Modeling Initial Participation of Diverse Communities in Competitive Swimming

Dane W. Wolfrom
dane.wolfrom@outlook.com

Emily J. Murray
Western Washington University, emilyjwm96@gmail.com

Angela M. Dominguez
Pacific Lutheran University, domingam@plu.edu

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Abstract
This research note introduces the Initial Participation Model, which theorizes continued participation in an activity or group before individuals make commitment is a function of: enjoyment, feeling of inclusion, and/or involvement opportunities. The specific focus of this research is investigating how deficiency in enjoyment, feeling of inclusion, and involvement opportunities may discourage continuing participation in competitive swimming by underrepresented populations such as African American, Black, Hispanic, Latino, Native American, Pacific Islander and low-socioeconomic communities. Details explain how initial participation differs from other sport stages by emphasizing participation; relating to program instead of sport; and resetting each time an individual joins a new activity or group. Two examples are offered illustrating how the model may be used for identifying points of intervention that stimulate continued initial participation. Also included are specific factors constructing the model and future testing plans for validation.

Key words: ethnicity, inclusion, participation, sense of belonging, sport, swimming

Competitive swimming reflects a hegemonic narrative of white, upper-class athletes participating and excelling. Common expectations and stereotypes approbe marginalized groups as non-swimmers, especially People of Color and low-income individuals. Our research focuses on the psychological and emotional experiences that competitive swimming provides individuals, rather than physical traits or resources they have. Recent research has rejected assertions that underrepresented youth cannot afford to swim, lack pool access, or are disinterested in swimming (Irwin, Irwin, Ryan, & Drayer, 2009; Irwin, Pharr, Layne, & Irwin, 2017; USA Swimming, 2014a). In 2006, Hastings, Zahran, & Cable found swimming to be a socially exclusive phenomenon. If connections between exclusivity and attrition during initial participation can be found, then nurturing a feeling of inclusion—which is realized when needs for both sense of belonging and value of uniqueness are met (Shore et al., 2011)—may improve competitive swimming participation for underrepresented populations.

In 2017, USA Swimming had 68.8% of swimmers who reported their ethnicity as white, while 2.2% reported as Black/African Americans; 0.3% American Indian/Alaska Natives; 5.8% Hispanic/Latino; and 0.3% Native Hawaiian/Pacific Islanders (USA Swimming, 2017). The average household income for USA Swimming members in 2014 was $125,000 while only 2.0% of all swimmers qualified for financial assistance that year (USA Swimming, 2014a, 2014b). These participation gaps are particularly provoking considering recent research affirmed underrepresented youth have similar interest levels and pool
access as affluent white youth (Irwin, et al., 2009; Irwin, et al., 2017; USA Swimming, 2014b). The Initial Participation Model introduced herein illustrates how ethnicity and income level might indirectly influence continuing initial participation through enjoyment, feeling of inclusion, and involvement opportunities; and provides a method for locating intervention points that may offset negative influences on continuing initial participation. Future validation of the model and related subsequent research may explain participation gaps in competitive swimming between white/nonwhite and low-income/high-income individuals.

**Defining Initial Participation**

Merriam-Webster defines *participation* as “the act of joining with others in doing something” (“Participation,” 2018). We define *initial participation* as the period an individual is participating in an activity or group experience up until their exact moment of commitment. Scanlan, Carpenter, Schmidt, Simons, & Keeler (1993) define commitment as “a psychological construct representing the desire and resolve to continue sport participation” (p. 6). Initial participation is not expected to be sport-specific (e.g., begins the first time a child splashes around in a pool and ends when they sign up for a swim team), but more likely program-specific (e.g., starts the first day on a new team and ends when reregistering for a second season). Initial participation may reset each time an individual joins a new activity or group, and post-reset experiences may augment or annul previous initial participation outcomes. An individual may experience more than one initial participation period at a time (e.g., starting a new high school team and new club team at the same time). For an individual thinking about joining a swim team who may watch a practice, speak to a coach, or discuss swimming with friends, their initial participation likely begins before they get in the water. In fact, the first time a child discusses being a swimmer with a family member falls within the initial participation period since that experience may affect whether or not the child eventually participates in competitive swimming to a point of commitment.

Autonomy support and Self-Determination Theory both have connected motivation to participate with sense of belonging (Amorose & Anderson-Butcher, 2007; Deci & Ryan, 1985, 2000; Mageau & Vallerand, 2003; Smith et al., 2016). The Sport Commitment Model (Scanlan et al., 1993) found individuals are likely to continue a sport based on their levels of enjoyment and involvement opportunities. Since initial participation is when an individual is trying to see if an activity or group is “for me,” we proffer continuing initial participation could be impacted by enjoyment, feeling of inclusion, and/or involvement opportunities.
There are other sport participation periods defined by Bloom & Sosniak (1985), Balyi (2001), Côté (1999), and Durand-Bush & Salmela (2001). These periods describe sport career paths, usually related to high-performance athletes and focusing on performance development. For example, Bloom & Sosniak (1985) discussed the *early years* period and how experiences within it may factor into whether a child will continue in sport; and Côté encourages an exploratory *sampling* period, where children sample a variety of sports between ages of six and thirteen (Côté, 1999). The introductory periods by Bloom & Sosniak and Côté may overlap at times with initial participation. They are not expected to completely overlap since initial participation is specific to an activity or group and not based on career sport progression. Initial participation will also reset multiple times as athletes progress through new coaches, teams, and training groups. An Olympic-level swimmer is likely far beyond their early years or sampling period, but may still experience initial participation if they transfer to a new team today.

**Determinants of Initial Participation**

**Enjoyment.** Our definition of enjoyment is equivalent to what Scanlan et al. (1993) described as: “*a positive affective response to the sport experience that reflects generalized feelings such as pleasure, liking, and fun*” (p. 6). Research has shown as enjoyment in sport lowers, athletes are less likely to continue participation (Gardner, Magee, & Vella, 2017; Scanlan et al., 1993). Parents of non-swimmers reported having fun as important or very important in choosing leisure activities for their children (USA Swimming, 2014). When discussing self-determination theory, many athletes cited enjoyment as a reason for continuing a sport. (Keshidar & Behzadnia, 2017). Gardner et al. (2017) linked declining athlete enjoyment to reduced commitment. We believe enjoyment is a key component for continuing initial participation.

**Feeling of Inclusion.** In an inclusive environment, each swimmer will perceive themselves to be an esteemed member of the group (e.g., training lane, team, sport) through satisfying a need for both sense of belonging and value of uniqueness (Shore et al., 2011). Feeling of inclusion may be relative to a sport, program, or group, and may vary as experiences occur. Even within one training group, a swimmer may experience a range in sense of belonging and value of uniqueness, depending on where and with whom each interaction is (e.g., coach at practice, teammates through social media, other swimmers in a locker room). For sense of belonging, we use Strayhorn’s definition: “a feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by and important to the group” (Strayhorn 2012, p. 3). In Irwin et al. (2017), Black/African American respondents reported less agreement to white youth on: “My best friends are good swimmers,” “My best friends like to swim,”
and “Most members of my family know how to swim” (p.17-18). We suggest statements about peer aptitude and enjoyment of swimming reflect a non-swimmer’s perception of whether competitive swimming is “for me” and influences their sense of belonging. In education, sense of belonging has enhanced participation in online programs (Thomas, Herbert & Teras, 2014) and Students of Color have reported a weaker sense of belonging in college than their white counterparts (Johnson et al., 2007). For value of uniqueness, Shore et al., asserted that acceptance of individual uniqueness is integral to creating an inclusive and diverse environment. Only when an individual feels like an insider on the team and is encouraged to retain individual uniqueness will s/he experience a feeling of inclusion (Shore et al., 2011). Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier (1992) assert that a person needs to be an integral part of their environment to feel included. We believe when value of uniqueness combines with sense of belonging, a feeling of inclusion instrumental for continuing initial participation is created.

Involvement Opportunities. Scanlan et al. described involvement opportunities as the anticipation of valued events or experiences that occur only through continued involvement. Opportunities may be actual, such as the chance to qualify for travel competition or be with friends; or they may be psychological, such as an athlete’s belief they will get in better condition (Scanlan et al., 1993). Opportunities for intrinsic forms of motivation (e.g., increasing skill level, learning from mistakes) have been found to increase the likelihood of continuing participation (O’Rourke, Smith, Smoll, & Cumming, 2012; Smith et al., 2016). Kesh tidar & Behzadnia (2017) found athletes stayed in sport for individual success and the opportunity to make friends. Weilbach (2012) found primary motivations for sport participation include making friends and living an active, healthy lifestyle. Parents of non-swimmers reported the following involvement opportunities as important or very important when choosing activities for their children: fitness-95%, self-confidence-89%, and making friends-81% (USA Swimming, 2014b). We believe involvement opportunities influence the likelihood of a swimmer continuing initial participation.

Initial Participation Model
We theorize in the Initial Participation Model that continuing initial participation (IP) is a function of enjoyment (e), feeling of inclusion (i), and involvement opportunities (o). The formula, \( IP = \text{sum}(e) + \text{sum}(i) + \text{sum}(o) \), reflects the summative nature of each construct, which may positively or negatively be influenced by extrinsic processes or experiences, and may positively or negatively interact with each other. An example of construct interaction is as sense of belonging increases, heightening a feeling of inclusion, enjoyment also rises (Dunn,
Dorsch, King, & Rothlisberge, 2016). All three constructs need not have positive influence on continuing initial participation. For example, a really slow swimmer (negative involvement opportunities) may experience a great love for swimming (positive enjoyment) and feel valued as part of their team (positive feeling of inclusion). This example assumes involvement opportunities due to slowness are net-deficient even after considering the positive effects of doing something they love and being with friends.

We do not know what value of $IP$ results in continued participation, but we believe every individual has an $IP$ value for each activity or group that assures continued initial participation. If a force uncontrollable by the individual causes the activity or group to end (e.g., parents withdraw athlete, coach moves away, sport season ends), the $IP$ value that assures continuing initial participation remains for the individual even if participation does not.

![Initial Participation Model](image)

**Figure 1** Initial Participation Model illustrates the relationship between enjoyment, feeling of inclusion, and involvement opportunities as they mutually influence initial participation and each other.

**Intervention Points**

The Initial Participation Model may be used to map psychological processes experienced by swimmers from underrepresented populations and identify points
for intervention that may encourage continuing initial participation. Interventions may promote positive, or diminish negative, indirect influences on initial participation through enjoyment, feeling of inclusion, and involvement opportunities. Two hypothetical examples of how indirect influences may affect initial participation are discussed here.

**Example 1 – Black Swimmer experiencing Implicit Bias and Stereotype Threat.** Black swimmers may experience a variety of interactions causing low feeling of inclusion. One such experience, implicit bias, is an unconscious cognition influencing understanding, actions, and decisions (Staats, Capatosto, Wright, & Contractor, 2015). For example, people may subconsciously assume a Black individual is not a swimmer before being given any information to confirm or reject that assumption. Olympic gold medalist Simone Manuel said, “The title 'black swimmer' makes it seem like I'm not supposed to be able to win a gold medal or I'm not supposed to be able to break records and that's not true because I work just as hard as anybody else. I want to win just like everybody else” (“Why Simone Manuel's Olympic gold,” 2016). Figure 2 maps how implicit bias may indirectly affect the prospect of a Black swimmer continuing initial participation through a diminished feeling of inclusion.

In addition to experiencing low sense of belonging, a Black swimmer may underperform due to stereotype threat. Stereotype threat is when the fear that performance outcome will reinforce a negative stereotype about an individual’s group actually negatively impacts their performance (Steele & Aronson, 1995). The ethnicity of an athlete alone is enough to induce stereotype threat and cause underperformance (Steele & Aronson, 1995; Stone, Lynch, Sjomeling, & Darley, 1999). The Black swimmer from our example may underperform due to stereotype threat and such underperformance may result in not qualifying for future championship meets, consequently decreasing involvement opportunities. Not qualifying for championship meets may induce a sense that perhaps Black people cannot swim after all, which may further lower feeling of belonging and enjoyment through decreased involvement opportunities. Figure 2 maps how stereotype threat indirectly affects continuing initial participation.
Figure 2 Initial Participation Model illustrating effect pathway and intervention points for a swimmer who experiences implicit bias and stereotype threat.

Figure 2 also locates possible intervention points for arresting the deficit feeling of inclusion and involvement opportunities. In this example a coach may become aware of their implicit biases and make efforts to reduce the effects of those biases (see Tropp, 2015) or an athlete may alleviate stereotype threat through affirmations (see Layous, Davie, Garcia, Purdie-Vaughns, Cook & Cohen, 2016). Intervening before the feeling of inclusion and involvement opportunities are negatively affected will have a net positive result on continuing initial participation. According to our theory, being a Black person does not directly affect initial participation, but rather may cause indirect influences which lower the likelihood of continuing initial participation. Our model shows by reducing the negative indirect forces at their intervention points, an environment conducive to continuing initial participation is attainable.

Example 2 – A Relay Swimmer who cannot afford a Technical Racing Suit. At a meet, a relay swimmer who cannot afford a technical racing suit may sense they do not belong because they cannot afford to purchase what other teammates have and do not look like they fit in. Physical and psychological effects of a non-technical suit may result in the athlete swimming slower (Marinho et al., 2012), which may decrease their involvement opportunities.
Feeling embarrassed and worried about disappointing teammates may lead to declining enjoyment. Figure 3 identifies the intervention point at suit scarcity. By providing the athlete a technical suit—especially in a way that respects their privacy—the athlete may swim faster due to the physical and psychological effects of a technical suit. Faster times may increase involvement opportunities. Wearing a technical suit may also remove embarrassment and fear of letting teammates down, which should increase enjoyment. Even though the swimmer with a technical suit may look like the rest of their team, some deficit feeling of inclusion could remain since the swimmer may still feel as if they do not belong in a sport they cannot afford. Overall, providing a suit to the athlete will likely result in a net-positive impact upon continuing initial participation.

**Figure 3** Initial Participation Model illustrating effect pathway and intervention points for a relay swimmer who cannot afford a technical racing suit.

**Future Model Validation**

A preliminary mixed methods study will be conducted to validate the Initial Participation Model. Past and present USA Swimming athletes ages nine to seventeen years old will be identified using snowball sampling of youth who started in a swim team between fifteen and twenty months prior to the study, and either quit within one year after starting or still participate. We will use one year because a second year has the commitment element of second registration to it, so all...
individuals will have either ceased participation or reached one level of commitment.

**Personal Investments.** The personal investments construct is not included in our theoretical model because we believe personal investment levels are inconsequential during initial participation. However, since personal investments are key to sport commitment (Dunn et al., 2016; Gardner et al., 2017; Scanlan et al., 1993) and some influence upon continuing initial participation may exist for more experienced and otherwise committed athletes who may be experiencing a reset in initial participation, we include personal investments in our validation test to confirm its exclusion. For testing purposes, personal investment is defined as personal resources put forth into an activity such as time, effort and money, that cannot be recovered after participation ends (Scanlan et al., 1993).

**Hypothesis.** An athlete continuing initial participation in competitive swimming is influenced by enjoyment, feeling of inclusion, involvement opportunities, and/or personal investment. Ethnicity and resources may indirectly influence an athlete continuing initial participation only through enjoyment, feeling of inclusion and/or involvement opportunities.

**Testing.** We will conduct a qualitative survey asking study participants about the following:

- Ethnicity: African American/Black; American Indian/Alaska Native; Asian; Hispanic/Latino; Native Hawaiian/Other Pacific Islander; White; Other ethnicity; More than one ethnicity.
- Age, in years.
- Highest level of education completed by head of household: 1-below eighth grade; 2-eighth grade; 3-high school; 4-post high school other than four-year degree; 5-four-year degree or higher (Caro & Cortés, 2012).
- Household financial wellbeing: 1-not at all well-off; 2-not very well-off; 3-average; 4-somewhat well-off; 5-very well-off (Caro & Cortés, 2012).
- How long they participated in the program: less than 1 month; 1-2 months; 3-6 months; 6-12 months; more than 12 months.
- How much they perceived enjoyment in swimming: 1-strongly felt no enjoyment; 2-felt no enjoyment; 3-neither felt enjoyment nor felt no enjoyment; 4-felt enjoyment; 5-strongly felt enjoyment.
- How much they perceived belonging in swimming: 1-strongly felt no belonging; 2-felt no belonging; 3-neither felt belonging nor felt no belonging; 4-felt belonging; 5-strongly felt belonging.
How much they perceived their individual uniqueness was valued in swimming:
1 - strongly felt no value as an unique individual; 2 - felt no value as an unique individual; 3 - neither felt value nor no value as an unique individual; 4 - felt valued as an unique individual; 5 - strongly felt valued as an unique individual.

How much they perceived opportunities in swimming: 1 - strongly felt no opportunities; 2 - felt no opportunities; 3 - neither felt opportunities nor felt no opportunities; 4 - felt opportunities; 5 - strongly felt opportunities.

How much time and money have you invested into swimming: 1 - no time and money; 2 - a little time and money; 3 - some time and money 4 - a lot of time and money 5 - too much time and money

After collecting the responses, we will run multivariate regression analysis to look at the effects of individual variables on initial participation. We will also run linear regression analysis to look at the relationship between two variables, for example initial participation and enjoyment. And a bivariate correlation to see if there is a statistically significant relationship between two variables.

We will conduct qualitative semi-structured interviews within a smaller sample of participants. These interviews include open-ended questions about experiences in aquatic sports and reasons for participating or leaving the sport. The data collected will be coded and analyzed for common themes throughout the interviews. Questions asked will be: (a) did you feel like you fit into swimming? (b) did you see people who looked like your ethnicity and gender? (c) how did you initially get involved in swimming? (d) did you enjoy swimming? (e) how did your family feel about you being involved in swimming? (f) How much time and money have you invested in competitive swimming? (g) why did you decide to stay or leave swimming?

Conclusion

This article introduced the concept of initial participation and the Initial Participation Model. Our motivation for constructing the Initial Participation Model was first, to demonstrate feeling of inclusion as a primary determinant of underrepresented populations entering competitive swimming; and second, to create a methodology increasing initial participation by identifying and implementing interventions of psychological processes affecting enjoyment, feeling of inclusion, and involvement opportunities. We hope publishing our notes before completing model validation expands collective research of underrepresented populations in competitive swimming to include enjoyment, feeling of inclusion, and involvement opportunities, and to consider extrinsic experiences (e.g., stereotype threat, not affording a tech suit) as indirect predictors of athletes continuing initial participation. We also recommend future research
investigate whether the Initial Participation Model may scale beyond competitive swimming into other sports, education, workplaces, and social environments.

References


