FEELING WELL AND HAPPY IN OUR OWN HOME

Household-articles are often purchased according to criteria of price and aesthetics, as well as usability. But in a way similar to the effects of textiles and food our health is directly concerned by the quality of these products. This topic is specifically suited to illustrate the interrelatedness of consequences produced by consumer-decisions.

1. Subject-specific information

1.1 Health

Attitudes which promote health:

- health-conscious nutrition
- physical activity
- psychic activity (e.g. mental training, meditation etc.)
- counselling for the public (e.g. smoker-counselling, psycho-social services, self-help groups…)
- frequency of (sweat-provoking) physical leisure-activities

Health is…

- not the mere absence of illness, but
- bodily, psychological, and social well-being (definition of WHO).

Factors which pose a risk to health	
individual risk-factors	biological risk-factors: body-size; body-weight; chronic illness; hereditary diseases;...individual behaviour: different addictions; wrong nutrition = deficiencies or overeating; high-performance sports;…
Environmental risk-factors (social, political, economic, and cultural environmental conditions	strain caused by work: stress; hard physical work; conflicts at work; multiple strain; environmental strain: noise, poisons in the living-space, pollutants in food; air-pollution; conflicts in the family; social disadvantages; lack of resources (e.g. water)

Factors which protect health	
individual protective factors	biologic protective factors:the weight one feels good with; no chronic disease; psychic balance;individual behaviour:conscious choice of food; no addictions; good time-management; regular movement; sufficient sleep; possibility of regular medical exams.
environmental protective factors	work, leisure-time, political measures:security at work; ergonomic work-place, partnership-division of household-work; sufficient leisure-time; social security; possibility of regular medical exams;environment, attitudes of reference-groups:no stress by noise; healthy living-space; no pollutants in the air; security in the family;no social disadvantages.

Individual well-being depends on how we cope with individual risk-factors, and on the presence of protective factors.

1.2 Attitudes which affect health: risk-factors and protective factors

It is necessary to collect data on attitudes which affect health, in order to establish a basis for carefully directed measures of prevention and respective political decisions.

Which activities are important for promoting and maintaining health?

- Healthy food: Food is considered important by most people, and even more so with increasing age. Nevertheless, it is a fact that nutritional practice has little to do with healthy food. Excessive weight poses a strong potential risk to health.
- Psychological activities: activities aimed at psychic well-being, and interest in mental techniques play an important role.
- Movement: a high percentage of the population considers movement important.
- Addictions: in spite of contrary measures the socially accepted addictions of smoking and drinking alcohol are still on the increase.
- Strain: psycho-social strain (mobbing at work, time-pressure, …), physical strain, and environmental strain create all stress and often cause psycho-somatic disorders [49].
- For most people the avoidance of risk-factors would mean a far-reaching change of their lifestyle , which is difficult to implement. For this reason the traditional model of risk-factors is losing its actuality and is superseded by the concept of protective factors, which means that health and illness are seen as parts of a complex process of change which moves back and forth between demands and resources [50]. A positive outlook on life, the capacity to handle stress, confidence in the social infrastructure, the feeling of being able to co-shape political decisions, and a healthy environment are sources of strength which make us resistant to illness.

1.3 Well-being and health in the home

For places of employment legislation has defined limits for pollutants, but for the private sphere they do not exist. "If for air in any given room the limit set for pollutants would be as clear and mandatory as at the place of work at least 10% of all apartments in Germany would need to be evacuated, and millions of people would not be allowed to enter their own house." The situation in Austria is similar.

Just like on the food-sector consumers are overtaxed by the multitude of new materials offered for construction and living-space, and find it hard to choose what is best suited to their own needs. Like for food, the price often determines what is bought. We should for this reason not be surprised by the fact that more and more dangerous chemicals sneak into our living-space.

1.3.1 Sources of undesired substances in the home

- air-pollutants enter from outside into the apartment
- air is contaminated by smoking in the apartment
- building materials, furniture and textiles, chipboard, wood-preservatives, floor covering, wallpaper, wall colours, and glue can emit pollutants
- poorly adjusted appliances (air conditioning, humidifier, gas-stove, heating, open fire) can pollute the air
- even properly used cleaning- or dissolving agents augment indoor-pollution
- high room-temperatures accelerate the emission of pollutants
- natural pollution by fungi, spores, bacteria, mites, viruses

- static electricity from home-textiles and clothing
- insufficient ventilation and electromagnetic fields affect our health negatively
- excessive noise caused by ourselves or by neighbours, traffic or factories

The following books and brochures offer suitable expert information for adults on most of the listed topics:

Konsument Extra (1995): Wohnen ohne Gift, Perlen Reihe

Konsument Extra (1998): Bettenkauf, Wien

Umweltberatung (1998): Wie reizend? Öko-logisch Waschen und Reinigen, Auswirkungen auf Umwelt und Gesundheit, Wien

Kammer für Arbeiter und Angestellte Niederösterreich (1992): Sauberer Haushalt- Verschmutzte Umwelt, Wien

1.3.2 Allergenic substances in the home

1.2.3.1 Mites

Their appearance has nothing to do with dirt. These spider-insects which measure about = 0,1 mm actually are natural inhabitants of our home-environment. They are noticed only when somebody shows an allergic reaction. Their main food consists of human skin-cuticles, of which we loose every day about 1,5 gram. This quantity is enough to feed more of a million of these tiny animals.

Mites like it humid and warm, and prefer dwellings with tightly insulated windows and poorly ventilated rooms. When humidity is about 70% and room-temperature is between 25 and 30°C the females live up to 150 days, and the males up to 100 days.

For a person suffering from this specific allergy the mite represents a life-long burden, because these fellow-lodgers never depart. They are most troublesome during the heating period. Most of them die because the air is dry and, but they leave large amounts of allergenic faeces.

What can be done against mites?

- Bedrooms should be well-ventilated and not warmer than 18°C;
- mattresses, upholstery, and carpets should frequently be vacuum-cleaned or steam-cleaned;
- bed-linen should be changed frequently;
- remove all dust-traps from the bedroom: upholstery, thick net curtains, bookshelves, plush- and rag-animals;
- floor-heating causes the mites to flee to the surface of carpets, from where they can be easily removed with the vacuum-cleaner;
- even floors made of stone, cork, or wood can be wiped;
- avoid fitted carpets.

1.3.2.2 Mould fungi

About one third of all people who suffer from allergies are troubled by allergenic substances originated by mould fungi.

There are different types of mold-fungi, which grow on organic material like bread and cheese, fruit, compost, wood and paper, and even on folders, books, and leather. The mold - not to speak of the allergenic substances - can not always be seen with the naked eye. The allergenic substances are in the spores of the fungus, from whence they are spread into the air and on food.

Mould fungi know no frontiers. The same type can be found in Alaska and in the Brazilian tropical forest. They thrive at a humidity of about 80% and a temperature of 20°C. But some of them are specialists and can endure temperatures below zero or above 60°C, and some "love" dry air of hardly 60% humidity.

Mould fungi in the interior

We usually associate mold fungi in the home with wet cellars, and poorly ventilated rooms. But a wet spot behind the bedroom closet is all that is needed to trigger an allergic reaction.

The malefactors grow in upholstery and in new buildings which were not given enough time to dry, as well as in old houses. They often hide behind wallpaper, in old floors, and behind panelling on the roof or on walls. Earth of indoor plants which are given too much water also can be a source of mould fungi.

Frequent sources of mould fungi

in nature

- rotting leaves in woods, compost heaps, greenhouses
- grass, hay, straw, wheat and flour
- intensive strain when mowing, harvesting, or working in barns, mills and bakeries can trigger allergic reactions

in the house

- holiday homes during periods where they are not used and not heated
- humid cellars
- poorly ventilated bathrooms and other areas which get wet (Nassräume, wet rooms)
- wallpaper which was taped on cold walls, causing humidity to develop in the zone of contact
- window frames where water condenses
- damp textiles
- humidifiers
- air conditioning systems, - they let the fungi thrive and at the same time circulate the spores

in food

- stored fruit and cooked vegetables, and also fresh fruit and vegetables
- juices which were liquefied and/or clarified by using mold-enzymes
- alcoholic beverages and vinegar which were sweetened with sugar-syrup produced with enzymes.

Typical illnesses caused by mould-fungi or their spores and the emitted poisons

- chronic allergic cold (stuffed nose) with sneezing, bronchial asthma, can be caused by a very small quantity of allergenic substances;
- intensive contact either at work or practicing a hobby can lead to the development of the so-called farmer's lung [52].

Tips

- ❍ Material infested with mould should be thrown away or taken off (wallpaper, fitted carpets, wood, food).
- ❍ Do not use fungicides in the kitchen, in the bedroom, or in the living room.
- ❍ Sufficient heating prevents the formation of condensed water on exterior walls.
- ❍ Empty refuse-containers - especially for biologic refuse - frequently.

1.3.3 Electro smog

In the household we are surrounded by electric installations, technical systems, and electric appliances. Are the computer, the radio-alarm, the battery-impelled clock or the cellular phone sources of illness? The media talk about electro smog, but they mean electromagnetic fields and electrostatic charge.

Some doctors relate a multitude of different ailments to electrostatic or electric strain, - disease, sleep-problems, irritation, nervousness, headaches, and hurting eyes.

1.3.3.1 What are electrostatic charges?

Electricity exists even without sockets. It is a result of the "electric charge" of particles. These electric charges produce energy which we call electric tension. It can be measured (volt = V). As soon as two electric charges unite, this energy disappears as by magic. Electromagnetic fields thus are caused by separated electric charges.

We call electric discharges electrification. When we walk on a carpet each step causes union and subsequent separation. We hold the charge until we approach an appropriate object, e.g. a door-handle, - touching it causes unloading, which can be quite painful.

Strength and frequency of electrical discharge depends on:

- our steps and their intensity;
- our clothing: fabrics like wool or synthetic fibres, which are poor conductors, and ample garments favour a discharge;
- the outfit of rooms: fitted carpets, synthetic floors and chairs favour electrical charging.
- air: used or dry air makes a charge last longer;
- skin: dry skin acts as insulation and diminishes discharges.

Everyday-measures to reduce electrical charging

- avoid clothes made of either synthetic fibres, or pure wool;
- avoid dry air in rooms, especially during periods of heating; sufficient humidification is important. Green plants also help to improve humidity;
- avoid slippers with rubber soles - leather or felt-soles should be preferred;
- avoid metal and plastic furniture;
- avoid fitted carpets in highly frequented rooms, choose floors made of wood, tiles, or conducting PVC;
- do not use insulating floor-wax [53].

1.3.3.2 What are electromagnetic fields?

An electric field develops around a conductor which is under tension, whether it conducts electricity or not. If electricity passes through the conductor an electromagnetic field develops around it.

Electric fields exist in the household, in technical plants, and in nature. Depending on the direction (of the electric current) there are electric fields of direct current and of alternating current. The changes of direction per second are called frequency. It is measured in hertz (Hz). Standard electric lines work with 50 Hz, but telephone-transmissions use 4000 Hz. When the frequency increases, electric and magnetic fields couple - they are not anymore independent from each other, and are thus called electromagnetic fields. It is possible that energy from the conductors gets loose, - radiation. Fields as well as radiation are forms of energy.

Electric fields can be screened by walls, but electromagnetic fields cannot. For this reason the refrigerator placed on the wall which separates the kitchen from the bedroom also affects the bedroom.

Electric fields in buildings (measured in volt per meter = V/m) [54]

limiting value	**5000**
stereo	260
receiver	180
iron	120
refrigerator	120
mixer	100
toaster	80
hairdryer	80
vacuum cleaner	50
electric clock	30

Electric processes also happen in our body, but they are minimal and measure a few thousandths. But from the outside our body is exposed to electromagnetic fields of high frequency.

We know that electromagnetic fields can rise the temperature of material they penetrate (heat-therapy by infrared light, micro-waves for the preparation of food). Possible consequences are still discussed, although the observation that the heartbeat of a person who enters a strong electromagnetic field is altered, is an accepted fact. Some physicians relate complaints like nervousness, uneasiness, head-aches and hurting eyes (apparently the eye cannot regulate the heat produced - e.g. - by mobile phones, and can react with inflammations or the development of cataracts), depressions, changes in the production of hormones and enzymes, and even leukemia of infants to intensive strain caused by electromagnetic fields [55].

The density of the magnetic flow of household appliances is measured in micro-tesla (mT), from varying distances [56].

appliance	***distance of 3 cm***	***appliance***	***distance of 30 cm***
hairdryer	*6 – 2000*	*mixer*	*0,6 – 10*
electrical razor	*15 – 1500*	*microwave oven*	*4 – 8*
drill	*400 – 800*	*portable radio*	*- 1*
soldering-iron	*- 105*	*electric stove*	*0,15 – 0,5*
iron	*80 - 30*	*washing machine*	*0,15 – 3*
		computer	*below 0,01*
		refrigerator	*0,01 – 0,25*
		toaster	*0,06 – 0,7*

appliance	***distance of 1m***
electric clock	*under =,01*
slide projector	*- 0,15*
television	*0,01 – 0,15*
dishwasher	*0,07 – 0,3*
immersion heater	*under 0,01*

Tips

- Electric fields in the household are primarily caused by appliances which use much electricity (hairdryer, drying hood, iron).
- The comparatively strongest fields are formed around the fuse-box.
- It is better to use a mains-operated telephone for long calls. In the car the mobile phone creates a strong field because the car reflects the radio waves. One could say that doing a phone call in the car is like sitting in a microwave oven.
- Do not use baby phones frequently, or for an extended period of time, and do not ever put them next to the baby's head - respect a security-distance of 2m.
- Always keep a distance of at least 30cm from hi-fi (sound)-equipment, halogen lamps, and radio alarms.
- Turn off appliances which you do not use: the stand-by modus uses electricity and creates unnecessary electromagnetic fields.

1.3.4 Noise as a factor of stress

Curiosities…

- In the Chinese empire Ming Ti, a police minister, edited a decree which sanctioned blasphemy with death by noise.
- Queen Elizabeth of England prohibited physical punishment of children after 10 p.m.
- In 1793 the Prussian law decreed that boys who made loud noise in the streets were punished with prison and flogging.
- A. Schopenhauer was of the opinion that there is an interrelation of a persons intellectual horizon and his acoustic sensitivity.
- I. Kant took a special measure to fight noise: when he was woken up by a rooster's early crow he bought it and ate it with his friends.

Sound - the basis of noise

Sound is a term used for mechanical oscillations and waves emitted by an elastic medium (e.g. air): The human being can perceive 16- to 20.000 oscillations per second. They are measured in hertz.

1 oscillation per second = 1Hz.

Noise is measured in decibel (dB). On the workplace strain caused by noise is measured by summing up the levels of intensity of all existing sounds.

While formerly hearing-problems were primarily a result of noise at work, they are at present closely related to leisure-activities. Previously, the average age of people with beginning noise-related hearing-disorders was about 50, but nowadays more and more young people are affected.

How does noise affect us?

Depending on intensity, range of frequency, and duration, the human body can react to noise in different ways:

- noise of a level of under 50 dB is perceived as troublesome and causes stress (specially at night noise interferes with sleep)
- noise of a level of 65 - 85 dB reduces efficiency and causes vegetative disorders (contraction of blood-vessels, sleep-disorders, excessive emission of gastric acid, and a poor supply of blood in the skin)
- noise above 85 dB reduces efficiency to a minimum; it damages the inner ear, and causes vegetative disorders.

Noise prevention

Preventive measures to be taken:

Choice of adequate construction-material, separation of buildings from main arterial roads by barriers, purchase of quiet household-appliances, avoidance of very loud places, stricter controls regarding preventive regulations.

Reduce sources of noise:

replace metal by synthetics (e.g. toothed wheels), place rubber or felt under noisy appliances, have machines regularly serviced.

Avoid the diffusion of noise:

coat walls, use noise-absorbing materials.

Personal protection:

ear-plugs, observance of noise-preventing regulations, avoidance of very loud places.

2. Didactic processing

	Introduction/ orientation	**Feeling well and happy in our own home** Form groups of five, get ready for brain-storming.
1	Methods	**Brain-storming:** (one person keeps record), followed by the creation of a mind-map: what does health mean to me? (on a physical, social, and psychic level). Results are presented on an OH-transparency. **Clustering:** which different factors exert an influence on health? Collect answers from all groups – write them on a poster and illustrate connections by drawing clusters. Each participant is given a coloured card: reflection of personal health-attitudes; each participant writes a list of the preventive measures he takes and of the risk-factors he is exposed to.
2	Objectives	• creation of awareness that ideas on health and illness can individually differ; • reflect which factors influence subjective well-being and learn more about them; • application of the results of an investigation to own health-attitudes.
3	Contents	- WHO-definition of health - factors which influence health - important data on factors which influence people's attitudes regarding health.
4	Duration	50 - 60 minutes
5	Material	✓ OH-transparency, markers ✓ poster paper, markers ✓ info-sheet: health-attitudes, risk-factors, stress-factors ✓ summary of an investigation: Statistic News 8/2002

	Planning	Feeling well and happy in our own home
1	Methods	**A fantasy-journey through a home** In a guided imagination the participants are taken through a home in order to raise their sensibility with regard to basic health-risks. **Group work** Each group is given information on different areas of living (construction-materials, textiles, sleeping-areas, etc.) and extracts and summarizes what is essential. The results will be presented on a poster. **Exercise** Each participant is given an A4-sheet with a schematic drawing of a flat. The task is to find areas which in the own apartment/house can hamper well-being. The sources of potential feelings of uneasiness are marked and commented.
2	Objectives	• awareness of areas in our own home which can lead to health-problems by a wrong choice of materials; awareness of own unwise behaviour.
3	Contents	- toxic substances and other factors which influence our well-being in our own home. - detection of possible undesired materials in our own home.
4	Duration	60 minutes
5	Material	✓ text for guided fantasy-journey ✓ schematic drawing of a flat ✓ information on toxins and other factors which influence health and well-being.

	Translation into action	Feeling well and happy in our own home
1	Methods	**Assembling the individual analyses to an overall picture:** all participants go to the flipchart where spaces are reserved for the different areas; they stick a red point on the area which for them is the most important. The moderator analyses briefly the subjective ranking. An example of a specific case is presented and consequences are developed together.

		Analysis: In which areas can I make my living space more helpful? The participants return to the schematic drawing and choose three areas which can be redeveloped at medium-term – parting from their own situation.
2	Objectives	• analyze seals of quality for products used in the home and examine their validity; • discuss questions of warranty in case a product contains undesired materials.
3	Contents	- quality-seals (labels, symbols) - product-warranty
4	Duration	40 minutes
5	Materials	✓ example of a case (reading matter) ✓ flipchart, red points ✓ schematic drawing of a flat ✓ different quality seals/security warnings

	Testing/ evaluating	**Feeling well and happy in our own home** Which difficulties would my project raise? What can I in the future avoid? What could be a first step towards an atmosphere of increased well-being?
1	Methods	**Reflection:** which difficulties may arise on translating my projects into action (social environment, financing, needed and not available leisure-time, stress-factors, habits which are difficult to change,…)? **Supplement:** What should we pay attention to when shopping for home-utensils – what do quality seals, security-warnings, and labels really mean? **Discussion:** Which advice can we offer participants ? Where can we get valid and up-to-date information?
2	Objectives	• awareness of critical aspects and open questions which regard changes in the living-space
3	Contents	- ambivalences regarding the translation into practice of projects which aim at the redevelopment of the home-environment and the change of own health-attitudes - labels and quality seals for the home-area
4	Duration	40 minutes
5	Materials	✓ quality-labels, seals of products which are part of our living space