Imagery

Imagery contributes to peak performance by helping the athlete focus on and immerse in the task; attenuate distracting thoughts/emotions/arousal levels; and promote the feeling of being in control of the task execution (Krane & Williams, 2010; Vealey & Greenleaf, 2010). In addition to task execution, the imagery-confidence relationship is also important to consider during a performance situation.

Holmes and Collins (as cited in Post, Williams, Simpson & Berning, 2015, p. 20) combined the bioinformational theory and functional equivalence theory models into the working PETTLEP model which has successfully been used across many domains including physical activity and sports performance (Afrouzeh, Sohrabi, Haghkhan, Rowshani, & Goharrokhi, 2015; Richter, Gilberg, & Baldis, 2012).

PETTLEP is an acronym for the seven key facets of imagery in an imagery program design: physical, environment, task, timing, learning, emotion, and perspective (Richter et al., 2012). "Physical" refers to the physical experiences and [physiological] responses of the athlete during imagery--using all the sense and kinesthetic awareness (Afrouzeh et al., 2015; Post et al., 2015; Richter et al., 2012). The imagery experience should be as physical as possible (e.g. wearing the uniform, putting on the shoes) (Wakefield & Smith, 2012). "Environment" refers to the surroundings where the imagery is performed; it should be as similar as possible (or replicate the similarity via photos, video, or audio) to the performance situation (Richter et al., 2012; Wakefield & Smith, 2012).

The "task" component refers to the importance of the imagery content; it should be appropriate, task-oriented, specific, and relevant to the level of the athlete (Afrouzeh et al., 2015; Wakefield & Smith, 2012). "Timing" refers to pacing the imagery; generally, it is ideal to conduct the imagery in real-time, meaning in the same span of time it takes to execute the task in reality (Wakefield & Smith, 2012). However, more research is needed regarding slow-motion or accelerated timing as real-time is not always practical (Wakefield & Smith, 2012).

"Learning" refers to the imagery practice/scripts that complements the athlete's imagery skill level; developing better imagery skills takes practice (Wakefield & Smith, 2012). "Emotion" refers to the multitude of emotions the athlete may experience during performance (Wakefield & Smith, 2012). During imagery practice, creating the most realistic situation by acknowledging, processing, and anticipating possible emotions during competition (Wakefield & Smith, 2012). "Perspective" refers to the internal/external viewpoint of the athlete during the imagery practice (Wakefield & Smith, 2012).

Battaglia et al. (2014) studied the effects of using PETTLEP for 6 weeks (in addition to video observation and physical practice) on the performances of 72 (36 PETTLEP, 36 control) nationally competitive female rhythmic gymnasts. The Movement Imagery Questionnaire Revised (MIQ-R) was used to assess the gymnasts' abilities with imagery; and the Optojump system was used to score jumping performances (Battaglia et al., 2014). The experimental group used video observation (demonstration of good jumping technique/performance) with a PETTLEP program plus physical practice; the control group utilized physical practice only

(Battaglia et al., 2014). At the end of 6 weeks, the experimental group made significantly improved performances (especially in flight time, improved stiffness in Hopping Test, and improved Drop Jump reactivity) as compared with the control group (Battaglia et al., 2014). The study by Battaglia et al. (2014) demonstrated that an PETTLEP-based imagery program can be helpful to elite athletes.

PETTLEP-based imagery programs have also been successful with less experienced athletes. Afrouzeh et al. (2015) recruited 36 novice male volleyball athletes for 7 weeks to study the effects of PETTLEP on motor-skill acquisition (passing drills). The athletes were randomly placed in one of three groups: PETTLEP plus physical practice; traditional imagery plus physical practice; and physical practice only (control group) (Afrouzeh et al., 2015). Traditional imagery utilized relaxation plus a response-oriented script as compared to the PETTLEP structured program (Afrouzeh et al., 2015). Afrouzeh et al. (2015) used the MIQ-R and AAHPERD's test for volleyball passing for assessment (3 times over 7 weeks). Afrouzeh et al. (2015) found that the PETTLEP group significantly improved (greatest rate of learning) as compared with the other groups; the traditional imagery group also fared better than the control group. PETTLEP may be useful to athletes from novice to elite.

Post et al. (2015) studied the use of PETTLEP with the acquisition of a complex motor skill, the standing long jump. Post et al. (2015) recruited 76 female college students assigned into one of four intervention groups for 4 weeks: physical practice (PP); imagery plus physical practice (IP+PP); imagery practice alone (IP); and control (no practice). Post et al. (2015) found that the IP+PP and PP groups improved and outperformed the IP and control groups. Imagery alone was not enough, but PETTLEP imagery coupled with physical practice allowed significant progress (Post et al., 2015).

Imagery, particularly the PETTLEP model, contributes to peak performance and motor skill acquisition among athletes from novice to elite levels. Williams and Cumming (2012) also noted that cognitive/motivational imagery content is generally used to enhance confidence and efficacy; also, mastery images/content provided the strongest link to confidence.

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