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Pairing Personality With Activity

New Tools for Inspiring Active Lifestyles

James Gavin, PhD

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IN BRIEF: The concept of "fitness personality" has been a topic of growing interest in the past few decades, and recent findings suggest it can be used to open a dialogue with patients about their activity choices. Clinicians who understand how seven personality dimensions (sociability, spontaneity, self-motivation, aggressiveness, competitiveness, aggressiveness, mental focus, and risk taking) relate to various sports can help patients identify more satisfying activities. By using simple tools for matching personality types with activities, physicians may increase patient compliance with exercise prescriptions. Patients who complete a personality assessment may gain insights and additional motivation to pursue regular exercise and fitness for a lifetime.

Over the past few decades, exercise participation rates in North America have remained at approximately 20% of the adult population,[1,2] despite mounting evidence that supports the value of regular activity for physical and psychological well-being.[3-7] Efforts to promote active living have been extensive and varied, yet gains have been modest at best. In recent years, a widely advocated tactic has been to match fitness programming to individual traits and personality.[8] Physicians can also use this approach to generate discussion and help patients discover how physical activity options mesh with their personalities.

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Personality and Activity Preferences

Physically active individuals engage in a wide range of sports and fitness pursuits. Whether influenced by convenience, fashion, or personal inclination, exercisers gravitate toward specific physical activities and avoid others. For example, some people identify themselves as dedicated runners; others consistently participate in yoga or dance classes.

Activity choices may be influenced by personality. Through the 1970s and 1980s, countless studies explored the relationship of personality traits to sport

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choice and participation. Most studies yielded results that could rarely be replicated.[9-13] For example, some studies characterized runners as compulsive,[14] depressed, inhibited,[15] introverted,[16] taciturn, cautious, deliberate, and suited to monotonous, repetitive situations.[17] Others described runners as sociable, optimistic,[18] sexually active,[19] and well-adjusted.[20] One report[21] found that body builders had a pathologic preoccupation with muscularity, but another investigation[22] found them to be quite normal. Martial artists were depicted as highly aggressive in one study,[23] while another reported relatively low levels of aggression.[24] Highly committed exercisers were described as narcissistic and obsessive-compulsive by one researcher,[25] even though the general trend describes regular exercisers as well-adjusted.[26]

By the end of the 20th century, research had offered few definitive answers to questions of association between personality and activity choice. Some hopeful signs may, however, be found in the emerging interest in the "big five personality traits"[27] within exercise settings and new personality research on exercise adherence.[28]

Abilities and Choice of Activity

Perhaps a more fundamental issue influencing exercise participation concerns the individual's sense of physical competency. Self-efficacy theory argues that an individual's sense of competency influences involvement in specific behaviors.[29] For instance, if someone does not feel competent to swim, he or she will avoid the water. In exercise psychology, research clearly suggests that increasing patients' physical self-efficacy will improve exercise participation.[30]

Once the question of competency has been assessed, it seems logical to then identify activities that are more suited to patients' personal styles or personalities, rather than directing them toward ones that don't interest them. Consistency theory suggests that people are more likely to participate in activities that closely match their personalities.[31-34] Moreover, much of the work on vocational guidance and counseling is premised on the belief that career choices should be compatible with the individual's interests, lifestyle, and personal inclinations.[35]

Although logic and related evidence may support fitness-matching strategies, a number of concerns arise. First, which personal variables are most relevant to physical activity choices? Second, if pertinent individual variables are identified, how can these be associated with sports and physical activities in a matching process?

Matching would ideally rely on identifying traits common to both individuals and physical activities. Through comparisons between individual and activity ratings on traits, indicators of congruence would guide the advisement of patients in activity choices. The result would be a suggested list of highly compatible activities that the individual could pursue to increase adherence or build selected competencies.

Elements of a Good Match

Studies[36-38] of personality in sports suggest a number of themes that could apply equally well to individuals and to the participation demands of different sports and fitness programs. While other personality themes can be found in the literature, seven dimensions seem most pertinent to activity-based analyses.

1. Social dimensions of sports and exercise. People may exercise either alone or with others. Sometimes activities bring people to a shared event or location, but interaction is optional. Running alone on wooded trails and swimming long distances in open waters are solitary activities. Taking a class at a gym with dozens of strangers may provide social opportunities without much interaction. By contrast, playing a team sport is necessarily social. Overall, activities require varying degrees of verbal and nonverbal social interaction, and participants may seek or avoid these interactions as part of their activities.[39-41]

2. Degrees of control or spontaneity. Some sports require precise control of movements and even thought processes,[42] while others allow participants to be less exact or controlled. Another concept, known as "going with the flow," has been described as a holistic sensation of being totally involved and functioning effortlessly.[43] In studies of movement qualities, control

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and spontaneity describe not only individual differences, but also corresponding psychological states of mind.[44,45] Activities that are mostly predictable and under participants' control (eg, training on a step machine, engaging in a highly structured group fitness class) may have different psychological benefits than ones related to activities that are less predictable or controllable (eg, an improvisational dance class, playing soccer).[46]

3. Motivation: intrinsic and extrinsic. Motivation refers to the direction and intensity of an individual's effort.[47] How much energy people direct toward certain objectives, and why they do it, can perhaps be understood by distinguishing between intrinsic and extrinsic motivations.

Intrinsically motivated acts provide satisfaction, pleasure, excitement, fun, or a sense of mastery in the process. Extrinsically motivated actions are undertaken as means to ends, and the ends are valued far more than the activities themselves. In sports and fitness, people may be motivated to exercise solely for extrinsic reasons (eg, managing weight, looking good, remaining healthy) and may experience little or no satisfaction in the exercise process itself. Intrinsic and extrinsic motivations range from a total lack of motivation to extrinsically generated motivation to intrinsic motivation.[38]

4. Aggression. Sports touch on three distinct levels of aggression: (1) hostile aggression, where the intention is to harm or cause pain; (2) instrumental aggression, where the intent is to promote a winning effort even if harm or injury to others occurs; and (3) sport assertiveness, where a legitimate use of force and unusual expenditures of effort and energy promote winning according to game rules.[48] In exercise, aggression represents more sport assertiveness than hostile aggression. Activities like weight training require a certain degree of aggression (or sport assertiveness) to move barbells up and down or to rotate levers on machines. From this perspective, a yoga class may require far less aggressive energy than a weight training experience.

5. Competitive, collaborative, or individualistic options. Competition has been widely explored in the field of sports and physical activity.[49] An activity can be designed with varying degrees of competitive, collaborative, or individualistic orientations. For example, a person playing basketball can relate to teammates either individually or cooperatively and to an opposing team player competitively.

6. Mental focus. The terms focus, concentration, and attention are often considered in sports participation and performance enhancement. Studies suggest two dimensions of attention or focus: width (broad versus narrow) and direction (internal versus external).[50] A basketball player preparing to take a foul shot exemplifies a narrow focus, whereas the same player running down court will be attending to a number of elements at the same time. Looking at the basket before taking a foul shot, the player manifests an external focus, while concentrating on breathing represents an internal focus.

Another framework for mental focus is found in associative attentional strategies (ie, monitoring feelings and body functions, such as breathing and muscle tension) versus dissociative attentional strategies (ie, "tuning out" or distracting oneself). Advantages and disadvantages exist for each of these strategies when applied to different sports.[51] Recreational athletes may want to focus their minds on something other than pressing life concerns, or they may prefer to mentally wander while they exercise. Some people watch TV, listen to music, or talk while exercising; others concentrate deliberately or because their sport demands it.

7. Risk taking or thrill seeking. Different sports and fitness pursuits carry varying kinds and degrees of risk. Participation in high-risk sports is associated with a trait known as "sensation seeking."[52] Risk taking is both a psychological trait and an activity characteristic. Sports have been cataloged according to the degree of physical risk they present[53]; however, psychological risk may also accompany activity participation. Some people may experience high degrees of self-consciousness or even embarrassment participating in different types of exercise programs. Not wanting to be seen as weak, incompetent, or unsuccessful may influence individuals to choose activities with lower apparent risks.

Both individuals and physical activities can be identified according to the seven dimensions; therefore, profiles of individuals can be matched to sport and fitness programs. For instance, if someone is highly social but dislikes competitive activities, group fitness classes might be a better match than competitive team sports. Knowing someone's profile potentially reveals at least two things: the nature and degree of psychosocial challenges they might encounter and the probability of enjoyment and adherence they might experience in different fitness activities.

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Does Compatibility Breed Compliance?

The principle of personality-activity matching may be stated simply as: Individuals who do not exercise regularly are likely to experience additional challenges or obstacles when they engage in activities that require them to behave differently from their customary patterns or styles.[54] Beginning exercisers have one fewer barrier to success if they choose sports and fitness programs that are highly similar to their personality profiles.

Preliminary survey findings[55] of 206 members at a multicenter community fitness organization suggest that:

- Individuals' psychosocial profiles corresponded more to activities they identified as "most preferred" compared with those identified as "least preferred";
- A significant trend was found between hours of exercise participation and the degree of match between individuals' psychosocial profiles and preferred activities; and
- Higher degrees of personality-activity match were associated with higher degrees of self-esteem and positive mood states.

In a smaller (n = 84) follow-up study,[56] analyses were based on what participants described as their "most regular" physical activity; again, hours of participation and satisfaction levels were associated with greater degrees of personality and activity profile matching. Moreover, greater association between personality and activity profiles significantly correlated with self-esteem and mood states.

What Are 'Fitness Types'?

Another way to examine the validity of personality-activity matching can be found in profiles of individuals who express strong interest in certain activities and dislike for others. From a database of 692 members at a multicenter community fitness organization (J. Gavin, PhD, unpublished data, September 2004), four groups were analyzed: group members expressed a high interest in karate (n = 56), aerobic dance classes (n = 76), doing yoga by themselves (n = 29), or running solo (n = 52). For each group, selection criteria ensured that they had little or no interest in the other three activities (eg, high interest in aerobic dance, but little or no interest in karate, yoga, or running).

Study participants answered questions about their preferred way of exercising according to the seven psychosocial dimensions. Each dimension was measured by two items rated on five-point Likert scales (strongly agree to strongly disagree). A sample question for the sociability scale was, "I prefer to have other people around when I exercise." Reliability for the scales ranged from 0.40 to 0.74. In addition, participants rated 50 sports and physical activities on a four-point scale ranging from "high interest" to "no interest," with a fifth category being "unable to do activity." Group comparisons for each of the seven dimensions were $P < .001$ significant, except for sociability ($P = .046$) and mental focus ($P = .12$).

This pattern (figure 1) is largely consistent with intuitive notions about individuals who might be attracted to these different activities. For example, exercisers who expressed high interest in doing yoga by themselves had the lowest scores on sociability, spontaneity, aggression, and competitiveness. Their scores on motivation and adventurousness were higher than those who had keen interest in aerobics, but lower than those highly interested in karate or solo

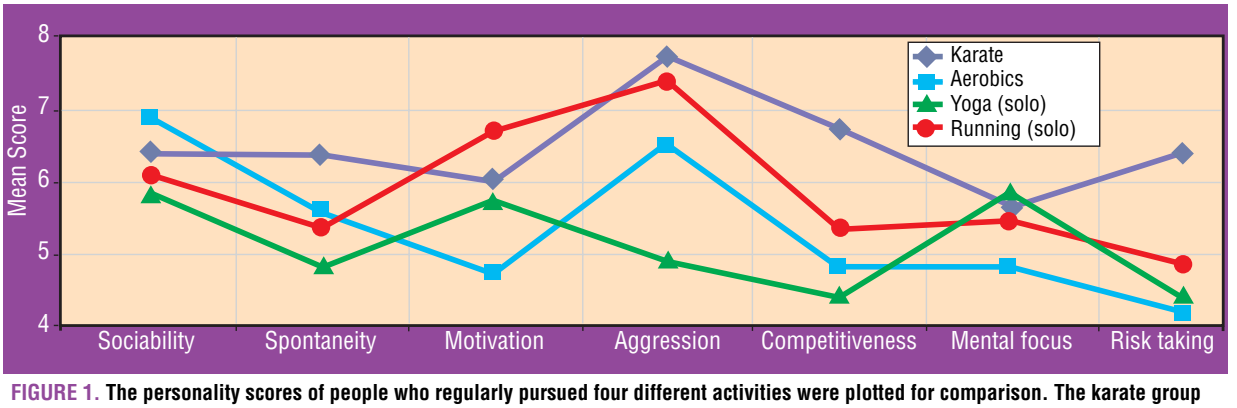

FIGURE 1. The personality scores of people who regularly pursued four different activities were plotted for comparison. The karate group scored the highest for measures of aggression, competitiveness, spontaneity, and risk taking; solo runners had the highest self-motivation; the aerobics group was the most sociable; and the yoga group had the most mental focus.

running. Moreover, yoga participants had the highest average score on mental focus. Individuals who had strong interests in karate scored highest on aggressiveness, competitiveness, risk taking, and spontaneity. While information of this nature supports the proposed model, further research is required to fully test various propositions of this fitness-matching approach.

Matchmaking Tools

A simple profile tool (figure 2) can be used to help patients explore their self-analysis based on the seven personality dimensions. This profile is based on the seven psychosocial styles that correlate to the demands of different sports and fitness activities (see "The Seven Psychosocial Styles," page 22).

Another tool (figure 3) is a stand-alone device for inspiring individuals to think about physical activity in new ways, or it can be used with the survey depicted in figure 2. The seven psychosocial dimensions are represented with icons for 19 sports; activities are arranged in a continuum for each dimension. The location of activities along the seven dimensions is based on

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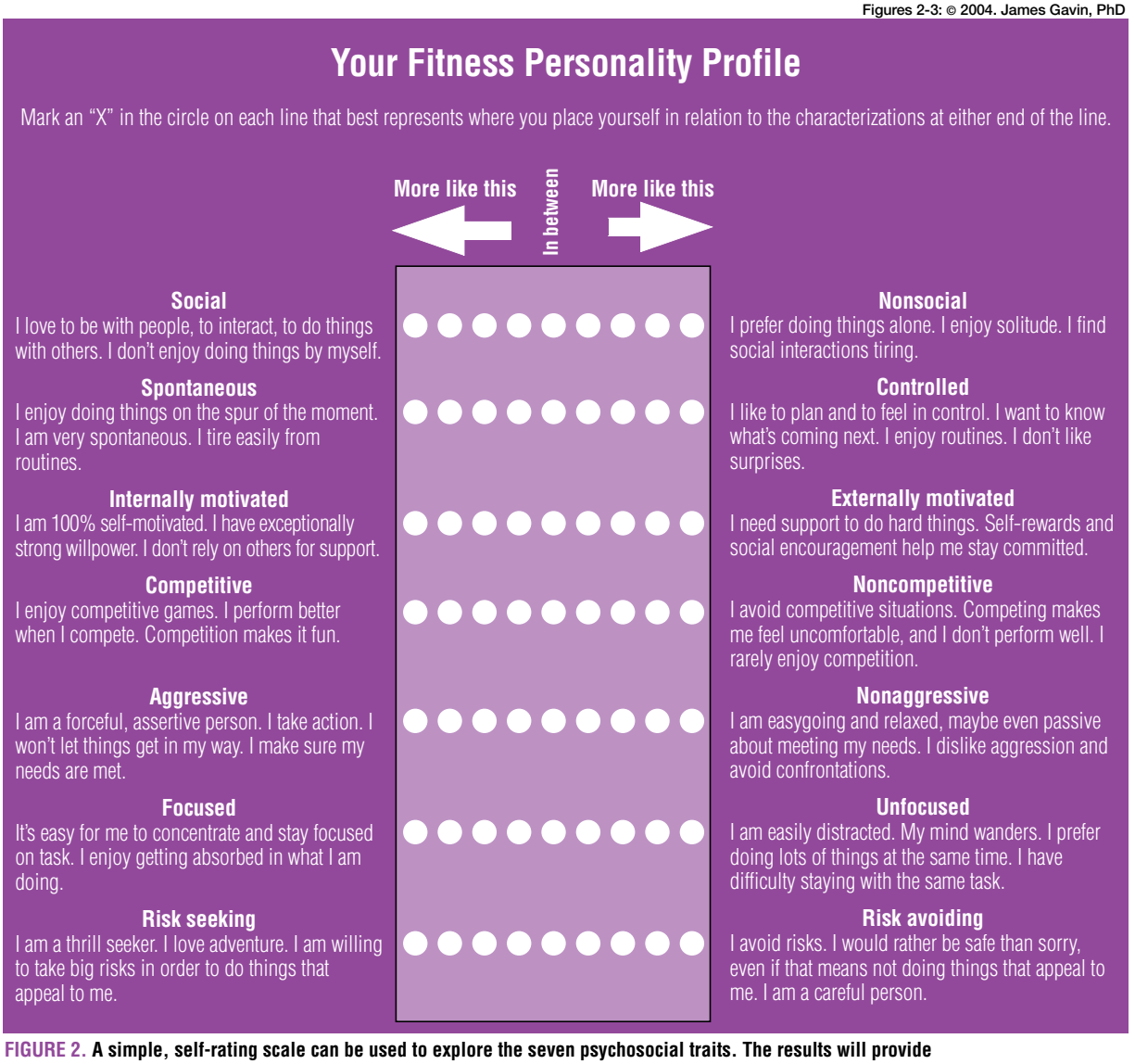

FIGURE 2. A simple, self-rating scale can be used to explore the seven psychosocial traits. The results will provide insights for choosing activities that sedentary patients will be motivated to try and active patients will find challenging.

continued

extensive interviews with participants and fitness professionals.[36]

One practical way to use this chart would be to have patients pick activities that interest them. For instance, if someone selected swimming, he or she would locate its icon (triangular figure drawing) in each personality dimension. A line connecting the seven swimming icons creates a profile of personality traits that this activity may draw upon.

Swimming, for example, would be a relatively nonsocial activity that emphasizes controlled, patterned behaviors rather than spontaneous ones. It relies on high levels of internal motivation, because cheering poolside crowds are rare, and it requires low-to-moderate forcefulness (aggressiveness). Although swimming need not be competitive, many recreational swimmers participate in local races and compare themselves to swimmers in neighboring lanes. Swimming does not depend on mental concentration, although swimmers need to be attentive to the boundaries of the pool and the presence of other swimmers. Finally, it does not cater to thrill seeking, with its low ego emphasis and risk of injury. Of course, the location of swimming on the continua could vary based on each participant's way of engaging in the activity.

Figure 3 describes more normative patterns. However, a swimmer could avoid competitive thoughts or actions, which would then relocate the swimming icon to the noncompetitive end of the continuum for this participant. Similarly, this swimmer could intentionally focus on breathing and body movements, making his way of doing this activity highly focused.

Making this chart available to patients enables them to explore the seven psychosocial dimensions of sports and activities and may help them make better choices. Moreover, if they have created personal profiles (see figure 2), they can roughly compare them to specific activity profiles to gauge compatible activities and those that may challenge their psychosocial patterns.

Practitioners using the personal assessment tool and chart should bear in mind that individuals will weigh the importance of each of the seven dimensions differently. For example, some patients may have strong feelings about risky activities; others may rely heavily on social interaction to keep them participating regularly. A good line of questioning is "Which of these seven dimensions are most essential to your choice of exercise? For instance, how much do you want to interact with others?"

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The Seven Psychosocial Styles

Sports medicine practitioners can gauge patient interests by administering a personality profile that uses a Likert scale (see figure 2). One possible scaling method is based on seven psychosocial dimensions that are briefly described as follows:

1. Sociability is the degree to which an individual prefers social interaction over solitary pursuits. This dimension is similar to measures of introversion and extroversion.

2. Spontaneity is the extent to which an individual lives in an intuitively guided, open manner whereby change and spur-of-the-moment happenings are welcomed, rather than emphasizing high levels of control and predictability in life and avoiding situations that are highly changeable.

3. Self-motivation is the degree to which an individual exhibits high levels of determination and willpower, as opposed to requiring external supports and reinforcements to adhere to challenging activities or life endeavors.

4. Aggressiveness is the extent to which an individual behaves or interacts in strong, forceful, highly assertive ways that may border on aggression, rather than behaving in a gentle, nonaggressive, or perhaps even passive manner.

5. Competitiveness is the extent to which an individual enjoys and pursues competitive engagements, as contrasted with an avoidance of competition coupled with a preference for noncompetitive, solitary, or collaborative pursuits.

6. Mental focus is the degree to which an individual demonstrates a high ability to concentrate or focus and prefers activities in which the mind is absorbed in one activity. On the other end of the scale is an individual who is easily distractible or prefers high levels of stimulation and multiple, simultaneous engagements.

7. Risk taking is the extent to which an individual engages in risky behaviors, pursues adventure, or can be characterized as a thrill-seeker. The opposite personality type is cautious, risk avoiding, and highly concerned with safety and security.

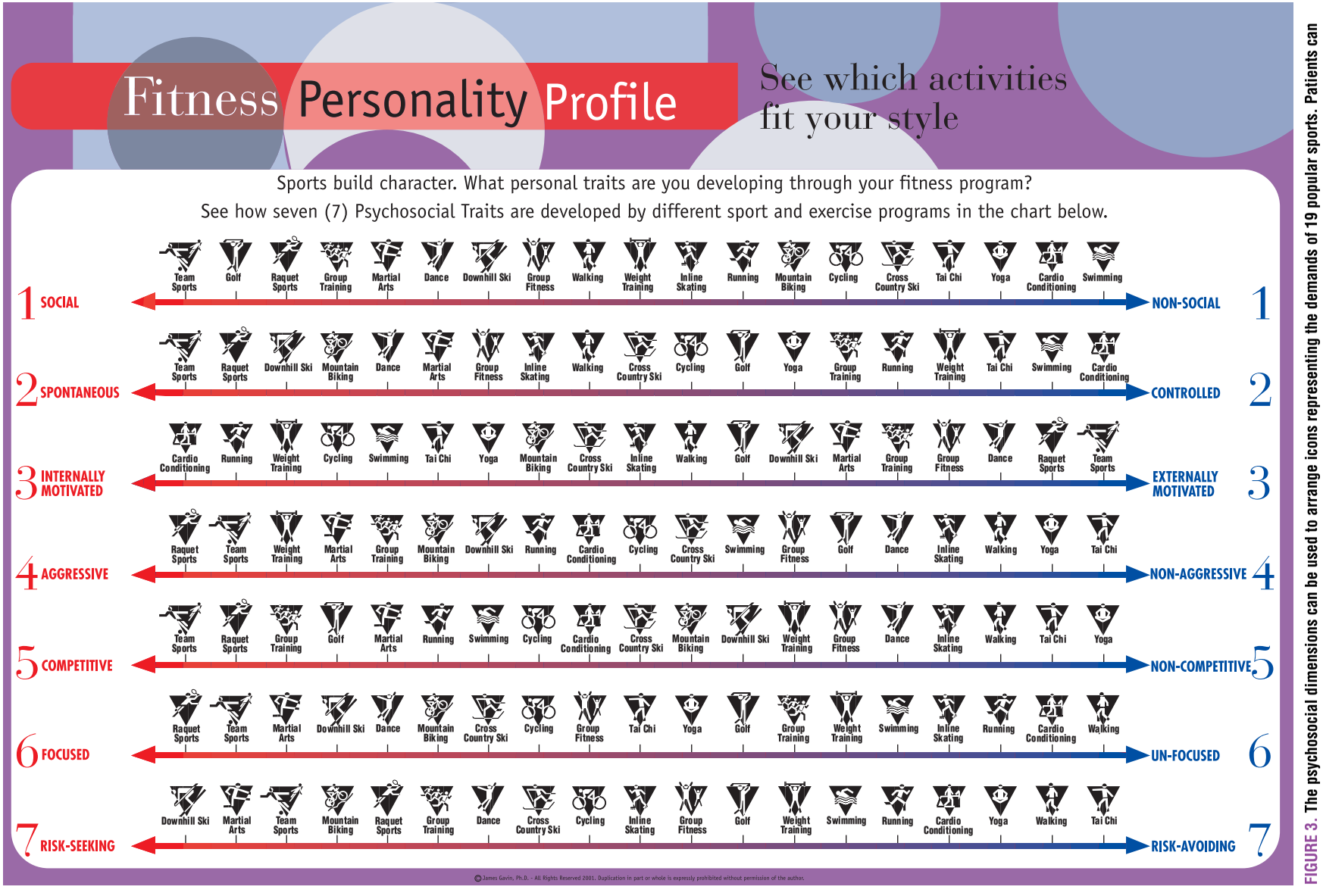

FIGURE 3. The psychosocial dimensions can be used to arrange icons representing the demands of 19 popular sports. Patients can select sports they find interesting and see how specific sports fit their personality traits.

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If patients complete personal profiles and are considering activities that represent a different profile, practitioners can use this as an opportunity to open dialogue, educate patients about the challenges they might face, and recommend ways to modify the activities to better suit their preferences. For example, a gregarious person who gets bored with weight training can be encouraged to try a circuit training class that will provide similar benefits. In general, these tools are a means to open dialogue with patients about their interests, patterns, and potential gains.[57]

Maximizing Motivators

The overarching goal of this process is to promote activity participation, especially for sedentary patients. Weight management, physical appearance, and physical functioning may motivate some people, while psychological benefits such as stress reduction, anxiety alleviation, and mood elevation will encourage others.

The tools described are incentives to action and can stimulate patients to reflect on additional motives to exercise. They are likely to be provocative and to encourage individuals to consider additional motives for exercising. Moreover, by examining the psychosocial demands of different sports and fitness pursuits, patients may be less likely to choose an activity that goes against their personal preferences. While many of the psychosocial demands may seem obvious to those who are involved in sports and fitness, novices may not know about the social and psychological demands of common fitness activities. The tools may help newcomers feel more confident about the choices they make and thus inspire them to at least *investigate* different physical activities.

For active patients, discussing physical activities may encourage the exploration of personal development through physical activities and create avenues for practicing and supporting new behaviors. For instance, a shy runner may consciously choose activities involving greater social interaction (including running clubs) to become more comfortable interacting with groups. An aggressive "type A" individual who normally prefers competitive racket sports might see merit in balancing his style by taking an occasional yoga class.

Using the personality assessment (see figure 2) and the chart (see figure 3) in discussions with patients can help them become more aware of how their personal preferences correspond to different activities. These tools may also enable them to recognize the multidimensional implications that sports and exercise have on their physical and psychological well-being. **PSM**

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