

Sick building research paper samples

[Literature](#), [Russian Literature](#)



Introduction

Architecture is very significant in people's life. Hence, every building should be created correctly. The point is that people face buildings every day: we lie in houses created by architectures; we work in offices created by them as well; we shop in malls projected by architectures. However, some architectures do not strive to build correctly. Although, there is no clear cause for it, but there are many cases when “badly built” buildings cause different diseases. Doctors call it sick building syndrome. This research is devoted to the issue of sick buildings and the syndrome they cause. The peculiarity of the research is that I will suggest several solutions for the problem. Another peculiarity of the research is that the problem will be described from ethic point of view.

Description of the problem

Sick building syndrome is something that connects interior designers and doctors. Both are struggling to solve this problem. Sick building syndrome is the disease that people get due to bad air conditioning. The main symptoms are constant headache, lethargy and eye irritation. (Tate) Designers of interiors are trying to solve this problem providing offices and homes with new ventilation systems. However, it does not always work.

The most common causes of the sick building syndrome include bad materials used while building an office; poor sanitation. The Ohio State Capital Building investigation case can prove that. Joshi outlined several other causes, such as ozone, organic solvents and formaldehyde in the atmosphere (proved by the Jeanne Stellman of the Women's occupational

health resource center case); office equipment; air borne chemical fumes or gasses from anything in the building; building air conditioning, inadequate ventilation (this can cause an increase of carbon dioxide and other dangerous chemicals); mould, bacteria, dust mites and other microorganisms; poor building maintenance; inadequate working space and lights; mice, rats, cockroaches; indoor air quality; temperature, humidity, noise and other factors.

Nowadays, interior designers together with doctors try to solve this problem. As I have already mentioned above, interior designers are working on new schemes of ventilation in buildings. Besides, Babatsikou mentioned in his work that there had been several experiments conducted to prove that sick building syndrome influenced the income of the company.

Risk factors

Scientists outline four risk factors, such as physical, chemical, biological and psychological. (Heimlich, 2008) In the first part of the research, I have already outlined main reasons for sick building syndrome. However, in this part, I would like to emphasize factors of risk. Tidy states that physical factors include all the recommendations given by Standard Systems of a country. The first standard is temperature in an office or in a building. To maintain normal conditions, an owner of a building should keep the indoor temperature between 20 and 26 degrees Celsius. Another recommendation is the humidity level in a building. I have already mentioned that the humidity level is one of the reasons for sick building syndrome. Besides, incorrect humidity level may cause the increasing of bacteria growth level. This s another cause of the sick building syndrome. On the other hand, when

indoor is too dry, people suffer from it. The third physical standard is ventilation. I have already mentioned for several times that proper air ventilation may prevent sick building syndrome in those who work or live there. This is the task of an interior designer to choose an appropriate ventilation system for a building. Another standard concerns interior designers, as well. I have already mentioned that eye irritation is one of the symptoms of the sick building syndrome. Hence, a building should have appropriate light. Some researchers have already proved that the level of ultraviolet and infrared rays influences human eyesight greatly. Besides, the light influences the productivity of workers (when speaking about offices). The point is that when the light is incorrect, office workers' eyes get tired faster. In turn, this influence the productivity of work. Noise and vibrations level is another significant demand of the World Health Organization about maintaining the working place and avoiding the sick building syndrome. Every owner of an office or a building should know the level of noise and vibrations set by the Standard organizations. An interior designer should develop such a project, so the level of noise and vibrations is as lower as possible. Some researchers have conducted an experiment. The point was to see whether the vibration level influenced workers greatly or not. The experiment showed that secretaries were irritated by the level of vibration that comes from their desks. Besides, most of workers are annoyed by the level of noise and vibration from neighborhood buildings. Hence, it is the task of an interior designer to provide a building with rather thick walls and noise and vibration isolating windows. Besides, it is the task of an interior designer to provide workers with high quality equipment. Ions, particles and

fibres can be included into one category of physical factors that lead to the sick building syndrome. Dust in a building is rather dangerous, and can lead to allergic reactions.

Chemical factors is another significant component of risk factors. There are two types of chemical factors: those that come from the outdoor and the ones that are emitted indoors. Tobacco smoke is one of the most dangerous aspects of chemical factors. The point is that such danger may come from the outdoor and from the indoor, as well. Besides, cigarette smoke is dangerous not only for those who smoke, but for those who breathe it. It has been already proved that cigarette smoke is dangerous and it may provoke different diseases. The second aspect is formaldehyde. It is not a secret that nowadays many materials contain different dangerous chemicals.

Formaldehyde is one of them. (Murphy, 2006) Hence, an interior designer should try to choose ecologically clean materials. Obviously, they are more expensive than ordinary materials based on chemicals. However, to prevent workers from having the sick building syndrome and to follow all laws and the interior designers' ethic code, an interior designer should try to protect his or her customer from being ill. Some say that the level of formaldehyde in materials used for building is too low to cause any visual effect. However, one should keep in mind that there might be several reasons that all together become dangerous and cause the sick building syndrome. Volatile organic compounds may be cause of sick building syndrome, as well. (Tate, 1993) When in small proportions, it is not dangerous. However, I have already mentioned that it is not obligatory that only one reason may be the cause of sick building syndrome. (Indoor air facts No. 4. Sick building

syndrome.)

Biological factors are significant. I have already mentioned that mice, rats may become a significant reason for sick building syndrome development. One may say that nowadays mice and rats are rare in modern big cities. However, I should admit that they still live in basement floors. Hence, an interior designer should try to protect basement floor and make workers safe. However, there is one more biological reason that might be dangerous for every worker – microorganisms. There is no surprise, that dangerous microorganisms develop in ventilation, dust, on some surfaces. Sahlberg suggests that an interior designer should protect workers, and provide a building with high quality ventilation system. Besides, an interior designer should try to use natural materials.

Psychological reason is one of the most significant. Binggeli explains this factor that we are all human beings, and we are influenced by those who are around us. Hence, psychological reasons may be the most significant among all the factors mentioned above. The point is that they are difficult to prevent and an interior designer can hardly do something about it. However, an interior designer together with a building owner can hold a lecture, and provide workers with all the necessary information about sick building syndrome and methods that were used to prevent it.

Influence of sick building syndrome

The World Health Organization admitted that the sick building syndrome was a disease long ago. In 1986 the Organization presented a report where admitted that sick buildings were too costly for the government. In the report, it was stated that sick buildings needed more energy for maintaining

them. Another reason for avoiding sick buildings is legal background. The point is that an owner of a building is responsible for its safety for others. I should admit that some owners pay attention only at fire safety. However, it is necessary to make people comfortable in an office. (Binggeli, 2013) Every interior designer should make an office or a dwelling comfortable to live, to work and to spend time there. However, not all interior designers realize that it is their duty to avoid sick buildings. (Sick building syndrome. Practical guide)

Interior designers' ethic code

This part of the research will be devoted to the issue of ethic code of interior designers. In my opinion, this part of the research is rather significant. The point is that every interior designer should be aware of the code and its implementation into life. I have already mentioned that interior designers are very significant for every person, because they develop the surroundings where people live, work, shop, and spend their leisure time. Hence, every interior designer should be aware of consequences his or her work may influence.

In the book, printed by Binggeli, it is mentioned that the ethnic code of interior designers is the document that outlines interior designers' rights and responsibilities to the public and to the clients. Although, there are several other chapters, I would like to focus on the first two of them. First, it is necessary to mention that the code is made as a set of rules regulating an interior designer's work. When performing one's job, every interior designer should keep in mind that he or she is responsible to public and to his or her

employer, as well. Hence, one should take care about the quality of work and materials.

Possible solutions

The first solutions that come in mind is to change air conditioning system. The point is that almost all causes of sick building syndrome are connected with bad air conditioning. This is the task of interior designers. One should create such a system of air conditioning that provides the building with a high oxygen concentrated air. In old buildings, where it is too costly to implement a new air conditioning system, one may suggest simply to open windows for several minutes every hour. This will help to increase the level of oxygen in the air and make it not so stuffy. Another solution is to use space of a working place wisely. It is necessary to keep in mind that inadequate usage of space is one of the reasons for sick building syndrome. Binggeli suggest an employer to ask an interior designer to organize the working place in an office so every employee feels comfortable, and air is not too dry.

When looking at the list of causes of sick building syndrome that I have provided above, it is difficult not to notice that chemicals are another significant cause of the disease. Hence, when building an office, managers should pay attention to the quality of materials used. Besides, when the building is used, it should be properly maintained. (Sick building syndrome) There are many other solutions to prevent workers from having sick building syndrome. I have outlined only some of them. These solutions are the most significant, in my opinion, and can be implemented in every office. To other solutions, one may include: air cleaning; proper ventilation; communication.

The point is that managers from different offices of a building should communicate with each other on the issue of air conditioning. This will help to find a solution faster, and it will be more effective. Old buildings should be rebuilt according to new requirements. If it is impossible, an interior designer should provide an office owner with all the necessary information on rebuilding the air conditioning system and changing old parts with the newest. One of the significant part of improving the air conditioning system is to prohibit employees to smoke in offices. I have already mentioned that some chemicals may cause sick building syndrome. Cigarettes contain such chemicals as well. Besides, some employees are allergic to cigarette smoke. The main task of an interior designer is to provide employees with comfortable surroundings. The point is that there are psychological reasons for sick building syndrome. Heimlich emphasizes that the interior designer should use only natural ecological materials. Moreover, the light should be natural as well. Besides, colors used in the interior should be light and soft. This will create a calm atmosphere in an office and allow people to work stressfully.

Evaluation of solution

As I have already mentioned above, the solutions are the simplest ones. These are the solutions that can be carried out rather quickly. However, in my opinion, the most significant solution is to provide a high quality air conditioning system. First, people should breather clean fresh air not to feel too tired at work, and be in mood. In my opinion, fresh air is the most significant component of everyday office life. there are two points of view on this solution. From an interior designer point of view, a high quality air

conditioning system will keep office workers from sick building syndrome. From medical point of view, fresh air is significant for brain working properly. If there is no opportunity to change the existing air conditioning system, I have suggested another solution: to open windows. Opened windows let some fresh air in, the air is not so stuffy and office workers feel better. However, I should admit that one should not underestimate the significance of other solutions. In my opinion, an interior designer should do everything possible to implement all the solutions. In the second part of the research, risk factors, I have already mentioned that there could be several reasons that led to sick building syndrome development. Hence, an interior designer should pay attention to preventing all the factors. Hence, at least four solutions should be taken into account: to decrease the danger of occurring of chemical, physical, biological and psychological factors. It is difficult to outline one or two main solutions, because all the possible solutions are significant. Besides, as I have already mentioned, a interior designer should do one's best to implement all of them.

Conclusion

This research was aimed on studying the issue of sick building syndrome and providing possible solutions of the problem. The issue of sick building syndrome is one of the main issues in interior design. I have chosen this topic because it has been proved and not once that healthy (physically and mentally) office workers present high quality work. To keep brain healthy one should breath fresh air. Hence, air conditioning system should be of the highest quality. This is the task of an interior designer. Besides, to keep office workers mentally healthy, an interior designer should provide an office

with a calm interior. Natural surroundings and calm atmosphere can keep workers mentally healthy and ready to work.

The essay consisted of several parts. Each part revealed its issue. The first part was dedicated to outlining the problem of sick building syndrome and its current situation. The second part of the research was aimed at providing information about risk factors that cause sick building syndrome. In this part, I have discussed the main four factors that cause sick building syndrome.

The next part of the research was aimed at providing the information on effects of the sick building syndrome. In the next part of the research, I have presented the information about the interior designers' ethic code. In my opinion, this code is rather significant for every interior designer and he or she should follow it. In the next two parts I have presented possible solutions based on my research and evaluated them.

In the last part of the research, I have suggested two best solutions that can prevent sick building syndrome in employees. I would like to underline that nowadays every interior designer should pay attention to air conditioning system when projecting a building. In my opinion, air conditioning system is the most significant issue of preventing sick building syndrome is keeping air fresh.

Resources:

Babatsikou F. The sick building syndrome. 2011. Health science journal. Vol. 5 Is. 2

Binggeli C. Building systems for interior designers. 2013. N. J.: Wiley

Joshi S. The sick building syndrome. 2008. Web. 30 Jan 2014 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2796751/>

<https://assignbuster.com/sick-building-research-paper-samples/>

Heimlich J. E. Sick building syndrome. 2008 Web. 30 Jan 2014 <http://ohioline.osu.edu/cd-fact/pdf/0194.pdf>

Murphy M. Sick building syndrome and the problem of uncertainty. 2006. Duke University press books.

n. a. Indoor air facts No. 4. Sick building syndrome. N. d. Web. 30 Jan 2014 http://www.epa.gov/iaq/pdfs/sick_building_factsheet.pdf

n. a. Sick building syndrome. Practical guide. N. d. Web. 30 Jan 2014 http://www.buildingecology.com/publications/ECA_Report4.pdf

n. a. Sick building syndrome. 2009. Web. 30 Jan 2014 http://www.nsc.org/news_resources/Resources/Documents/Sick_Building_Syndrome.pdf

Noyes Data Corporation. Sick building syndrome: sources, health effects and mitigation. 1991. NDC.

Sahlberg B. Indoor environment in dwelling and sick building syndrome. 2012. Uppsala University

Tate N. The sick building syndrome. 1993. New horizon press

Tidy C. Sick building syndrome. 2010. Web. 30 Jan 2014 <http://www.patient.co.uk/doctor/Sick-Building-Syndrome.htm>