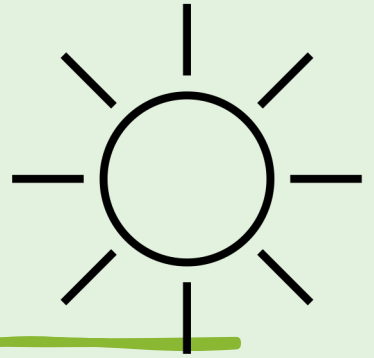
Weekly meeting

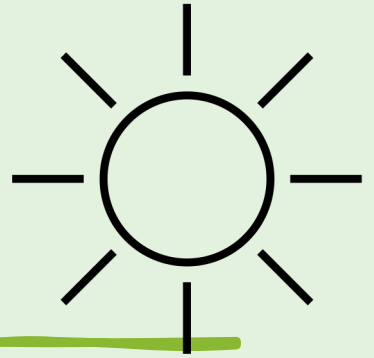
2023/05/22 (Mon.)

Contents



- Paper survey
- Rough paper review (just my interest)

Databases



- PubMed
- Google Scholar
- CiNii
- IEEE Xplore

Topics and Keywords

Main topics

- Weather, health condition

Keywords

- weather (atmospheric pressure, humidity, etc.)
- meteoropathy, health, pain, mood, depression, fatigue, headache, joint pain, asthma, etc.
- (option) blood component, menstruation, lunar cycle

Background

60 % of Japanese people suffer from symptoms related to weather [1].

Why?

⇒ It is widely thought because of lack of autonomic nerve balance, but it is not clarified.

We have to investigate the link between meteorological factors and health condition to solve the problems.

[1] Weathernews. Inc Survey of Meteoropathy: https://weathernews.jp/s/topics/202007/070165/

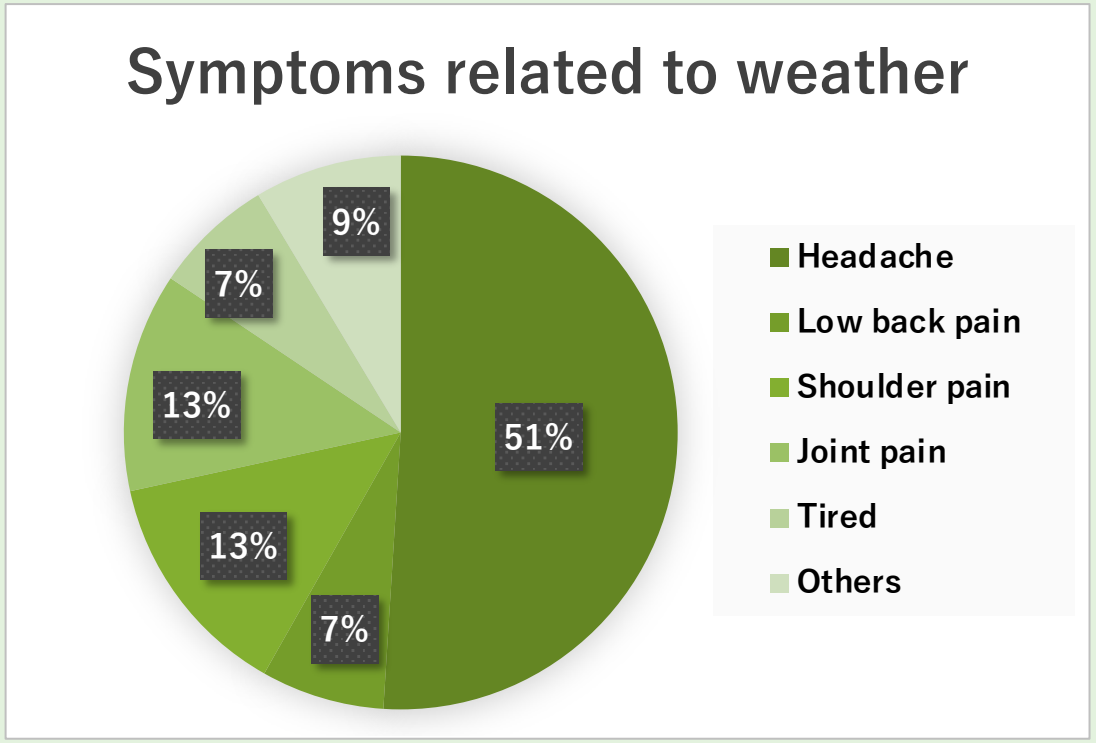


Figure 1. Survey of symptoms percentage [1] by Weathernews. Inc

Paper Survey Results: PubMed

Query	Result (papers)
weather AND health	54,410
weather AND pain	11,280
weather AND mood	23,183
weather AND depression	4,715
weather AND fatigue	1,717
weather AND headache	584
weather AND “joint pain”	68
weather AND asthma	2,472

replace AP with “atmospheric pressure”

Query	Result (papers)
AP AND health	1,354
AP AND pain	253
AP AND mood	463
AP AND depression	163
AP AND fatigue	77
AP AND headache	60
AP AND “joint pain”	9
AP AND asthma	89

Paper Survey Results: Google Scholar

Query	Result (papers)
weather AND health	562,000
weather AND pain	66,600
weather AND mood	66,700
weather AND depression	58,000
weather AND fatigue	161,00
weather AND headache	31,100
weather AND “joint pain”	13,800
weather AND asthma	53,800

replace AP with “atmospheric pressure”

Query	Result (papers)
AP AND health	223,000
AP AND pain	20,300
AP AND mood	12,300
AP AND depression	23,500
AP AND fatigue	23,900
AP AND headache	16,600
AP AND “joint pain”	1,410
AP AND asthma	17,100

Paper Survey Results: IEEE Xplore

Query	Result (papers)
weather AND health	1,089
weather AND pain	142
weather AND mood	39
weather AND depression	252
weather AND fatigue	101
weather AND headache	39
weather AND “joint pain”	8
weather AND asthma	68

replace AP with atmospheric pressure

Query	Result (papers)
AP AND health	125
AP AND pain	3
AP AND mood	-
AP AND depression	6
AP AND fatigue	4
AP AND headache	-
AP AND “joint pain”	-
AP AND asthma	4

Rough Paper Review - 1

Title:

Weather, ambient air pollution, and risk of migraine headache onset among patients with migraine

(DOI: 10.1016/j.envint.2019.105100)

Keywords: headache, migraine(偏頭痛), weather, air pollution

Rough Paper Review - 2

Introduction:

14% American adults have migraine. Weather and air pollution are often reported by patients as causes. Costs were about $8243 U.S. dollars (2013) per person per year for patients (98円/$: 約80万円!). There may be subgroup of patients who are susceptible to weather [1] and fine particulate matter such as PM2.5.

[1]: https://link.springer.com/article/10.1007/s00415-010-5798-7

Rough Paper Review - 3

Methods:

Screened by criteria 98 subjects (≥ 18 years old) that have the symptoms joined the diary-form questionnaire experiment for an average of 45 days.

Hourly temp, relative humidity, barometric pressure were collected and taken average.

PM2.5, SO2, NO2, O3, and CO (different sampling rate) were collected.

Techniques: moving average, anova, logistic regression, seasonality, auto-correlation, generalized estimating equation, cubic spline function

Rough Paper Review - 4

Results:

Higher relative humidity was associated with higher probability of migraine headache in warm season.

Higher levels of daily maximum 8-hour O3 and daily maximum 8-hour CO appeared to be associated with higher odds of migraine.

Rough Paper Review - 5

My opinion:

Screened participants are almost female (88 %).

-> Perhaps female tends to have migraine?

Experiment format was diary-form, not measuring biosignal.

-> Combination of them could be more informative.

There are so many references related to my study topics, so they are helpful information for me as well.

Next step

1. Paper survey (improve topics and keywords)

2. Make a schedule (option)

3. Do something for publishing a paper. (option)
    1. Review my undergraduate thesis
    2. Read references

Thank you :)