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Antecedents and consequences of family social control use following an adolescent physical activity lapse

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ABSTRACT

Objectives: This study explored the relationship between social control and behavior by examining both the antecedents of social control use following a physical activity lapse as well as the behavior reaction to the use of social control.
Design: As part of a larger project, high school students ($N = 547$) were prospectively followed over the course of a year and reported physical activity every two months.
Methods: For this study, 123 adolescents who reported experiencing a physical activity lapse sometime during the year were selected. Family physical activity and adolescent activity prior to the lapse were used to predict family use of social control tactics following the lapse. Use of social control tactics were used to differentiate whether adolescents increased their activity following the lapse or not.
Results: Results revealed that family physical activity predicted use of positive and collaborative social control following an adolescent activity lapse. Adolescent physical activity prior to the lapse also predicted parental use of collaborative social control following the lapse. In terms of the adolescent's behavior reaction, an increase in collaborative social control following the lapse appeared to differentiate those who reported an increase in activity following the lapse compared with those who reported no increase.
Conclusions: This study provided support for physical activity behavior being both an antecedent and consequence of parental social control.

Physical activity has been associated with numerous benefits for adolescents including decreased adiposity, improved musculoskeletal and cardiovascular health (Strong et al., 2005). Despite these benefits, research has shown adolescents are often not active enough to achieve health benefits (Troiano et al., 2008) and they tend experience lapses in activity (Shields et al., 2008). Activity lapses may be important to examine because they could signal a path to longer periods of lower activity (Conroy et al., 2007). Given the importance of remaining active for health, the examination of influences that might help adolescents return to being active following an activity lapse appears warranted.

With the establishment of a positive relationship between family social influences and physical activity in general (Pugliese & Tinsley, 2007; Van Der Horst, Paw, Twisk, & Van Mechelen, 2007), it is not surprising that family influences also have been related to activity following a lapse (Shields et al., 2008). One type of social influence that has been examined with respect to adolescent activity lapses is social control (Wilson & Spink, 2010, in press). Social control is a regulatory influence that is exerted by one individual when another individual performs an undesirable behavior (Lewis & Butterfield, 2005).

The potential usefulness of social control in examining lapses is highlighted by a key feature of its definition that describes it as a behavioral reaction to deviance (Clark & Gibbs, 1965). Based on this definition, when an individual experiences a physical activity lapse (e.g., deviates from the norm) one would expect the use of social control to increase (i.e., a negative relationship). Additionally, as social control has been conceptualized as an influence designed to regulate unhealthy behavior (Lewis & Butterfield, 2005; Markey, Gomel, & Markey, 2008), the expectation would be that increases in social control following a lapse would lead to subsequent increases in physical activity (i.e., a positive relationship).

These two possible relationships are in line with the conceptual model of social control that suggests that behavior is both an antecedent and reaction to social control (Lewis & Butterfield, 2005). Based on the Lewis and Butterfield model, a negative relationship is

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predicted when behavior is an antecedent of social control whereas a positive relationship should emerge when behavior is a reaction to the social control. The overall purpose of this study was to examine the social control – behavior relationship from both perspectives (i.e., behavior as an antecedent as well as a reaction to use of social control).

The best way to tease out the direction of these relationships is to examine the relationship between social control and behavior prospectively. For the most part, studies using a prospective design examining other health behaviors (e.g., Fekete, Stephens, Druley, & Greene, 2006; Helgeson, Novak, Lepore, & Eton, 2004) have tended to focus on social control from only one perspective – to predict future behavior (i.e., as a reaction to social control) rather than on how changes in behavior might relate to the use of social control (i.e., as an antecedent following deviant behavior). Further, notwithstanding design issues and outside of a few exceptions (Lewis & Butterfield, 2005; Wilson & Spink, in press; Wilson, Spink, & Priebe, 2010), social control as an outcome of behavior deviance has not received much attention in the health-related social control literature. In addition, while existing studies have provided support for social control being used in response to situations with health consequences (Lewis & Butterfield, 2005; Wilson & Spink, in press), they involved hypothetical scenarios, which limit the ability to generalize to real-life situations (Lanza, 1990). The paucity of research examining how changes in behavior lead to the subsequent use of social control highlights the need to examine this relationship using a longitudinal design. To address this suggestion, the current study prospectively examined the relationships between reported lapses in actual activity behavior and use of social control to detect whether changes would occur over time in the expected direction (i.e., behavior as an antecedent). For example, does social control use increase following a decrease in physical activity (i.e., a lapse)?

In predicting the use of social control, research also has revealed that the specific type of social control used in an activity setting (i.e., positive, collaborative, and negative) may be important to consider (Wilson & Spink, in press; Wilson et al., 2010). As noted in this activity research, positive social control reflects a more encouraging form of social control, which includes discussing the benefits of physical activity or encouraging the adolescent to be more active. Negative social control is a more pressuring type where parents order or nag the adolescent to be active. Further, both types of social control are common in the health-related social control literature (Lewis & Butterfield, 2007). The third type of social control, collaborative, that has emerged within the activity literature involves an action by both the parent and adolescent such as the parent offering to be active with the adolescent (Wilson & Spink, in press; Wilson et al., 2010).

When considering social control use following a lapse in physical activity, it is important to consider factors that might play a role in the use of this regulatory form of influence. In this regard, factors that may serve as sources of information for the development of social norms (Miller & Prentice, 1996) may be important to consider and may include the family's own behavior and the typical behavior of the adolescent. For instance, those families with a stronger norm for physical activity might be expected to exert more social control when the adolescents lapse. In a recent study, Wilson and Spink (in press) examined both parent and child activity levels as potential moderators of the social control/physical activity relationship. Results from that study revealed active parents intended to use social control more than less active parents following a hypothetical lapse in their child's activity level. Specifically, it was found that parent activity was related to use of positive and collaborative social control following a lapse, but not negative social control (Wilson & Spink, in press). As further support for the role of parent activity, the results of a second study revealed that both parent activity and importance of the child being active were related to social control (Wilson et al., 2010). While child activity did not emerge as a significant predictor in the Wilson and Spink (in press) study, the authors speculated that this might have been due to the use of hypothetical scenarios.

Based on these findings (Wilson & Spink, in press), which used a hypothetical scenario to elicit responses, it was hypothesized that following a self-reported lapse in physical activity, adolescent reports of the use of positive and collaborative social control tactics by parents would be greater in those with more active families compared with less active families. No relationship between parents' use of negative social control following a lapse and family physical activity level was expected. Given that no relationship emerged between adolescent activity and parental use of social control in previous research using hypothetical scenarios, no specific hypotheses were advanced for this predictor in this examination of self-reported adolescent activity.

In terms of reactions to the use of social control, previous research has examined the relationship between social control and subsequent behavior change in different settings. Interestingly, the expected relationship has not been found consistently. Several studies have found that social control had a positive effect and was associated with improved behavior (e.g., Fekete et al., 2006; Westmaas, Wild, & Ferrence, 2002), while others have reported that social control was associated with no change or poorer health behavior (e.g., Franks et al., 2006; Helgeson et al., 2004). In terms of activity lapses specifically, the result of one study revealed that parents' use of collaborative social control predicted more positive change in adolescent activity level following a recalled activity lapse (Wilson & Spink, 2010). With these mixed results in other settings, and the one initial finding using a retrospective design in the activity literature, a second purpose of this study was to explore whether changes in social control use would be associated with behavior change in a real world setting (i.e., between those who returned to being more active following a lapse compared to those who remained less active). Based on the results of the one retrospective activity study (Wilson & Spink, 2010), it was hypothesized that increases in social control following a lapse would be related to increased activity following the lapse.

Method

Participants

Adolescents from the *in motion* (Chad et al., 2004) prospective activity study ($N = 547$) were used for this study. This study followed adolescents over a 12-month period. Participants were high school students in grades 9–12 ($n_{gr.9} = 169$, 31%; $n_{gr.10} = 150$, 27%; $n_{gr.11} = 109$, 20%; $n_{gr.12} = 117$, 21%). The participants ranged in age from 13 to 18 years, with a mean age of 16.2 years ($SD = 1.22$; 94% of sample reported). The distribution by sex was approximately equal with 52.5% ($n = 264$) female and 47.5% ($n = 239$) male of those reporting sex (92% of sample reported).

Procedures

Ethical approval for this study was obtained from the University Ethics Committee and the School Board Ethics Review prior to data collection. All classes from two high schools in two cities in the North American mid-west were approached by research assistants. Participants were those students who provided both parental consent and participant assent. In a classroom setting, research assistants administered the questionnaires to participants six times throughout the year at two month intervals (September, November, January, March, May, and September). Participants independently completed a questionnaire, which took approximately 20 min to complete.