID-19 outbreak in the Middle East: From infectious diseases to climate change adaptation. *Science of the Total Environment*, 768, 144434. <https://doi.org/10.1016/j.scitotenv.2020.144434>

Negev, M., Khreis, H., Rogers, B., Shaheen, M., Erell, E. (2020). City design for health and resilience in hot and dry climates. *BMJ – British Medical Journal*, 371, m3000. <https://doi.org/10.1136/bmj.m3000>.

Raviv, O., Zemah Shamir, S., Izhaki, I., Sagie, H., **Negev, M.**, Mazor Tregman, M., Collins-Kreiner, N., Mansfeld, Y., Lotan, A. (2020). The socioeconomic value of multiple ecosystem types at a biosphere reserve as a baseline for one holistic conservation plan. *Ecosystem Services*, 41, 101043.

Teschner, N., Sinea, A., Vornicu, A., Abu Hamed, T., **Negev, M.** (2020). Extreme energy poverty in the urban peripheries of Romania and Israel. *Energy Research & Social Science*, 66, 101512.

Vered, S., Paz, S., **Negev, M.**, Tanne, D., Zucker, I., Weinstein, G. (2020). High ambient temperature and stroke risk: A national study of Israeli adults. *Environmental Research*, 187, 109678.

Recent and active Grants:

Negev, M., Weinstein, G., Paz, S. Using satellite-based spatiotemporal resolved air temperature exposure to evaluate the association between weather conditions and risk of stroke. Funded by Israel Science Foundation.

Dr. Maya Negev (continue)

Recent and Grants (continue):

Negev, M., Paz, S., Nouman, H., Zohar, M. and Levine, H. Developing urban community resilience and spatial planning schemes for emergency readiness. Funded by Ministry of Science and Technology (Through the National Knowledge and Research Center for Emergency Preparedness)

Negev, M., Kaphzan, H. Delphi study of telepsychiatry policy. Funded by Israel National Institute for Health Policy Research.

Negev, M., Ayalon, O. Determinants of littering in forests and parks. Funded by Jewish National Fund.

Negev, M., Gesser-Adelsburg, A. Earthquake preparedness experiment for developing strategies to motivate the Israeli public's seismic adjustment behavior. Funded by Ministry of Science and Technology

Negev, M. Chemicals in children's products and lead in paint: Quantitative analysis and regulatory assessment. Funded by Environmental Health Fund.

Dr. Sharon Nahmani

Publications:

נחמני, ש. ועשהאל, ע. (2020). "בין לבין" - הקבוצה כמרחב מעברי לבחינה של עמדה אמביוולנטית ביחס לטיפול בהפרעות אכילה. **שיחות**, ל"ד, 224-237.

Dr. Maya Peled-Raz

Publications:

פלד-רז, מ. (2020). מסגרת אתית לקבלת החלטות, בהקצאת משאבי הנשמה מצומצמים, במהלך משבר נגיף הקורונה. **הרפואה**, 159(4), 235-239.

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Prof. Lital Keinan-Boker

Publications:

Beglaibter, N., Zelekha, O., **Keinan-Boker, L.**, Sakran, N., Mahajna, A. (2020). Practices and attitudes of bariatric surgeons in Israel during the first phase of the COVID-19 pandemic. A nation-wide survey. *Israel Journal of Health Policy Research*, 9(1), 59.

Ben-Zion Berliner, M., Haim Katz, L., Derazne, E., Levine, H., **Keinan-Boker, L.**, Benouaich-Amiel, A., Gal, O., Kanner, A., Laviv, Y., Honig, A., Siegal, T., Mandel, J., Twig, G., Yust-Katz, S. (2020). Height as a risk factor in meningioma: A study of 2 million Israeli adolescents. *BMC Cancer*, 20(1), 786.

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Glatman-Freedman, A., Pando, R., Sefty, H., Omer, I., Rosenberg, A., Drori, Y., Nemet, I., Mendelson, E., **Keinan-Boker, L.**, Mandelboim, M. (2020). Predominance of a drifted influenza A(H3N2) clade and its association with influenza vaccine effectiveness variations by age, influenza season 2018-2019. *Vaccines (Basel)*, 8(1), 78.

Izhakovich, E., **Keinan-Boker, L.**, Barchana, M., Shacham, Y., Yaish, I., Carmel Neiderman, N. N., Fliss, D. M., Stern, N., Meyerovitch, J. (2020). Long-term all-cause mortality and its association with cardiovascular risk factors in thyroid cancer survivors: An Israeli population-based study. *BMC Cancer*, 20(1), 892.

Keinan-Boker, L., Twig, G., Klaitman-Meir, V., Derazne, E., Shina, A., Levine, H., Kark, J. D. (2020). Adolescent characteristics and incidence of pre-malignant disease and invasive tumors of the cervix. *International Journal of Gynecological Cancer*, 30, 959-968.

Prof. Lital Keinan-Boker (continue)

Publications (continue):

NCD Risk Factor Collaboration (NCD-RisC). (2020). Height and body-mass index trajectories of school-aged children and adolescents from 1985 to 2019 in 200 countries and territories: A pooled analysis of 2181 population-based studies with 65 million participants. *Lancet*, 396, 1511-1524.

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Simchoni, M., Hamiel, U., Pinhas-Hamiel, O., Zucker, I., Cukierman-Yaffe, T., Lutski, M., Derazne, E., Beer, Z., Behar, D., **Keinan-Boker, L.**, Mosenzon, O., Tzur, D., Afek, A., Tirosh, A., Raz, I., Twig, G. (2020). Adolescent BMI and early-onset Type 2 Diabetes among Ethiopian immigrants and their descendants: A nationwide study. *Cardiovascular Diabetology*, 19(1), 168.

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Recent and active Grants:

Keinan-Boker, L. (co-PI), Berman, T. (PI). Biomonitoring in Israel. Funded by Environment and Health Fund (EHF).

Keinan-Boker, L. (co-PI), Shasha, S. & Offer, M (PIs). Long-term health outcomes in offspring of Holocaust survivors. Funded by Israeli Ministry of Science.

Dr. Geffen Kleinstern

Publications:

Kleinstern, G., Camp, N. J., Berndt, S. I., Birmann, B. M., Nieters, A., Bracci, P. M., McKay, J. D., Ghesquière, H., Lan, Q., Hjalgrim, H., et al. (2020). Lipid trait variants and the risk of non-Hodgkin lymphoma subtypes: A Mendelian randomization study. *Cancer Epidemiology, Biomarkers & Prevention : A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology*, 29(5), 1074–1078.

Kleinstern, G., O'Brien, D. R., Li, X., Tian, S., Kabat, B. F., Rabe, K. G., Norman, A. D., Yan, H., Vachon, C. M., Boddicker, N. J., et al. (2020). Tumor mutational load predicts time to first treatment in chronic lymphocytic leukemia (CLL) and monoclonal B-cell lymphocytosis beyond the CLL international prognostic index. *American Journal of Hematology*, 95, 906–917.

Kleinstern, G., Rishi, A., Achenbach, S. J., Rabe, K. G., Kay, N. E., Shanafelt, T. D., Ding, W., Leis, J. F., Norman, A. D., Call, T. G., et al. (2020). Delineation of clinical and biological factors associated with cutaneous squamous cell carcinoma among patients with chronic lymphocytic leukemia. *Journal of the American Academy of Dermatology*, 83(6), 1581–1589.

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Rottenstreich, A., Zacks, N., **Kleinstern, G.**, Levin, G., Sompolsky, Y., Mankuta, D., Ezra, Y., Rottenstreich, M., Yagel, S., and Kalish, Y. (2020). Planned induction versus spontaneous delivery among women using prophylactic anticoagulation therapy: A retrospective study. *BJOG: An International Journal of Obstetrics and Gynaecology*, 127, 1241–1248.

Shanafelt, T. D., Kay, N. E., Parikh, S. A., Achenbach, S. J., Lesnick, C. E., Hanson, C. A., **Kleinstern, G.**, Olson, J. E., Norman, A. D., Rabe, K. G., et al. (2020). Risk of serious infection among individuals with and without low count monoclonal B-cell lymphocytosis (MBL). *Leukemia*.
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Yan, H., Tian, S., **Kleinstern, G.**, Wang, Z., Lee, J. H., Boddicker, N. J., Cerhan, J. R., Kay, N. E., Braggio, E., and Slager, S. L. (2020). Chronic lymphocytic leukemia (CLL) risk is mediated by multiple enhancer variants within CLL risk loci. *Human Molecular Genetics*, 29, 2761–2774.

Prof. Sharon Sznitman

Publications:

Sznitman, S. R. (2020). Trends in medical cannabis licensure, Israel, 2013-2018. *Drug and Alcohol Review*, 39(6), 763-767.

Sznitman, S. R., Pinsky-Tali, L., Salameh, M., Moed, T. & Bentur Y. (2020). Cannabis and synthetic cannabinoid exposure reported to the Israel Poison Information Center: Examining differences in exposures to medical and recreational compounds. *International Journal of Drug Policy*, 2020 Mar;77:102711. doi: 10.1016/j.drugpo.2020.102711. Epub 2020 Feb 29.

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Sznitman, S. R., Vulfsons, S., Meiri, D., & Weinstein, G. (2020). Medical cannabis and insomnia in older adults with chronic pain: A cross-sectional study. *BMJ Supportive & Palliative Care*, 20. [https://doi:10.1136/bmjspcare-2019-001938](https://doi.org/10.1136/bmjspcare-2019-001938). 10 pages.

Weinstein, G., & **Sznitman, S. R.** (2020). The implications of late-life cannabis use on brain health: A mapping review and implications for future research. *Ageing Research Review*, 59. [https://doi: 10.1016/j.arr.2020.101041](https://doi.org/10.1016/j.arr.2020.101041). 15 pages.

Zarhin, D., Negev, M., Vulfsons, S., & **Sznitman, S. R.** (2019). "Medical cannabis" as a contested medicine: Fighting over epistemology and morality. *Science, Technology, & Human Values*. <https://doi.org/10.1177/0162243919862866>.

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Zolotov, Y., Vulfsons, S., & **Sznitman, S. R.** (2019). Predicting physicians' intentions to recommend medical cannabis. *Journal of Pain and Symptom Management*, 58(3), 400-407. <https://doi.org/10.1016/j.jpainsymman.2019.05.010>.

Recent and active Grants:

Sznitman, S. R. & Lewis, N. (Co-PIs) Developing and testing media campaign messages to reduce the risk of cannabis-impaired driving. Funded by the Israeli Insurance Funds.