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SRG 2009

“Matching Activities to Personal Style (MAPS): Developing a Physical Activity Guidance System for High School Students”

Project Summary

A series of investigations was designed to create building blocks for a process of guiding physical activity choices among high school students and young adults based on psychosocial information and experiential processes. The initial studies explored patterns of physical activity (PA) interests and motivations over the lifespan, as well as their relationships with individuals’ personal style characteristics. Additional studies provided insights regarding the degree to which perceptions about the psychosocial characteristics of different physical activities were commonly held in the population. The final study supported by this grant was an attempt to determine whether beliefs about changes fostered by physical activity could be influenced through information and personal experience.

Research methods and results

Lifespan differences

How do perceptions of and motivations for different sports and physical activities change with age? As a foundational study in this series of investigations, we examined data obtained from a sample of 1,885 individuals ranging in age from teens to 70s. They were grouped into 5 age categories: Teens, 20s, 30s, 40s, and 50s+.

Activity Interests: Based on a questionnaire evaluating participants’ interests in 50 different types of activities, eight factors or dimensions showed different levels of interest over the lifespan. On three of these dimensions (yoga and stretching, non-gym leisure activities, weight training), interests remained consistent across the lifespan; for the dimensions of martial arts, class training, group cardio, competitive sports, and outdoor activities, significant differences among age groups were found, along with linear declines in interests across the lifespan.

Motivational Interests: Using the same sample and methodology, another instrument in the questionnaire measured 20 motives for exercising. These were reduced to four dimensions through factor analysis, and scores on these dimensions were compared across five age groups. Motives relating to remaining ‘toned and fit’ as well as those pertaining to stress reduction remained relatively constant across the age groups. Surprisingly, however, motivations to exercise based on having fun and being with friends, as well as those involving a quest for challenge, adventure, enhancement of self-esteem, and learning new skills for life declined with age.

Physical activity and character development

In our research we explored a model of physical activity guidance based on the belief that individuals could be assessed on different psychosocial dimensions (e.g., sociability, risk taking) that were also embedded in psychosocial demands characteristic of different physical activities. The intended guidance process underpinning our work rested on a premise that each physical activity has a unique psychosocial profile that

would match to varying degrees with individual participants' psychosocial profiles. Before advancing toward the design of a guidance process, we needed to know whether our premise was valid.

Psychosocial profiles of physical activities: We chose eight distinct categories of physical activity and asked individuals to rate these activities on seven psychosocial dimensions. Moreover, we selected our sample based on their 'knowledge-level' pertaining to sports and activity, and grouped participants into three categories – social science students (206), exercise science students (146), and exercise professionals (76). The eight activities were: dance, solo cardio, team sports, martial arts, racquet sports, weight training, yoga, and fitness classes; the seven psychosocial dimensions were: sociability, predictability, aggressiveness, competitiveness, motivation, mental focus, and risk taking. The eight activities differed significantly on all seven psychosocial dimensions. Moreover, ratings were relatively homogeneous with few significant differences on the psychosocial requirements across the three knowledge levels.

Relating 'personality' to activity interests: Having demonstrated that activities could be distinguished on their psychosocial characteristics, we then explored whether different 'types' of individuals (based on psychosocial characteristics) showed different PA interest patterns. Two studies examined this question. The first involved the sample of 1,885 participants mentioned above. Here we found that individuals with higher competitiveness, greater risk taking propensity, and stronger aggressive characteristics showed stronger preferences for martial arts, competitive sports, and adventurous outdoor activities. In a similar vein, data revealed that individuals with higher propensities for thrill seeking and spontaneous actions were drawn more to martial arts and adventurous outdoor recreation. Finally, this study revealed that individuals with greater emphasis on predictability, higher mental focus, and self-motivated action tended to have stronger preferences for weight training and lesser interests in class-based activities. Our second study involved a smaller sample and a slightly different measurement strategy. With 286 participants who rated themselves on seven psychosocial dimensions and interest levels for eight types of activity, we discovered that (1) individuals with lower levels of competitiveness expressed less interest in team sports and weight training, (2) individuals desiring high predictability in their programs and who had stronger degrees of self-ascribed aggressiveness showed greater preferences for fitness class and solo cardio activities, (3) individuals with lower self-reported risk taking were less keen on martial arts, and (4) highly social individuals expressed greater interests in dance, fitness classes, and yoga/Pilates, but less interest in solo cardio activities.

Changing beliefs: In moving closer to creating sound building blocks for a guidance system based on psychosocial profiling, we designed a field experiment to estimate whether beliefs about 'what changes' through physical activity participation can be influenced in a way that would allow individuals to draw upon a broader range of motivations for participation. Our experiment involved 208 participants who were exposed to a 2-hour information + experience session focusing on exercise-induced personal changes, and involving a comparison of their psychosocial profiles with those of different sports and physical activities. Beliefs about changes in cognitive, physical, psychosocial, and spiritual functioning were assessed before and after the intervention. Though beliefs about cognitive, physical, and spiritual changes remained relatively constant, the intervention was shown to have a significant impact on participants' beliefs about the degree to which sports and exercise can change one's personal characteristics.

Policy implications

A few of the policy implications of these investigations are as follows:

1. Different strategies seem warranted for increasing PA participation in different age cohorts.
2. Promotional campaigns for increasing rates of active living should emphasize different motivational bases.

3. The linkage between personality and sport interest might be further explored to understand the causal direction of this relationship.
 4. Support should be increased for research that emphasizes intervention processes related to life-enhancing non-physical changes supported by PA participation.
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Next steps

The current research provided support for important elements underpinning the creation of a sport and physical activity guidance system rooted in multidimensional characteristics of the individual. However, further documentation is necessary. For instance, further validation of measurement tools is deemed critical. Moreover, research addressing the types of non-physical changes promoted by regular engagement in physical activity would be most useful. Finally, investigations exploring experience-based exercises that increase individuals' awareness about the wide-ranging changes supported by PA engagement would add directly to guidance system development.

Key stakeholders and benefits

As publications appear on the results of these investigations, press releases have been and will be generated to increase public awareness of the findings. In addition, large conferences involving physical educators and fitness professionals would provide excellent venues for enhancing understanding of these findings. At this point, more research would be required before more systematic interventions into fitness agencies, health centers, and school systems would be justified.