CSE440

Proposal

The Facts:

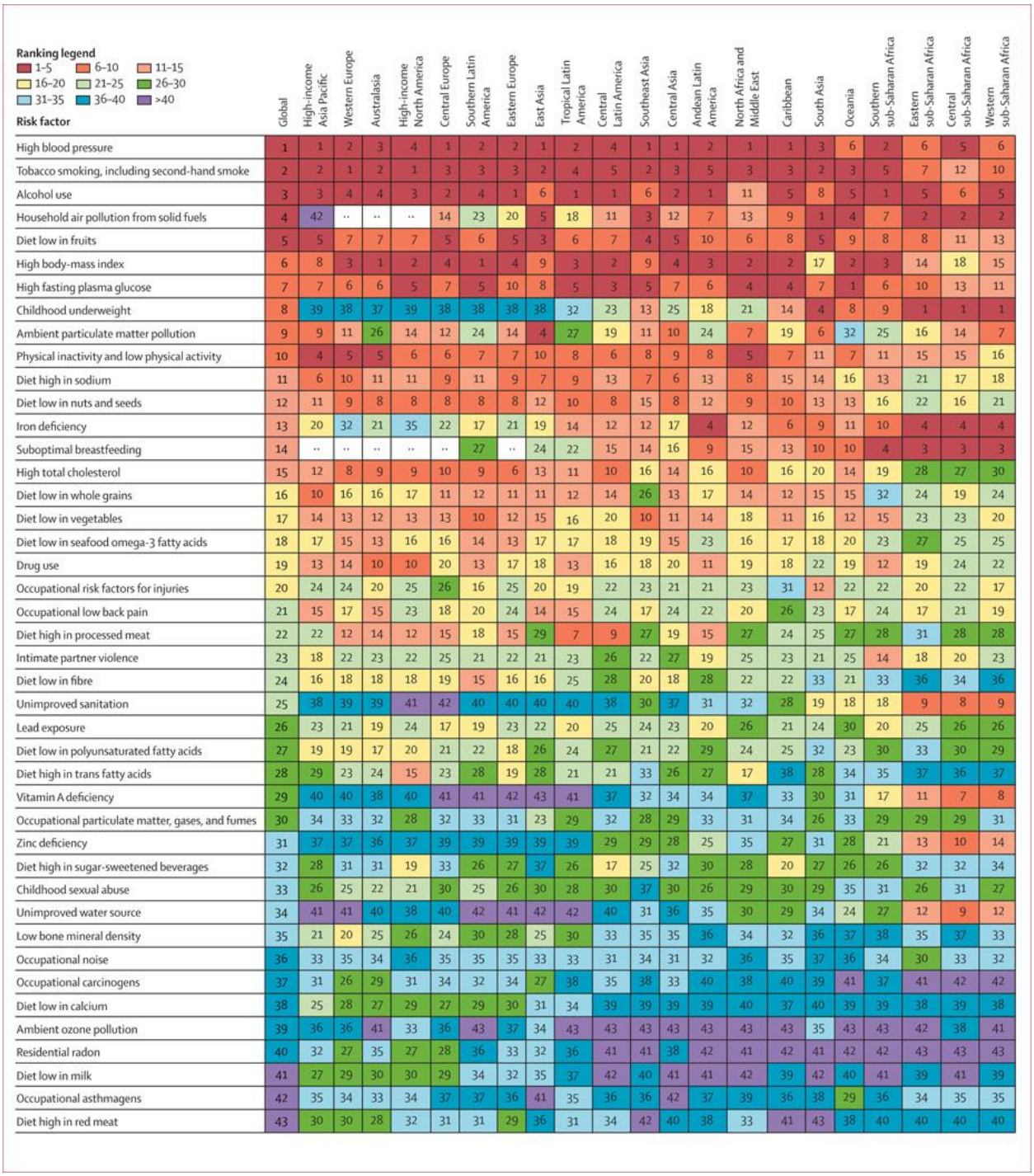
Drinking alcohol is immediately gratifying. It can be a social lubricant, or a silent friend. Some people drink too much, and let that friend outstay his welcome. As lighthearted as that might come off, alcohol abuse is no joke. Obvious physical maladies aside, alcoholism can also emotionally destroy the livelihood of those affected. The National Institute on Alcohol Abuse and Alcoholism reports that globally, alcohol misuse is the leading cause of premature death and disability for people between the ages of 15 and 49[1]. Furthermore, a report funded by the Bill and Melinda Gates Foundation placed alcohol use as the third largest "risk factor" that could lead to a reduced lifespan, as seen in the image below.

The Problem:

OK, we get it. Abusing alcohol is bad. However, drinking alcohol can be fun and relaxing, so telling everyone to abstain from imbibing is ridiculous. Therefore, we must aim for moderation. Setting out to "solve alcoholism" is, more or less, a fool's errand. However, I believe a manageable problem is that some people struggle with knowing at which point they have surpassed "moderation". I personally haven't taken any classes on the long term effects of alcohol and, let's face it -- a frequent alcohol user probably doesn't concern him or herself too much with the amount of alcohol they consumed last week or the week before that.

In the age of information, I believe personal informatics can play a major role in solving this problem. There is a large array of information that is never mined or utilized. By providing people with the tools to analyze their personal informatics could lead to preventing alcohol abuse.

1. SAMHSA. 2012 National Survey on Drug Use and Health (NSDUH). Table 5.8A—Substance Dependence or Abuse in the Past Year among Persons Aged 18 or Older, by Demographic Characteristics: Numbers in Thousands, 2011 and 2012. Available at: http://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabs2012/NSDUH-DetTabs2012/HTML/NSDUH-DetTabsSect5peTabs1to56-2012.htm#Tab5.8A



Ranking legend: 1–5, 6–10, 11–15, 16–20, 21–25, 26–30, 31–35, 36–40, >40

Risk factor	Global	High-income Asia Pacific	Western Europe	Australasia	High-income North America	Central Europe	Southern Latin America	Eastern Europe	East Asia	Tropical Latin America	Central Latin America	Southeast Asia	Central Asia	Andean Latin America	North Africa and Middle East	Caribbean	South Asia	Oceania	Southern sub-Saharan Africa	Eastern sub-Saharan Africa	Central sub-Saharan Africa	Western sub-Saharan Africa
High blood pressure	1	1	2	3	4	1	2	2	1	2	4	1	1	2	1	1	3	6	2	6	5	6
Tobacco smoking, including second-hand smoke	2	2	1	2	1	3	3	3	2	4	5	2	3	5	3	3	2	3	5	7	12	10
Alcohol use	3	3	4	4	3	2	4	1	6	1	1	6	2	1	11	5	8	5	1	5	6	5
Household air pollution from solid fuels	4	42	..	..	..	14	23	20	5	18	11	3	12	7	13	9	1	4	7	2	2	2
Diet low in fruits	5	5	7	7	7	5	6	5	3	6	7	4	5	10	6	8	5	9	8	8	11	13
High body-mass index	6	8	3	1	2	4	1	4	9	3	2	9	4	3	2	2	17	2	3	14	18	15
High fasting plasma glucose	7	7	6	6	5	7	5	10	8	5	3	5	7	6	4	4	7	1	6	10	13	11
Childhood underweight	8	39	38	37	39	38	38	38	38	32	23	13	25	18	21	14	4	8	9	1	1	1
Ambient particulate matter pollution	9	9	11	26	14	12	24	14	4	27	19	11	10	24	7	19	6	32	25	16	14	7
Physical inactivity and low physical activity	10	4	5	5	6	6	7	7	10	8	6	8	9	8	5	7	11	7	11	15	15	16
Diet high in sodium	11	6	10	11	11	9	11	9	7	9	13	7	6	13	8	15	14	16	13	21	17	18
Diet low in nuts and seeds	12	11	9	8	8	8	8	8	12	10	8	15	8	12	9	10	13	13	16	22	16	21
Iron deficiency	13	20	32	21	35	22	17	21	19	14	12	12	17	4	12	6	9	11	10	4	4	4
Suboptimal breastfeeding	14	..	..	..	..	..	27	..	24	22	15	14	16	9	15	13	10	10	4	3	3	3
High total cholesterol	15	12	8	9	9	10	9	6	13	11	10	16	14	16	10	16	20	14	19	28	27	30
Diet low in whole grains	16	10	16	16	17	11	12	11	11	12	14	26	13	17	14	12	15	15	32	24	19	24
Diet low in vegetables	17	14	13	12	13	13	10	12	15	16	20	10	11	14	18	11	16	12	15	23	23	20
Diet low in seafood omega-3 fatty acids	18	17	15	13	16	16	14	13	17	17	18	19	15	23	16	17	18	20	23	27	25	25
Drug use	19	13	14	10	10	20	13	17	18	13	16	18	20	11	19	18	22	19	12	19	24	22
Occupational risk factors for injuries	20	24	24	20	25	26	16	25	20	19	22	23	21	21	23	31	12	22	22	20	22	17
Occupational low back pain	21	15	17	15	23	18	20	24	14	15	24	17	24	22	20	26	23	17	24	17	21	19
Diet high in processed meat	22	22	12	14	12	15	18	15	29	7	9	27	19	15	27	24	25	27	28	31	28	28
Intimate partner violence	23	18	22	23	22	25	21	22	21	23	26	22	27	19	25	23	21	25	14	18	20	23
Diet low in fibre	24	16	18	18	18	19	15	16	16	25	28	20	18	28	22	22	33	21	33	36	34	36
Unimproved sanitation	25	38	39	39	41	42	40	40	40	40	38	30	37	31	32	28	19	18	18	9	8	9
Lead exposure	26	23	21	19	24	17	19	23	22	20	25	24	23	20	26	21	24	30	20	25	26	26
Diet low in polyunsaturated fatty acids	27	19	19	17	20	21	22	18	26	24	27	21	22	29	24	25	32	23	30	33	30	29
Diet high in trans fatty acids	28	29	23	24	15	23	28	19	28	21	21	33	26	27	17	38	28	34	35	37	36	37
Vitamin A deficiency	29	40	40	38	40	41	41	42	43	41	37	32	34	34	37	33	30	31	17	11	7	8
Occupational particulate matter, gases, and fumes	30	34	33	32	28	32	33	31	23	29	32	28	29	33	31	34	26	33	29	29	29	31
Zinc deficiency	31	37	37	36	37	39	39	39	39	39	29	29	28	25	35	27	31	28	21	13	10	14
Diet high in sugar-sweetened beverages	32	28	31	31	19	33	26	27	37	26	17	25	32	30	28	20	27	26	26	32	32	34
Childhood sexual abuse	33	26	25	22	21	30	25	26	30	28	30	37	30	26	29	30	29	35	31	26	31	27
Unimproved water source	34	41	41	40	38	40	42	41	42	42	40	31	36	35	30	29	34	24	27	12	9	12
Low bone mineral density	35	21	20	25	26	24	30	28	25	30	33	35	35	36	34	32	36	37	38	35	37	33
Occupational noise	36	33	35	34	36	35	35	35	33	33	31	34	31	32	36	35	37	36	34	30	33	32
Occupational carcinogens	37	31	26	29	31	34	32	34	27	38	35	38	33	40	38	40	39	41	37	41	42	42
Diet low in calcium	38	25	28	27	29	27	29	30	31	34	39	39	39	39	40	37	40	39	39	38	39	38
Ambient ozone pollution	39	36	36	41	33	36	43	37	34	43	43	43	43	43	43	43	35	43	43	42	38	41
Residential radon	40	32	27	35	27	28	36	33	32	36	41	41	38	42	41	42	41	42	42	43	43	43
Diet low in milk	41	27	29	30	30	29	34	32	35	37	42	40	41	41	42	39	42	40	41	39	41	39
Occupational asthmagens	42	35	34	33	34	37	37	36	41	35	36	36	42	37	39	36	38	29	36	34	35	35
Diet high in red meat	43	30	30	28	32	31	31	29	36	31	34	42	40	38	33	41	43	38	40	40	40	40

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1. SAMHSA. 2012 National Survey on Drug Use and Health (NSDUH). Table 5.8A—Substance Dependence or Abuse in the Past Year among Persons Aged 18 or Older, by Demographic Characteristics: Numbers in Thousands, 2011 and 2012. Available at: http://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabs2012/NSDUH-DetTabs2012/HTML/NSDUH-DetTabsSect5peTabs1to56-2012.htm#Tab5.8A