

# The influence of dogs on the physical activity and social network of the owners: A qualitative study.

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## Abstract

The effect of dog ownership on the physical activity and social network of the owners is getting more attention nowadays. Dogs may be able to positively influence risk factors for preventing non-communicable diseases. The basis for this qualitative study is mainly established on a literature study and the data gathered is derived from two focus group interviews followed by six detailed individual interviews. From the gathered data it can be concluded that the influence of dogs on the physical activity and social network needs to be viewed from a comprehensive framework based on three environments: the social, physical and policy environment. Besides the main environmental structures, a more in depth structure can be seen to influence the intention to walk and social network. The characteristics of the dog, the characteristics of the owner, the personal beliefs and the bond between owner and dog, are mentioned to influence the key perceptions. These key perceptions are the motivation and obligation to walk with the dog, the social support provided by the dog and the perceived barriers and benefits. Dogs are said to be able to positively influence these perceptions of the owner, which enables dogs to maintain the owners' walking behavior. The point that dogs can positively influence some key factors of current mental and physical health problems, raises the possibility to develop a dog intervention. Both owners and non-owners may benefit from dog interventions. However before starting with the development of an intervention, it is important to examine the needs of the population. A needs assessment study would be a good first step in the development process of a dog intervention and if the results are positive, a concrete plan for a dog intervention can be made.

## Keywords

Dog ownership, physical activity, social network, human health.

## Introduction

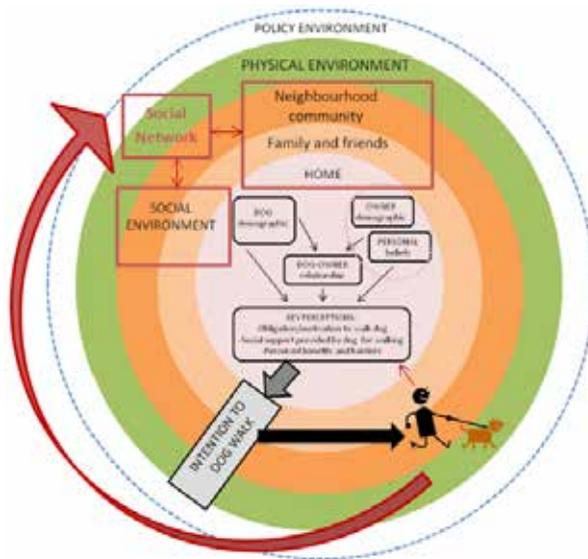
During the recent years the global burden of diseases is in transition. In the past communicable diseases caused the highest mortality and morbidity rates worldwide. In the most developed countries the communicable diseases are under control, while non-communicable diseases have a large impact on the health of citizens. Nowadays these chronic diseases are playing a major role in public health care, with estimates of trillions of dollars in annual health care cost and about 36 million deaths on a global scale every year. It is important that non-communicable diseases, such as cardiovascular diseases, respiratory diseases, cancer and type 2 diabetes are getting more attention (Mackenbach & Van der Maas, 2008). Besides these physical diseases, mental illnesses are also receiving more attention because of the increasing number of people that is suffering from mental health problems, such as depression and anxiety disorders (WHO, 2003). It is generally known that people function better if they are part of a larger social network, because it gives them a sense of meaning. However in our society the problem of social isolation and loneliness is getting bigger. Health promotion and disease prevention are important strategies to reduce new cases or the number of people suffering from one of these diseases. This can be done by tackling the risk factors, such as smoking, drinking alcohol, unhealthy diet and too little exercise for physical diseases and social isolation and loneliness for mental illnesses (Mackenbach & Van der Maas, 2008). It is generally known that the environment wherein people live influences their health-related behavior and thus their health outcomes. Promoting physical activity is a public health priority to reduce physical conditions. Also for mental diseases a supporting environment with a good social network has positive effects on health (Mackenbach & Van der Maas, 2008). Accessibility of facilities where people meet each other, opportunities for activity and aesthetic attributes encourage citizens to do more physical exercise and improve their social network (Humpel, Owen & Leslie, 2002). However one aspect of these environmental conditions seemed to be forgotten for a long time and is getting more attention nowadays. This is the effect of dog ownership on the physical activity and the social network of their owners (Christian et al., 2013; Feng et al., 2014). Besides the aspect of possibly improved physical activity mediated by dogs, these dogs may also play a role in reducing the risk factors of mental health diseases. That is why in this qualitative study the following problem statement is used: "How does dog ownership influence the physical activity and social network of the owner?"

## Methods

The basis for this qualitative study is mainly established on a literature study. The literature was gathered from different sources, namely 52 scientific articles, book chapters and websites. From the literature study a general overview was created about the current scientific knowledge in the area of dog influences on human health. A theoretical framework was set up on the basis of a social-ecological model to explain the influence of dogs on the walking behavior and social network of the owners. The data gathered is derived from two focus group interviews followed by six detailed individual interviews, where the questions were also based on the earlier mentioned framework. First of all the focus group interviews which were used to get more insight in the ideas, thoughts, concerns and feelings of the participants about the influence of dogs. During the focus groups new ideas and solutions arose to current problems. Focus group interviews are a good option to find out what possible interventions can be developed were the role of dogs in the physical activity or the social network can be enlarged. The most important characteristic of a focus group interview is that interaction and discussion is possible between the leader and members, but also between the group members. It is important that ideas are being developed during the discussion. That is why the focus group interviews were guided by the researcher and particular questions were used to give a good direction to the process. The questions were separated into three subgroups: first questions were asked about the influence that dogs have on the walking behavior of their owners, second questions about the influence that dogs have on the social network of their owners and as a third point the possibility to develop an intervention were dogs stimulate the social network and physical activity of their owners. During the focus group interviews cooperative learning techniques were used, such as the walk, stop and exchange method, where participants were asked to walk around the room and if the researcher said stop, the participants went to the nearest person and they exchanged their ideas about why they walk with their dog (Van der Hoeven, 2012). Furthermore, a flip-over screen, a placemat and a brainstorm session were used during the focus groups. After finishing the focus groups, individual interviews were used to get more detailed information about the influence of dogs, where more was questioned about sensitive subjects of the social network. After the two focus groups and six individual interviews it was decided that the saturation point was reached, which means that the participants were not giving new insights to the influence of dogs. The data was analyzed using the Nvivo software, which made the search, storage and retrieval process easier (McDonnell, 2012).

## Results

The focus group interviews were conducted in two groups of six participants. All participants had at least one dog and the average age of the participants was 45 years. Two males and ten females participated. The individual interviews were conducted with six participants. The average age of the participants was 52 years and two males and four females participated. All participants owned at least one dog. The participants had varied levels of education, such as catering, care and nursing, business economics and pedagogy. Except three dog owners, all participants walked at least two times a day with their dogs. It was mentioned that the number and length of the walks depended on the time of the day, the weather and the available time. During the walk, stop and exchange method the following reasons were given why the participants walked with their dogs: the dog can do his needs, health of the dog, socialization of the dog with other dogs, to prevent restless behavior of the dog, obligation to the dog to walk, dogs lose their energy by running, playing with other dogs, a habit of the owner, owners physical and mental health and owners social contacts. Furthermore, during the data collection three main environments arose that might be able to explain the influence of dogs on the physical activity and social network of the owners: the policy, physical and social environment. The policy environment was mentioned to set the local rules. Besides the mentioned possibilities for the improvement of free running areas and the availability of trash containers, the dog taxes needed to be adjusted according to the participants. With respect to the physical environment all participants agreed on the importance of off leash walking areas for dog owners, which were said to positively influence the intention of the owner to walk. In the third environment, the social environment, dog owners agreed on the point that dogs can enlarge the social network of their owners during the walk, because of the increased number of conversations. Also a feeling of support provided by the dog to go out for a walk and a better cohesion, social control and safety in the neighborhood were mentioned. However in the social environment a more in-depth structure arose, where the physical activity and social network may also be influenced by first of all the dog related characteristics, such as the breed, age, number and health of the dogs. Secondly, the owner related characteristics, such as enjoying social contacts and being active. As a third point the personal beliefs of people, about the need for dogs to walk and to socialize with other dogs and as a last point the dog-owner relationship.



**Figure 1.** Social-ecological model of the correlates of dog walking and the role of dogs in the social network theory.

Dogs are said to be able to positively influence these perceptions of the owner, which enables dogs to maintain the owners' walking behavior and increase the social network.

## Discussion / conclusion

From the gathered data it can be concluded that the influence of dogs on the physical activity and social network needs to be viewed from a comprehensive framework based on three environments: the social, physical and policy environment. The policy environment sets the local rules, which influences the physical surroundings, but also the possibilities for people to own a dog (Westgarth et al., 2014). For dog owners, municipalities could increase the free running areas and more trash containers can be placed. Another point where both owners and non-owners can benefit from is that the municipality can invest in a poo cleaner, to clean the environment. However the main point where municipalities may influence the number of dogs owned in their environments are the dog taxes. Municipalities have great differences in tax, with which they are trying to balance the number of dogs. One step lower in the theoretical framework the physical environment turned out to play a role in influencing the role that dogs have on the walking behavior and social network of their owners. In the physical

environment, especially off leash walking areas for dog owners positively influence the intention of the owner to walk. It seemed that the adjustment of the environment to dog owners has an impact on the frequency of the walks and the time of the walk. Other owners said that the time frame and frequency of the walk did not change, but they returned more often to a nice walking area. This means that these pleasant walking areas also attract dog owners, which may have positive influences on the social network. In the third environment a more in depth structure can be seen to influence the intention to walk and social network. In the social environment, where especially the influence of a dog on the social network, cohesion in the neighborhood and more or less the positive mental health turned out to be important, an overlap can be seen between the increase in social contacts and the intention to walk. Walking with a dog increased the social network of the owners, despite that these contacts with most of the time strangers were more superficial. Besides this, it can also be concluded that people can be stimulated to walk with other dog owners, especially if people walk together. This point of stimulation by walking with other people or dog owners, can be explained as a subjective norm (Giles-Corti et al., 2006). Dog owners are likely to have more conversations, because of the fact that they always have a subject to talk about (i.e. the dog) and a dog shows a particular behavior by pulling towards dogs during the walk. Also the cohesion in the neighborhood increases due to some regular dog owners. Dog owners get to know their neighbors and the surrounding faster, compared with non-owners. Furthermore a better social control and safety were determined with some regular dog walkers in the neighborhood. Another point is that dogs are suggested to prevent mental disorders, because owners need to go out for a walk which enlarges the social network and prevents loneliness. According to the participants of this qualitative study, the fact that dogs are companions and give a feeling of meaningfulness in life may prevent the occurrence of a mental disorder. Thus dogs also have a direct impact on the social network of people in three ways: (1) emotional and instrumental social support, (2) a subjective norm and (3) a better participation and social cohesion in the neighborhood (Allen et al., 1997). In the theoretical framework the social environment has more detailed functions to explain why the network of people with dogs improves and what factors influence their intention to walk with the dog. The main core contains three key perceptions, obligation/motivation to walk with the dog, social support provided by the dog and perceived benefits and barriers. These perceptions of the owner are influenced by the characteristics of the dog, the characteristics of the owner, personal beliefs and the relationship between dog and owner (Westgarth et al., 2014). The point that dogs can positively influence some key factors of current mental and physical health problems, raises the possibility to develop a dog intervention. Both owners and

non-owners may benefit from dog interventions. Where for dog owners the intervention needs to be aimed at increasing the intention to walk, non-owners can benefit from a different range of intervention opportunities regarding the needs of particular population groups, such as company, a meaning in life, more social contacts and more physical activity. However it is important that more research is done towards the possibilities to start with a dog intervention for as well people who own dogs, as people who do not. This research should be based on a needs assessment study (Brug et. al., 2007). This needs assessment is important to investigate the needs of the possible target population and the possibilities for dogs to fulfill those needs. However more important is the willingness of the population to participate in a dog related study. A needs assessment study would be a good first step in the development process of a dog intervention and if the results are positive, a concrete plan for a dog intervention can be made.

## Role of the student

During my study Health Sciences I chose to do my thesis and internship about a subject of my own interest. The reason, why I chose to write my bachelor thesis about the influence of dogs on the physical activity and social network of the owners, is that I have always been interested in the possibilities of dogs to support people. My supervisor during the thesis and internship was professor Kremers, who gave valuable input to improve my thesis. I did the literature and qualitative study myself, which includes the design of the study, questionnaires, focus group interviews, individual interviews, processing of results and the whole writing process.

## Acknowledgments

I would like to thank Professor Van Assema, who supported me and helped me to specify the subject in my field of interest. With special appreciation I would like to thank Professor Kremers, who was willing to be my mentor during the thesis and internship. He gave great support and feedback during the thesis period. I also need to acknowledge the support of my close family and partner. They were always available to discuss and think about some difficulties during the writing process of the thesis. Furthermore I would like to thank all the participants of this qualitative study for their input and cooperation.

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