Chapter 10
Social Support, Relationships, and Physical Activity

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Chapter Overview
We live in a social world where our interactions with others influence our physical activity behavior. A parent may take their child to the park to play. A spouse may encourage their partner in reaching their goal of running a half marathon. A person may keep going to an exercise class because they enjoy the people in that class. An older adult may be more likely to go for a walk if they have someone to walk with them. In this chapter, we will explore the different ways that other people influence our physical activity. First, we will explore social support, which is probably the area that has received the greatest attention in the research. We will also look at other types of social influences including social norms and social control. We will also explore the role of groups in our physical activity. We will examine how these social influences relate to physical activity and ways they have been used to promote physical activity. At the end of this chapter, we will learn about some of the many ways we measure these social influences. While we are focusing on physical activity, these social relationships also influence our health and well-being. For more discussion on social support in the context of rehabilitation from sport injury, see Chapter 31 (Griffin et al., 2021).
Social Relationships and Health and Well-being

Social Networks and Health

The recognition of how our social relationships influence our health and well-being has been around a long time. Durkheim in 1897 published a book called Suicide that described how a lack of social integration or a lack of connection with others was associated with increased rates of suicide (Berkham et al., 2000). When looking at risk of dying (mortality), there is a decreased risk of dying when someone has a strong social network compared to a poor social network (Holt-Lunstad et al., 2010). The reduction in mortality risk associated with high levels of social support versus low level of support is similar to that reduction of risk by quitting smoking, and larger than risks associated with other conditions, such as obesity (BMI; Holt-Lunstad et al., 2010). There are many pathways in which social networks or social contacts can influence one’s health, including influencing one’s behaviors (e.g., diet, exercise, smoking), how one feels (e.g., decreasing depression, improving self-esteem, helping us cope) and even improving one’s physiological functioning (e.g., improving immune function; Berkham et al., 2000).

The effects of social networks on health are often separated into (a) the structural aspects (i.e., how many people in your social network and how often you interact with them) and (b) the functional aspects (i.e., the content of those interactions in terms of social support provided; Umberson et al., 2010). Examples of this functional support include providing social support, creating social norms or expectations for how one is to act, and helping to regulate behavior (e.g., social control). These interactions with others can influence both mental health as well as health behaviors (Umberson et al., 2010). Most of the social influences covered in this chapter will look at the functional aspect of social support.

What is Social Support?

Social support is described as the resources that one has available or perceives available to them from their social relationships (Gottlieb & Bergen, 2010). These resources are the ways that other people can help a person. One example of social support would be realizing there is a friend that someone could invite to be physically active with, while another person may rely on a spouse to watch their children, so they can be active themselves. Another person might value having a person motivate them so they can reach their goals. Different people may be able to provide different types of support for an individual to help them be physically active.

There are two general ways to view social support: (a) perceived support and (b) received support (Gottlieb & Bergen, 2010). Perceived social support is the support one perceives available from others regardless of whether they use it or not. Someone who knows that they could call a friend would perceive that support is available to them if they were to need it. Received social support is the support that others provide to a person. An example of this would be when a teen reports that their parent encouraged them to keep going on a run. This is the support that has been provided often in response to stressful situations. While both types of social support have been related to health behaviors, perceived support may help individuals develop positive coping skills and subsequently decrease the development of chronic disease (Uchino, 2009). Knowing that support is available if needed, regardless of whether one uses it or not, is important for engaging in health behaviors such as physical activity.

Models of Social Support

When looking at how social support may influence health behaviors and health, several different models have been suggested. These models include a main-effect model, stress-buffering model and more recently the thriving through relationships model. Each model specifies a different path through which physical activity may be influenced by our social relationships.
Main-Effect Model

The view that social support has a direct effect on well-being is called the main-effect model (Cohen & Wills, 1985). This model is closely tied to the idea that large social networks are associated with positive outcomes such as well-being and health. According to this model, the social support received has a protective effect on an individual as a whole. In this model, social support directly influences physical activity regardless of whether a person is experiencing stressful events. For example, someone driving a friend to the gym would be having a direct effect on their physical activity. In this example, the social support directly helps someone engage in physical activity. The direct effect on behavior and well-being occurs directly as a function of the social support provided.

Stress-Buffering Hypothesis

The stress-buffering hypothesis focuses on the role of social support in helping individuals cope and manage stress (Cohen & Wills, 1985). Stress is experienced when a person does not think they will be able to meet the demands of the situation (Lazarus et al., 1984). This perception of a threat leads to the experience of stress including feelings of worry and helplessness. It also may lead to negative changes in behaviors including less exercise, alcohol abuse, and poor diet (Cohen & Wills, 1985). Social support may help a person in these potentially stressful situations in two ways. First, with support, they may not perceive that situation as stressful. Someone who knows that they have a friend that they can call on for help may not find a situation as stressful. When in the potentially stressful situation of juggling the demands of being physically active and their job, a friend providing encouragement may help someone realize they can handle the situation. The second way that social support could help in these potentially stressful situations is that support may provide added resources that will help them cope with the situation. For example, someone balancing being active and other demands finds this situation stressful. By having a co-worker help them balance the job demands, they may now have the resources to cope with the situation and be able to fit exercise into their schedule. In this instance, social support helps a person cope with the situation by providing resources. In this model, social support plays a role in protecting someone from the negative effects of stress.
Chapter 10: Social Support, Relationships, and Physical Activity

**Thriving Through Relationships**

A newer model of social support put forward by Feeney and Collins (2015) focuses on how to help people thrive. This model looks at how social support plays a role in someone’s overall well-being. This model focuses on two pathways in which social support influences one’s well-being: (a) in the face of adversity and (b) seeking opportunities.

In the first pathway, the focus is on helping an individual deal with life adversity. This pathway is similar to the stress-buffering pathway. It looks at how social support can help someone cope with challenges they are facing. In this case, the support person serves as a *source of strength* and provides support in a way that may help someone deal with challenges. Think about someone who is trying to return to being active following an injury. In this case, they might need the encouragement and support from someone as they are just starting out. The support may take the form of emotional comfort such as listening to someone’s fears about returning to being active. The support also could take the form of helping the individual build up their abilities by assisting them with activity modifications that they could do. Another way that support could occur during this return following injury would be to help motivate the person as they are returning physical activity. In these instances, the support provided is helping someone cope with the stress of returning from injury and the support person serves as a source of strength to the recipient. Also see Chapter 31 (Griffin et al., 2021).

The second pathway involves support that encourages people to seek out opportunities. In this manner, social support from others would encourage someone to set goals and push someone to grow, develop and thrive. In this pathway, the person is called a *relational catalyst* as they are helping someone seek out new opportunities. Many of the examples in the physical activity context may relate to this pathway of support. The support provided could take the form of encouraging someone to reach goals they might not usually set for themselves, such as running a half marathon, or helping a person to push themselves outside of their comfort zone and try something new. Other examples of this support include helping the individual reach their goals by helping them plan (e.g., creating an exercise program with them), and providing assistance (e.g., driving someone to a fitness facility or watching their children while they exercise). Within this pathway, the support involves helping someone to develop and grow as they strive to achieve their physical activity goals.

**Learning Exercise One**

What are the main differences between a person serving as a “source of strength” and a “relational catalyst” when providing social support?

**Social Support and Physical Activity**

Social support has frequently been examined as a correlate of physical activity. Several reviews have suggested that there is a positive relationship between social support and physical activity (Scarapicchia et al., 2017; Smith et al., 2017). In a review of 20 prospective studies that examined the role of social support for future physical activity participation, there was a small positive effect for social support, meaning that those who reported more social support at one time tended to be more active at a later point in time (Scarapicchia et al., 2017). Two of the most common sources for social support examined were from family, friends, and significant others. However, in this review, there was a lot of variation in results. For instance, support from family appeared to be related to physical activity, but the studies looking at friend social support were inconsistent. In a review of 27 studies examining social support in older adults, family-provided social support showed a positive association with physical activity.
activity participation (Smith et al., 2017). In a review of 75 articles examining social support in adolescents, an overall positive association with physical activity was reported for social support provided by parents, family, and friends (Mendonca et al., 2014). These reviews support the positive effects of the provision and receipt of social support on physical activity across the lifespan (e.g., Mendonca, et al., 2014; Scarapicchia et al., 2017, Smith et al., 2017).

Several studies have started to look at social support that is provided on a day-to-day basis. Using the thriving model of social support, Berli and colleagues (2018) examined how daily support from a spouse influenced one’s physical activity level that day. Couples who were previously inactive participated in the study with the goal of becoming more physically active. In this study, people completed an average of 25 more minutes of physical activity on days when their spouse provided support towards their goals than on days when they did not provide support. They also reported more physical activity on days when both partners engaged in physical activity together. This joint activity may reflect a type of companionship support where the partners have someone to be active with. In another study, daily support by spouses was related to increased perceptions of confidence and physical activity in individuals with type 2 diabetes (Khan et al., 2013).

One population in which social support for physical activity is particularly influential is cancer survivors (McDonough et al., 2020). Physical activity settings provide the opportunity for social support both for being active as well as coping with cancer. This is an example of how—in the case of adversity, surviving cancer—the social support is vital for coping with stress and overall well-being (McDonough et al., 2020). In a review of 39 qualitative studies, cancer survivors described many ways their social relationships supported their physical activity, such as through encouragement, accountability, and companionship (McDonough et al., 2020). Support for coping with cancer was also commonly described across several studies; this included strategies such as understanding the cancer experience, being able to talk about cancer, normalizing cancer, and modeling living after cancer.

Social support, especially if it is from family, appears to have a positive influence on physical activity behavior (Scarapicchia et al., 2017; Smith et al., 2017). Most of the research has looked at social support as a whole and has not differentiated the types of social support (e.g., Scarapicchia et al., 2017; Smith et al., 2017). However, as people support each other in many different ways, researchers look at the role of specific types of social support, such as instrumental support (e.g., tangible aid), emotional support (e.g., encouragement and caring), and companionship (Golaszewski & Bartholomew, 2019).

**Types of Social Support**

Given that social support has big potential to influence physical activity behavior, what does it involve? There are several different ways of classifying social support. These different types of social support pertain to what is the actual content of the social support. Is someone providing information or encouragement, or are they someone to be active with? While there are different ways of conceptualizing the types of social support, (Gottlieb & Bergen, 2010; Golaszewski & Bartholomew, 2019), some common types are described below in Table 10.1.

Research in the physical activity area often combines social support into a summary score and does not differentiate the types of support (Beets et al., 2010; Scarapicchia et al., 2017). Among studies examining social support and youth physical activity, social support is sometimes separated into tangible support (e.g., instrumental and companionship) and intangible support (e.g., emotional and informational; Beets et al., 2010). Both types of support have been related to youth’s physical activity. Using a newly developed measurement tool, Golaszewski and Bartholomew (2019) reported that five different types of support (emotional, companionship, instrumental, informational, and validation support) were positively related to self-reported physical activity behavior, with companionship and informational support showing the strongest relationships. While social support can influence physical activity in many ways, social support is not the only social influence on physical activity.
Table 10.1
Examples of Different Types of Social Support (Gottlieb & Bergen, 2010; Golaszewski & Bartholomew, 2019)

<table>
<thead>
<tr>
<th>Type of support</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>Provision of caring and encouragement</td>
<td>Helping someone keep going when they are struggling to reach a goal. Cheering a person on or listening to challenges that someone is facing.</td>
</tr>
<tr>
<td>Instrumental</td>
<td>Tangible aid such as the provision of resources or services</td>
<td>Someone helping a friend by driving them to the gym. A parent purchasing sport equipment for their child. Spotting another person as they lift weights.</td>
</tr>
<tr>
<td>Informational</td>
<td>Provision of advice, feedback, or help problem-solving</td>
<td>Advice from a friend on how to overcome a plateau in their fitness goals. Enlisting the help of a partner to problem-solve how to deal with a particular barrier for physical activity.</td>
</tr>
<tr>
<td>Companionship</td>
<td>Having someone to be active with and spend time with</td>
<td>Having someone to go for a walk with or lift weights with.</td>
</tr>
<tr>
<td>Esteem</td>
<td>When others make someone feel like they matter, are valued, and accepted</td>
<td>Someone commenting on how much they value being active with a person. Helping another feel like they are needed.</td>
</tr>
<tr>
<td>Validation</td>
<td>Provides social comparison in terms of behaviors and norms</td>
<td>An individual who feels sore after just starting to work out, may seek out validation support from others who also were working out to see if this “soreness” is normal.</td>
</tr>
</tbody>
</table>

Learning Exercise Two

Think about your own physical activity and provide an example of each type of social support that you have experienced. Which type do you think made the biggest difference in your own physical activity?

Other Types of Social Influences

Social support is just one of the ways that social relationships may influence physical activity. Several other common social influences include social norms and social control. These are described below.
Social Norms

Social norms reflect perceptions surrounding what is appropriate behavior (i.e., either typical or desired behavior; Cialdini et al., 1991). There are two primary types of social norms that have been investigated relative to physical activity behavior. Descriptive norms are based on what other people do (Cialdini et al., 1991). For example, if a person’s friends are all going on a hike, they likely would feel pressure to go with them. Injunctive norms are norms that are based on what is viewed as desirable behavior by others (i.e., what behavior is acceptable; Cialdini et al., 1991). An example of this would be engaging in physical activity because someone thinks it is what their family thinks they should do. Previously an overlooked type of social influence, social norms seem to influence physical activity behaviors more than previously thought (Priebe & Spink, 2011). When asked reasons for being active, people typically report health- or appearance-related reasons and are less likely to report being active because others are too (Priebe & Spink, 2011). However, perceiving others to be active was related to physical activity participation; this leads the suggestion that descriptive norms are important for influencing physical activity behaviors (Priebe & Spink, 2011).

The evidence for the effects of norms on our physical activity behavior has continued to grow. In a study looking at social norms for using the stairs among university students, both descriptive and injunctive norms were related to stair use (Crozier, 2019). Using data from an online exercise-focused database, people were more active when they had more friends in the database and their friends reported more physical activity (Carpenter & Amaravadi, 2019). In efforts to predict physical activity and healthy eating in a sample of African American church members, researchers found that a descriptive norm for physical activity was positively associated with physical activity engagement, even after controlling for individual variables (e.g., sex, employment status, risk perceptions) and neighborhood variables (e.g., access to parks, presence of sidewalks; Heredia et al., 2020). These three studies illustrate the potential influence of descriptive norms on physical activity behavior.

In addition to being related to physical activity behavior, social norms have been related to other important outcomes. Researchers have reported that performance on a muscular endurance task (i.e., a maximal plank hold task) was greater when people were provided information that others held the second plank for longer (Priebe & Spink, 2014). With this descriptive normative message, people also felt more confident that they could hold their second plank longer (Priebe & Spink, 2014). Another study showed that participants receiving normative information (e.g., “97% of those tested improved their balance”) had better standing balance than those who received no information (Spink et al, 2019). Studies such as these have used experimental designs and manipulated the normative messaging, leading to changes in perceptions and behavior. With the potential to manipulate norms, others have examined the effects of using norms to promote physical activity on a larger scale.

Using norms to promote physical activity is receiving increasing attention. For example, messages that focused on norms have been used to prompt stair usage (e.g. “We’re doing it! Are you? Join staff and students in taking the stairs today” and “Most staff and students think we should increase stair use”; Crozier, 2019, p. 103). During the period when the norm messages were displayed, stair use increased by 3.1%. To examine the effects of changing physical activity norms in a care center for older adults (age range: 80–95 years), researchers used a news report that highlighted a descriptive norm: “Increasing numbers of exercising older adults in the local community” versus a control story that just referred to “older adults in the local community” (Koeneman et al., 2017). Compared to the control group, older adults exposed to the normative message reported greater intention to take part in the physical activities offered at the care center and reported participating in more physical activity three months later (Koeneman et al., 2017). In another study, pedometers were used to provide descriptive norms by giving information about the group average step count for participants, along with indicating if the person was above or below the average (Wally & Cameron, 2017). Compared to the no-message control group, the group that received this messaging reported more steps (Wally & Cameron, 2017).
The potential impact of norms such as what others are doing has been shown to be related to physical activity across a wide variety of populations (e.g., University students, general population, African American church members, and older adults) and a wide variety of behaviors (e.g., stair use, step counts, muscular endurance and balance tasks). While people may not recognize the role of norms in their own behavior, the research suggests that perceptions of norms (i.e., number of people active) and normative messaging are related to physical activity behaviors.

**Learning Exercise Three**

Describe the descriptive norms and injunctive norms that you see from your family and friends as they relate to physical activity behaviors, such as exercise or active choices (e.g., taking the stairs).

**Social Control**

Another way that social relationships influence physical activity is through the provision of social control, which reflects the efforts by one person to monitor, prompt, or persuade another to engage in a desired behavior (Craddock et al., 2015). Social control is viewed as a more active influence where the person providing the influence is attempting to change or control the behavior of the recipient. Much of the research on social control in the physical activity domain has been with older adult populations (e.g., Newsom et al., 2018) or adults at risk or with chronic conditions such as obesity (Scholz et al., 2021) and diabetes (Kahn et al., 2013).

While social control has not received as much attention as social support with respect to physical activity behaviors, it does appear to have the potential to exert both a positive and negative impact depending on the type and other contextual factors surrounding the influence (Craddock et al., 2015; Scholz et al., 2021). Factors such as social support (Kahn et al., 2013) or experiences of emotions (Newsom et al., 2018) may lead to different responses to social control. Positive types of social control (e.g., more encouraging forms that prompt the behavior) appear to be related to positive outcomes (Craddock et al., 2015; Scholz et al., 2021). In contrast, the more pressuring form of social control, often called negative social control, may have a negative or no effect on the behavior (Craddock et al., 2015; Newsom et al., 2018). In a sample of couples who were overweight and intending to become more active, positive social control was associated with more physical activity and feeling more positively while negative social control was related to feeling more negatively and reporting doing the opposite behavior or hiding that they were not active (Scholz et al., 2021). Behavioral reactance is a common negative response in which an individual performs the opposite behavior or hides the unwanted behavior in response the pressuring type of social control (Scholz et al., 2021).

Another relationship where social control has been examined is the parent–child relationship (e.g., Wilson & Spink, 2011). Parents have been identified as key influences for children’s physical activity (Gustafson & Rhodes, 2006). As parents guide their child’s physical activity behavior, they may exert social control. In a qualitative study, parents and adolescents described parents using social control to regulate their child’s physical activity level during a physical activity lapse (Wilson et al., 2014). When parents viewed their child spending too much time in front of a screen or when parents viewed a lack of motivation for physical activity, they described acting to prompt their child to engage in physical activity through the use of social control strategies. This indicates that parents may use social control as a type of regulation to prompt children to be active when they are perceived as not meeting the desired amount of physical activity (Wilson et al., 2014). In another study, adolescents (age 12–18 years old) reported an increase in their physical activity after an activity lapse when they perceived their family exerting more collaborative social control (e.g., offering to be active with them; Wilson & Spink, 2011).
Parental Influences

Parents have been identified as playing a vital role in their children’s physical activity. Previously, we explored the role of parental social support (Beets et al., 2010) and social control (Wilson & Spink, 2011; Wilson et al., 2014). A parent may provide opportunities for their child to participate in physical activity by, for example, providing a bicycle or ball for them to play with. A parent may encourage and support their child as they are participating in physical activity. A parent may also serve as a model for the child’s behavior by being active themselves. Several reviews have highlighted the positive relationship between parental encouragement and physical activity in children (Beets et al., 2010; Gustafson & Rhodes, 2006). Across these different reviews, the potential of parents to influence their child’s physical activity has been consistent. Given the diversity of ways that parents may influence their children’s physical activity, there has been an effort to conceptualize the influences. Mâsse and colleagues (2017; 2020) grouped parental influences into three broad types: (a) autonomy promotion, (b) structure, and (c) neglect and control.

Autonomy promotion reflects efforts by parents to support their child’s independence as well as promote physical activity through encouragement (Mâssé et al., 2017; Mâssé et al., 2020). This classification also has been called autonomy support (Mâssé et al., 2017). Many aspects of these parental influences focus on guiding the child to choose to engage in physical activity. Encouragement has been reported as a strategy that has consistently been related physical activity behavior (Gustafson & Rhodes, 2006; Beets et al., 2010). Often this encouragement from parents has a stronger effect among younger children than adolescents as it is thought adolescents may be more influenced by peers than parents (Gustafson & Rhodes, 2006). The other aspect of autonomy promotion appears to be praise and rewards provided by parents (Mâssé et al., 2020). This type of parental influence often has been combined with parental support measures and not examined on its own (Beets et al., 2010). Across several studies, the encouragement and reinforcement provided by parents appears to be a key type of parental influence for encouraging children to engage in physical activity (Beets et al., 2010).

Structure refers to parents creating an environment that promotes physical activity (e.g., co-participation, facilitating physical activity, modeling; Mâssé et al., 2017). When parents engage in physical activity, their children are also more likely to participate in physical activity (Beets et al., 2010). In school-aged children, both mothers’ and fathers’ physical activity was related to their child’s physical activity on both the weekend and weekdays (Fuemmeler et al., 2011). In their review of parental influences, Gustafson and Rhodes (2006) identified modeling as a potential type of parental influence; however, this form of influence was not always related to children’s behavior. In preschool-aged children, parents’ activity was related to their child’s activity when they reported being together as opposed to times when they were apart (Keyes & Wilson, 2020). This suggests that parents being active on their own (e.g., going to the gym without their child) may not have the same influence as parents being active with their child (e.g., going for a walk together). Another example of this type of parental influence may come from parental provision of collaborative social control that involves co-participation and helping children learn the skills to be active (Wilson & Spink, 2011). This type of social control is the type that appears to be most promising in prompting children to participate in physical activity (Wilson & Spink, 2011). The beneficial effects of parents and children co-participating in physical activity has been seen across several studies (Beets et al., 2010). Children were more likely to meet the recommended physical activity standards when their parents were directly involved in the physical activity, co-participated, or watched their child participate in physical activity (Beets et al., 2010). This active participation by parents appears to be a key form of parental influence.
Neglect and control reflect pressures by parents to prompt their child to be active without focusing on the child’s interest (e.g., nagging the child; Mâsse et al., 2017). This strategy includes pressuring influences such as nagging, punishing, or using threats to prompt physical activity. Negative social control reflects parents nagging and pressuring them to be active and it does not appear to have a strong influence on physical activity behaviors unless it is perceived as supportive by adolescents (Wilson & Spink, 2010). Another aspect of this type of parenting strategy is that the parent does not encourage physical activity at all and leaves it up to the child to decide if they want to engage in physical activity or not (e.g., permissive strategies; Mâsse et al., 2017). While not directly looking at parenting strategies, parenting styles such as uninvolved and permissive styles may provide some idea of how this absence of strategies may relate to physical activity (e.g., Henessey et al., 2010). One study reported that children (aged 6–11 years) were the least active when they had uninvolved parents (low demandingness and low responsiveness) when compared to other parenting styles (Hennessey et al., 2010). The strategies identified by Mâsse et al (2017) may have less of an impact on physical activity behavior than the other strategies.

While much of what we know about the different types of parental influences can be classified into these three broad types, it is still a relatively new taxonomy. There is a lot of support for the benefits of the autonomy supportive strategies and the structure that parents may provide (Beets et al., 2010; Gustafson & Rhodes, 2006). For more on discussion on autonomy in the context of self-determination theory, see Chapter 3 (Quested et al., 2021) and Chapter 32 (Kingston et al., 2021). In an effort to move our knowledge of parental influences forward, Mâsse et al. (2020) have also put forward a tool for measuring parental influences based on this classification system.
A parent is wondering how to help their child become more physically active. Based on the different types of parental influences, what recommendations would you give?

### Group Dynamics in Physical Activity Settings

It is thought that as humans we have a fundamental need to belong (Baumeister & Leary, 1995). Physical activity settings allow us to satisfy this need to belong by interacting with other people. Much of our physical activity is done with others and many people prefer to be active with others. For example, people may go for a walk or run with a friend, join a fitness class, or lift weights with a group of friends. While some of these settings may seem very much like a group (e.g., walking with a group of friends), others may look a little less like a group (e.g., a drop-in fitness class).

#### Groupness

Researchers have examined the degree to which these physical activity groups possess the characteristics of a true group (Spink et al., 2010). This is reflected in the concept of groupness, which is the degree that a collection of individuals perceives themselves to be a group (Spink et al., 2010). In structured exercise settings like group fitness classes or running clubs, perceiving that setting to be more like a group has been related to participating more often in that setting (Spink et al., 2010). Perceiving higher levels of groupness within a fitness class has been related to greater reports of enjoyment and effort (Graupensperger et al., 2019). In fitness classes, having higher perceptions of groupness was related to greater satisfaction for the basic needs of relatedness and autonomy and subsequently was related to more physical activity (Evans et al., 2019). Because groups can address the need to belong and have positive effects on physical activity behavior, it is not surprising that research has focused on group environments, structure, and processes (for review, see Eys et al., 2019). The group environment (e.g., member characteristics), structure of the group (e.g., positions, norms, and roles), and group processes (e.g., group cohesion) all have the potential to influence the experience of people within physical activity groups (Eys et al., 2019).

#### Cohesion

One of the group processes that has received the most attention in the physical activity setting is cohesion (Eys & Brawley, 2018). Cohesion reflects the “dynamic process that is reflected in the tendency for a group to stick together and remain united” (Carron et al., 1998, p. 213). It is conceptualized with two dimensions. The first dimension relates either to the task such as getting a good workout in, or the social aspect such as enjoying the company of the others you are active with. The second dimension relates to either attraction to the group (i.e., the desire of an individual to be a part of the group) or group integration (i.e., the unity of the group as a whole). The combination of

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1. While many people prefer to engage in physical activity, others may prefer to participate in activity alone for a variety of reasons including personality types and even experiences self-presentational anxiety (Hausenblas et al., 2004).
2. The basic needs of autonomy and relatedness pertain the psychological needs that are part of the self-determination theory. When the basic psychological needs are satisfied in an activity, a person is thought to develop more autonomous motivation (Deci & Ryan, 2000).
these two dimensions creates four types of cohesion, namely (a) attraction to the group - task, (b) attraction to the group - social, (c) group integration - task and (d) group integration - social.

Cohesion has been examined for decades in the physical activity area with a meta-analysis conducted in 1996 describing a positive effect of task cohesion on exercise adherence (Carron et al., 1996). Cohesion has been described as an important aspect of physical activity groups and it is thought to relate to many positive outcomes including adherence or attendance and satisfaction with the settings (Burke et al., 2014). Not all physical activity groups possess the same level of cohesion. Cohesion is influenced by a variety of factors, including similarity, leadership characteristics, and environmental factors such as group size (Chapter 25; Cotterill & Fransen, 2021; Eys & Brawley, 2018). Most of the research on cohesion in the physical activity domain has focused on structured groups like group exercise classes (Eys & Brawley, 2018). Although one study looked at cohesion in unstructured groups, such as people walking with groups of friends (Spink et al., 2014). In that study, adherence was related to higher levels of task cohesion and lower levels of social cohesion. With cohesion playing an important role in the dynamics of a group, researchers have looked at how to develop cohesion (Eys et al., 2019).

Developing cohesion through team-building is one strategy that has been used to promote physical activity participation (Eys et al., 2019). Some of the earlier work involved fitness class instructors’ team-building with their group exercise classes (Spink & Carron, 1993). Researchers held a workshop for fitness instructors and guided them in creating a list of team-building strategies that they would implement in their own fitness classes. Examples of strategies focused on the group environment (e.g., neon shoeaces, slogans for the class), group structure (e.g., norms such as group goals), and group processes (e.g., partner work; Carron & Spink, 1993). In this early research, classes with team building had higher levels of task cohesion (attraction to the group-task) as well as fewer dropouts than the control classes (Spink & Carron, 1993). This teambuilding approach has been used in a variety of settings including fitness classes, physical activity clubs for youth, and exercise settings with older adults (Eys et al., 2019). At the center of this team-building approach is having the leader identify strategies that will work in their setting for the following areas (a) group distinctiveness (e.g., developing a group name, t-shirt), (b) individual positions (e.g., spots for different intensities), (c) group norms (e.g., standards for work ethic or achievement), (d) individual sacrifices (e.g., asking individuals to help others), and (e) interaction and communication (e.g., incorporating partner work; Burke et al., 2014).

Social Identity and Self-Categorization Theory

Social identity is another factor related to the group that has the potential to influence an individual’s behavior (Stevens et al., 2019). Social identity describes the identity that is formed when an individual derives part of who they are as a person (e.g., their self-concept) from being part of a specific social group (Tajfel, 1981). For example, someone may identify that being a member of a running club is part of who they are. They may describe themselves as part of a weight-lifting club and that identity is central part of who they are as a person. This concept of social identity has been receiving increasing attention in physical activity settings with it being investigated in organized running groups (Stevens et al., 2019) and exercise groups (Dunlop & Beauchamp, 2011; Steffens et al., 2019). In exercise group members, identifying with the group has been associated with higher attendance and effort exerted within the exercise classes (Steffens et al., 2019). Self-categorization theory is a related theory that focuses on factors that contribute to perceiving oneself as part of a group and identifying with other group members (Beauchamp, 2019). Beauchamp (2019) describes the potential importance of social identity and self-categorization in the physical activity context to promote physical activity adherence. Given the potential of social identity in influencing physical activity adherence, researchers are starting to examine how leadership behaviors and other group factors (e.g., groupness or cohesion) may relate to the formation of social identity (Eys et al., 2019).
Learning Exercise Five

Think about the settings where you have exercised with other people. How did being part of a group influence your experience? What is it you liked or did not like about being part of a group?

Enhancing Social Support and Social Influences

Interventions that promote social support have been shown to be effective, especially when used alongside other interventions that incorporate behavioral components such as goal setting and behavior contracts (Heath et al., 2012). There are numerous strategies to increase social support in efforts to promote physical activity. Some examples of social approaches include buddy systems, creation of walking groups, and establishing contracts between leaders and participants (Heath et al., 2012). These social strategies have been explored in families, worksites, communities, clinical settings, and schools (Heath et al., 2012).

Many physical activity interventions incorporate some aspect of social support as part of the intervention whether it is involving family, friends, or being conducted with a group. In a review of 26 randomized control trials, 22 of those studies included some aspect of social support as part of the intervention (Howlett et al., 2019). On average, these interventions had a positive effect on physical activity behavior and on maintaining that behavior change following that intervention. In another review of interventions that included both diet and physical activity for those at risk of type 2 diabetes, the inclusion of social support was one of the strategies that improved the effectiveness of interventions (Greaves et al., 2011).

One way to facilitate social support is to incorporate it as part of physical activity groups. For example, one study targeted social support through a variety of interpersonal strategies, including small group discussions about physical activity-related ideas and sharing experiences about how to get support and overcome barriers (McMahon et al., 2017). This study also included friendly comparisons of physical activity based on activity monitors as part of its interpersonal strategies (McMahon et al., 2017). Those who received this added interpersonal interaction reported more physical activity (McMahon et al., 2017). As described earlier, a common type of intervention used in physical activity settings is the team-building approach (Burke et al., 2014; Spink & Carron, 1993). This approach involves enhancing the group dynamics through targeting the group distinctiveness, structure, norms, individual positions and sacrifices, as well as interaction and communication (Burke et al., 2014). With team-building, the goal is to develop group processes like cohesion with the intent to increase adherence and attendance. Another group-based intervention that has received quite a bit of attention is the group-mediated cognitive behavioral intervention (Brawley et al., 2014). This approach uses group-dynamic principles to build the group and teach cognitive-behavioral strategies such as goal setting, barrier management, and self-monitoring. The key distinction with this approach is that the individual is weaned off the group so that they can become independent exercisers at the end. The group-mediated cognitive-behavioral intervention has been examined with a variety of populations and settings including cardiac rehabilitation, older adults, individuals with knee osteoarthritis, and postnatal moms (Brawley et al., 2014). Across these numerous studies, positive effects were seen for the group-mediated cognitive-behavioral approach for adherence (i.e., increasing physical activity levels), improving self-efficacy, and physical functioning (Brawley et al., 2014). There is a wide variety of strategies for using social support from others or peers to promote physical activity and many of these approaches appear successful (Heath et al., 2012). Some of these strategies may be promoting
interactions through physical activity groups, buddy systems, group discussions, and phone networks (Heath et al., 2012).

**Measuring Social Influences**

Questionnaires are the most common tool for measuring social influences such as social support, parental influences, and group cohesion. A common social support questionnaire is called the Social Support for Exercise Survey that assesses support received from family and friends (Sallis et al., 1987). Example questions include whether family or friends: exercised with me, discussed exercise with me, and helped plan activities around my exercise. A newer measurement tool called the Physical Activity and Social Support Scale has been developed to assess different types of social support (Golaszewski & Bartholomew, 2019). This measure includes separate subscales that capture emotional, companionship, instrumental, informational, and validation support. For parental influence, a new measurement tool called the Parenting Practice Item Bank has been created to capture the three conceptualized parenting strategies described earlier, namely autonomy support, structure, and neglect and control (Mâsse et al., 2020). One of several tools to assess cohesion is called the Group Environment Questionnaire, which assesses the four dimensions of cohesion in a variety of sport and exercise groups (Carron et al., 2002). Although questionnaires are frequently used, there are some limitations of this form of assessment, including a potential self-report bias.

There have been several emerging strategies for assessing social influences including social network approaches (e.g., Prochnow et al., 2020), direct observation of social influences (e.g., Collins & Feeney, 2004; Herbison et al., 2020), and using "big data" from databases (e.g., Carpenter & Amaravadi, 2019). Social network approaches involve individuals describing the networks they are involved in (Prochnow et al., 2020). This may involve having individuals report about people in their networks (e.g., report on family, friends, classmates) or surveying an entire social network (e.g., a classroom at school, or a group exercise class). These networks can be evaluated for a variety of characteristics such as the number of connections a person has, the number of connections within a network, and similarity of the
people in a grouping (Prochnow et al., 2020). In a review of 28 social network studies, physical activity seemed to be an attribute that was shared within a grouping such that if a child’s social network was physically active, they also were more likely to be active (Prochnow et al., 2020). A social network approach can be used to look at how interactions across a network of peers or family members influence physical activity behavior.

Another way to measure social influences is to use direct observations where interactions are recorded and then coded to reflect the type of influence. To gain a more objective measure of social support, researchers observed couples interacting and coded the behavior in terms of support provided (Collins & Feeney, 2004). In this study, researchers coded the type of support such as emotional support, and instrumental support in speech writing task. Audio recordings can also be used to capture the social interactions between individuals. Using an electronically activated recorder (EAR), researchers were able to explore youth hockey players’ social interactions in a natural environment (Herbison et al., 2020). Recordings of interactions were then coded to classify the recordings into different types of interactions (Herbison et al., 2020). The use of observation and coding provides a more objective measure for classifying the interactions and, unlike a questionnaire, does not rely on what individuals recall or report.

Another way to gather information on social influences is to use “big data” from databases that exist through social network applications and wearable devices. One study used registered users from a web-based application that was used for creating fitness challenges, allowing people to connect with other users, participating in employer incentivized programs, or sharing results with others (Carpenter & Amaravadi, 2019). Both the number of friends reporting exercise as well as the average amount of friends’ exercise were related to an individual’s own reported level of exercise (Carpenter & Amaravadi, 2019). Others also used data from the Fitbit™ databases and application to look at the social networks on those applications (Stück et al., 2017). Being more active was associated with having a greater number of social ties on the network as well as those ties having a higher average activity level (Stück et al., 2017). These device-based measures and “big” datasets present an interesting avenue for future research examining social influences for physical activity, especially as the use of wearables such as smart watches increases.

The most common tools for measuring social influences are self-reported questionnaires such as scales for social support. Recently, there have been innovations in how to measure social influence including social network analyses, direct observation, as well as using big data. This increase in the diversity of ways to assess social influences will expand our understanding of how these relationships influence our physical activity behavior and our health.

**Conclusion**

We live in a social world and most of us interact with many people across the course of a day, whether they are family members, friends, coworkers, or even acquaintances at a gym. Given our fundamental need to belong (Baumeister & Leary, 1995), these social relationships are vital for our health and well-being (Umberson, et al., 2010). Social support refers to the resources that one perceives available or received from their social networks (Gottlieb & Bergen, 2010). There are many types of social support ranging from companionship support (e.g., being active together), emotional support (e.g., providing encouragement), and instrumental support (e.g., providing tangible assistance such as providing equipment). Receiving more social support is beneficial for participating in physical activity (Scarapicchia et al., 2017). There are several different frameworks for how social support may influence our physical activity and health. Social support is just one way that our social relationships may influence our behavior. Others, such as social norms, social control, and group processes also influence our physical activity behavior.
Chapter 10: Social Support, Relationships, and Physical Activity

Further Reading


References


Wilson

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