Health and Happiness
What’s happening???

Pekka Mustonen
MD, PhD

Duodecim Medical Publications Ltd. / Finnish Medical Society Duodecim
POB 713, FIN-00101 Helsinki, Finland

pekka.mustonen@duodecim.fi
Founded 1881
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Duodecim Medical Publications Ltd. 1984
We publish a national health portal for the health care professionals.

In 2011 more than 50 million opened articles!
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In 2011 more than 40 million opened articles!
Life at Stake – how long you wish to live?

A TV-program aiming to make a change in health behaviors!

> 500 000 people took the test! (>10% of the population)
How to live 40-years longer?

Finrisk-algoritm

- Blood pressure
- Cholesterol
  → 11 years

- Fruits, vegetables, calories
- Physical activity
  → 8 years

- No smoking
- No alcohol-related problems
  → 13 years

- Optimism, happiness
- Life-satisfaction
- Stress-management
  → 9 years

Question remains how these "confounding" variables are interrelated?
Why should I live Long?
When do the best years of life begin?

> 300 000 Finns answered this to this question!
In 2009 the second production term of Life at stake:

**The secret of happiness.**

22 lifestyle questions and 50 questions exploring psychological wellbeing

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**The Happiness Project**

Would you like to be happier? According to research, you can increase your level of happiness simply by changing the way you think and act. The Happiness Project is a unique TV format which tries to unearth the secrets of happiness. A lonely overweight artist, widowed single-parent, workaholic... Five people take part in a fascinating televised experiment. During six months they try methods of the school of positive psychology to increase a person's level of happiness. The happiness test, developed carefully by qualified and experienced professionals, is made available to the public online. The show aired on YLE TV1 in Finland this Autumn and performed well, regularly beating the slot average.
Results
Self reported building blocks of happiness:

**Health**
- Own serious illness (n= 700) 61 p.
- Very unsatisfied with own health 29 p.

**Couple of more examples:**
- Money & wealth (Top 20%) 69 p.
- Money and wealth (Lowest 20%) 64 p.
- Married, > 2 children 68 p.
- Married, no children 68 p.
- Single, female 63p.
- Single, male 57 p.
- Unsatisfied with social relations 37 p.
Happiness skills:
- I am very optimistic about the future
- I find it very easy to forgive
- I enjoy helping other people
- I feel gratitude
- I have clear goals in my life
- I don't have clear goals in their life
- I am very pessimistic about the future
- I don't feel any gratitude

Conclusion:
If you don't have them it's very difficult to be happy!

Good news:
You can develop the happiness-skills by training!

40-50% of happiness can be learned!
Data-analysis

We divided the people into two groups based on how the replied tuo the question "I have a strong confidence in the future".

Pekka Positiivinen (luokat 5, 6 ja 7)
Niilo Negatiivinen (luokat 1, 2 ja 3)

We placed the median-answers of the two groups into the Finrisk-calculator predicting the average length of life.
**Weekly exercise level:**

"Kuinka paljon keskimäärin liikut ja rasitat itseäsi ruumiillisesti vapaa-aikana?"

- Vapaa-aikanani luen, katselen televisiota ja suoritan askareita, joissa en paljonkaan liiku ja jotka eivät rasita minua ruumiillisesti.

- Vapaa-aikanani kävelen, pyöräilen tai liikan muulla tavalla vähintään 4 tuntia viikossa. Tähän lasketaan kalastus ja metsästys, kevyt puutarhatyö yms., mutta ei työmatkoja.

- Harrastan vapaa-aikanani varsinaista kuntoliikuntaa, kuten juoksemista, lenkkeilyä, hiihtoa, kuntovoin misteluja, uintia, pallopelejä tai teen rasittavia puutarhatöitä tai muuta vastaavaa keskimäärin vähintään 3 tuntia viikossa.

- Harjoittele vapaa-aikanani kilpailumielessä säännöllisesti useita kertoja viikossa juoksua, suunnistusta, hiihtoa, uintia, pallopelejä tai muita rasittavia urheilumuotoja.
Mean daily consumption of cigarettes was 3 x bigger in the group of the Negative than in the group of the Positive.
Difference in the average life-length prediction 11 -15 years!
Income inequality and mortality: importance to health of individual income, psychosocial environment, or material conditions

John W Lynch, George Davey Smith, George A Kaplan, James S House

Studies on the health effects of income inequality have generated great interest. The evidence on this association between countries is mixed, but income inequality and health have been linked within the United States, Britain, and Brazil. Questions remain over how to interpret these findings and the mechanisms involved. We discuss three interpretations of the association between income inequality and health: the individual income interpretation, the psychosocial environment interpretation, and the neo-material interpretation.

Methods
We reviewed the literature through traditional and electronic means and supplemented this with correlational analyses of gross domestic product and life expectancy and of income inequality and mortality trends based on data from the World Bank, the World Health Organization, and two British sources.

The individual income interpretation
According to the individual income interpretation, aggregate level associations between income inequality and health reflect only the individual level association between income and health. The curvilinear relation between income and health at the individual level is

Summary points

Income inequality has generally been associated with differences in health

A psychosocial interpretation of health inequalities, in terms of perceptions of relative disadvantage and the psychological consequences of inequality, raises several conceptual and empirical problems

Income inequality is accompanied by many differences in conditions of life at the individual and population levels, which may adversely influence health

Interpretation of links between income inequality and health must begin with the structural causes of inequalities, and not just focus on perceptions of that inequality

Reducing health inequalities and improving public health in the 21st century requires strategic investment in neo-material conditions via more equitable distribution of public and private resources
Education vs. Income of the household

Blue < 10 years
Red > 16 years
> 30 % better income for the positive!

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<tr>
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<th>median</th>
<th>mean</th>
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<tbody>
<tr>
<td>Positive (5-7) N=47921</td>
<td>40000 €</td>
<td>51856,0 €</td>
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<tr>
<td>Negative (1-3) N=9092</td>
<td>30000 €</td>
<td>38389,3 €</td>
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No difference in education!

Positive vs. Negative

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<td>Education</td>
<td>14</td>
<td>14</td>
<td>4.76</td>
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<tbody>
<tr>
<td>Education</td>
<td>14</td>
<td>13.54</td>
<td>4.8</td>
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Work stress experience

Almost all the time
Seldom if ever

Positive 11 % not at work
Negative 19 % not at work
I am satisfied with my socioeconomic status?

- **Fully agree**
- **Fully disagree**

- Positive (5-7) belonging to the lowest income quartile (mean 4.8)
- Negative (1-3) belonging to the highest income quartile (mean 4.1)
Grant study of Harvard students since 1938:
(George Vaillant, MD, Professor of Psychiatry Harvard Medical School)

Two best predictors for long life, good health and life-satisfaction:

1. Warm Childhood
2. Overall College Soundness
3. Empathic Coping Style (age 20-35)
4. Warm Adult Relationships (age 30-45)
Satisfaction with social relationships

Positive (5-7) vs. Negative (1-3)

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<th>sd</th>
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<tr>
<td>ET01</td>
<td>6</td>
<td>5,44</td>
<td>1,2</td>
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<tr>
<td>ET01</td>
<td>4</td>
<td>3,75</td>
<td>1,59</td>
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7 = Very satisfied
6 = Satisfied
4 = not satisfied / not unsatisfied
2 = Unsatisfied
1 = Very unsatisfied
Marriage (1-3 vs. 5-7)

Not married

40% Posit.
25% Negat.

Problems in marriage?

Negat.  Posit.

Almost all the time  Sometimes  Seldom
Can you learn Positivity or Happiness?

Yes!

- We have a long experience from therapies, executive training programs, positive psychology methods, etc.

- Functional schemes, reactions, attitudes and control of negative emotions can be developed and learned

- Pre-requisite is own interest, activity, first steps and feelings of success...
The How of Happiness

Environment 10%
Genetic 50%
Attitudes, habits, Reactions... 40%

Sonya Lyubomirsky, 2007
From theory to Implementation…
PHR as an integrated part of the EHR
- Patients right to see his/her own dg`s, drugs, labs, etc.

Empowerment by context-sensitive patient information management
Voiko masennusta hoitaa ja ehkäistä itse?

Masennus
2.2.2011
Jyrki Tuulanen

- Positiivisuuden kasvattaminen
- Töpumisen edistaminen

Masennusosiaalisuussa on hankalaa, että oireet ovat toipumisen esteitä. Olisi hyvä syödä monipuolisesti, nukuttaa hyvin, olla aktiivinen ja ajattela realistisesti. Masennuksen tyypillisiä oireita ovat työ, henki, ruokahalut, unettomuus ja unihäiriöt, voimattomuus ja negatiiviset ajatteluavut (ks. «Masennuslaita oireet ja diagnos»). Toveliivasta olisi hyvä pitää yllä, mutta masennusliitale on ominaista toivotomuus.

Oman elämän hahmotamisessa voi ihan aluski esittää itselleen seuraavat kysymykset: Onko minulla olut elämäni aikana alaviestä tai masentunut olen ja voin päästä se on haitattu elämäni? Voinko tärkeän minulle on voida paremmin? Haluanko laittaa hyvän valon lisäämisen elämäni asiallistal tärkeimpänä tavoitteet jotkoon?

Positiivisuuden kasvattaminen

Masennussairauden kanssa kampaillea ei usko enää voivansa kokea mielihyviää, mielenkiintoa asioiden eikä iloa tai nemoaakaan. Positiiviset tunnekemukset ongava meiltä kohden, mikä on melkeen hyväksy.

Masentunut ei kyvene siirtymään positiivisiin tunnekemukseen. Masennus vie ihmiselä halun olla sosiaalisissasi tekemissä muiden kanssa.

Masennusairaus asettaa ihmisen naastavan tehtävän eteen: kuinka kasvattaa positiivisten tunnekemosten määrää ja vähentää negatiivisen tunnekemukseen laajakaa? Masennuksen omatoimisessa holtamisessa ja eräisissä kannatte pyritä toimimaan kolmella suunnalla:

1. Pyrkia pitamaan elämä aktiivisena – tai masennustilan jälkeen pyrkia aktiivisena sitä uudele (ks. «Masennusointi: vahentaminen elämää aktivoimalta»).
2. Pyrkia muunnamaan ja hallitsemaan elämän ja ajetta negatiivisesti (ks. «Masennusointi: liittyvän kielteisyyden voittaminen»).
**Basic information**

**Sex**
What is your sex? (*)
- [ ] Man
- [ ] Woman

**Age**
How old are you? (*)

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<tr>
<th>Age (years)</th>
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<tr>
<td>25</td>
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**Height**
How tall are you? (*)

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<th>Height (cm)</th>
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<td>177</td>
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**Weight**
How much do you weigh in light clothing? (*)

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<tr>
<th>Weight (kg)</th>
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<tr>
<td>68</td>
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**Waist Measurement?**
What is your waist measurement?  

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<tr>
<th>Waist Measurement (cm)</th>
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<td>80</td>
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**Education**
For how many years in total have you studied as a full-time student during your life?

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<th>Years</th>
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<td>18</td>
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Your lifestyle and living conditions influence your life expectancy. According to estimates, men in your age group with similar lifestyles achieve on the average about the age of 60. The chart below shows estimated life expectancy and also the average remaining healthy life years and ailing years.

**Life expectancy**

If you were to change your lifestyle to most favorable, you might increase your healthy life years by 0.

Ailing years are characterised with sicknesses, the likelihood of which can also be estimated from your health habits. The chart shows the risk during your lifetime of suffering a heart attack, stroke, dementia or diabetes. At the same time the chart shows your disease risk, if your lifestyle were as healthy as possible.
Health

Blood pressure
You should measure your blood pressure for risk of vascular diseases. To test your blood pressure, turn to your local health clinic or occupational health care.

Cholesterol
You should measure your level of cholesterol for risk of vascular diseases. Ask for a cholesterol measurement from your local health clinic or occupational health care.

Weight management

Weight
Based on the body mass index your weight is normal, which greatly promotes your health. Usually one's weight tends to accumulate over years. The upper level of a normal weight (body mass index 25), for you, 78.0 kg. Keep track of your weight so as not to exceed this. A healthy diet and physical exercise will help to prevent overweight.

Waist measurement
Abdominal obesity or the accumulation of excess weight around the waist increases the risk of disease. For men, the abdominal waist measurement limit is 100cm, the ideal being less than 94cm. Sometimes fat can accumulate around the waist and in the abdominal cavity by a few too many kilos, even though your BMI is still within the normal range.

Your waist measurement is under 94cm, which is ideal for health.

Diet

Vegetables, fruits and berries
Daily consumption of fruits and berries is good for your health.
SETTING OF GOALS

You can improve your health estimation by making changes to your way of living. The best changes are made, when you do them gradually, so that the renewed habit remains as part of your daily life. You should choose just 1-2 changes at first. When you have achieved permanent changes, you can choose some new targets.

For your chosen changes, you need to set a goal. Health coaching supports you in each part of your target for three months, giving you encouragement and feedback on your progress. In order for the program to give you personalized feedback, monitoring information needs to be recorded as regularly as possible. If required, after the monitoring, you could set yourself a new goal or choose some new things to change.

Weight management
For someone with a normal weight, weight loss is not necessary from a health point of view. However, it can still be a good idea to check that you are eating a healthy and varied diet.

Diet
By increasing the consumption of fresh vegetables, fruit and berries you can prevent cardiovascular diseases and reduce the risk of cancer diseases. In addition to this the consumption of vegetables and fruit helps with blood pressure and weight management.
Stress
We experience stress very individually in different situations. If you experience stress at work it may be due to unreasonable worker requirements and expectations. However, not all situations have available solutions, for example negotiating or cutting workload. Our own attitudes, interpretations and opinions affect the issue strongly.

You can't "control" stress, but the ability to tolerate stress can be developed. If you choose to do a training program, you receive two messages a week, which include stress tolerance exercises.

Life management
You can improve your mental well-being through exercises. According to studies they can enhance your stress tolerance, creativity and productivity, and combat depression. You may also experience an increase in energy and immunity levels. Choose one of the following exercises to begin with.
Electronic health coaching as an integrated part of the system (www, email, mobile...)!
Overview

Personal Targets:
- Exercise
- Sleep
- Stress
- Happiness

Personal devices / reporting
- Mobile Client
- SMS
- Web-user interface

EHR
- Patient data repository
- Rule-based health coaching (15 programs)
- Rule-based Decision support (EBMeDS - patient version)
- Feedback, messaging
- Alerts to view data or contact patient

EHR / Patient data repository
- Storage of the collected data.

DS-Server
- Professional user interface
  - Computer generated feedback and coaching
  - Physician/nurse feedback

Mobile Client
- Step counter
- Blood pressure
- Weight
Thank you!

“But, remember, you're responsible for your own happiness.”

by Leo Cullum
O'Connor, Betty
NHS Number: 052157-9456
Age: 65
Hospital number:

Diagnoses
30.06.2008 Non-insulin-dependent diabetes mellitus

Acute diagnoses
12.06.2008 Total cholecystectomy nec

Medication and dosage
12.06.2008 Enalapril 20mg tablets 1/day
30.06.2008 Simvastatin 40mg tablets 1/day

Measurements and target values
Height (cm) 179 cm (6/5/2008)
Weight (kg) 94 kg (6/2/2008)
BMI 29.3 (6/2/2008)
BP (Systolic) 138 mmHg (6/3/2008)
BP (Diastolic) 72 mmHg (6/3/2008)

Medicine allergies
Penicillin

Other allergies
Peanut

Special diet
Lactose-free

Lifestyle and risks
Smoking Yes Pack years: n/a
Risk of coronary heart disease 11%
Mortality risk of cardiovascular disease 13%

Decision support
DNA [0]
NOTES [0]
O'Connor, Betty
NHS Number: 052157-9456 Age: 30
Hospital number:

Diagnoses
30.06.2008 Non-insulin-dependent diabetes mellitus

Reminders:
- The patient has type 2 diabetes. Metformin is the primary choice for better glycemic control. As the glomerular filtration rate calculated with the MDRD formula is below normal range (14 ml/min), lower dosage should be considered. (cor00016)
- The patient has type 2 diabetes and no indication of ASA allergy or asthma. Based on current knowledge, ASA treatment is encouraged using a dose 100 mg daily. (cor00108)

Guidelines:
- Metabolic syndrome
- Newly diagnosed type 2 diabetes
- Diabetes: definition, differential diagnosis and classification
- Treatment and follow-up in type 2 diabetes
- Lifestyle education in type 2 diabetes
- Oral antidiabetic drugs in the treatment of type 2 diabetes
- Insulin therapy in type 2 diabetes

Acute diagnoses

Medication and dosage
12.06.2008 Enalapril 20mg tablets
30.06.2008 Simvastatin 40mg tablets

Medication and Drug Allergies from GP Systems
- Penicillin

Other allergies
- Peanut

Special diet
- Lactose-free

Lifestyle and risks
Smoking: Yes, Pack years: n/a
Risk of coronary heart disease: 11%
Mortality risk of cardiovascular disease: 13%