

Common Methods in Applied Sport Psychology Research

This quick guide is meant to aide you in your research studies. Below, you will find a list of popular themes in sport and exercise psychology research along with examples of measurements associated with research in that area. Note: This is not a comprehensive document. If you believe that additional measures should be added to the list, please contact the current Chair of the Best Practices in Research (BPR) student initiative (contact information available on the AASP website).

1. Aggression

- a. Aggressiveness in Sport Questionnaire (Kumar & Shukla, 1998)
- b. Bredemeier Athletic Aggression Inventory (Bredemeier, 1975)
- c. Buss-Perry Aggression Questionnaire (Buss & Perry, 1992)
- d. Competitive Anger and Aggression Scale (Maxwell & Moores, 2007)
- e. Conduct in Sport Towards Opponent Scale (Yukhymenko-Lescroart, 2015)
- f. Hostile and Instrumental Aggression of Spectators Questionnaire (Wann et al., 2000)
- g. Sport Emotion Questionnaire (Jones, Lane, Bray, Uphill, & Catlin, 2005)
- h. Sport Spectator Attitude Scale (Rudd, 2016)
- i. Taylor Aggression Paradigm (Taylor, 1967)

2. Arousal, Stress, and Anxiety

- a. Biochemical indicators/catecholamines (see Simmons & Foster, 2008)
- b. Blood Pressure (see Griffin, Robergs, & Heyward, 1997)
- c. Coach-Athlete Stressors in Football Questionnaire (CSFQ; Kristiansen, Halvari, & Roberts, 2012)
- d. Competitive State Anxiety Inventory-2 (CSAI-2; Martens, Vealey, & Burton, 1990)
- e. Electrocortical Activity/Electroencephalogram (see Reis, Hebenstreit, Gabstreiger, von Tscherner, & Lochmann, 2014)
- f. Fear of Success Scale (Zuckerman & Allison, 1976)
- g. Heart Rate/electrocardiograph (see Albanese, Neofytou, Ouarrak, Schneider, Schöls, 2016)
- h. Media Stressors in Football Questionnaire (MSFQ; Kristiansen, Halvari, & Roberts, 2012)
- i. Muscle Tension/electromyography (see Türker & Sözen, 2013)
- j. Physical Activity and Sport Anxiety Scale (PASAS; Norton, Hope, & Weeks, 2004)
- k. Respiration/spirometer (see Nuffield Foundation, 2011)
- l. Skin Conductivity (see Lyyken & Venables, 1971)
- m. Sport Anxiety Scale-2 (SAS-2; Smith, Smoll, Cumming, & Grossbard, 2006)
- n. Sport Competition Anxiety Test (SCAT; Martens, 1977)
- o. Sport Emotion Questionnaire (Jones, Lane, Bray, Uphill, & Catlin, 2005)
- p. Sport Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970)

3. Athlete Identity, Career Planning, and Career Transitioning

- a. Athletic Identity Measurement Scale (Brewer, Van Raalte, & Linder, 1993)
- b. Athlete Retirement Questionnaire (ARQ; Sinclair, 1990)
- c. Australian Athletes Career Transition Inventory (AACTI; Hawkins & Blann, 1993)
- d. Australian Coaches Career Transition Inventory (ACCTI; Hawkins, Blann, Zaichkowsky, & Kane, 1994)
- e. British Athletes Lifestyle Assessment Needs in Career and Education Scale (BALANCE Scale; Lavalley & Wylleman, 1999)
- f. Career Beliefs Inventory (CBI; Krumboltz, 1993)
- g. Career Decision-Making Difficulties Questionnaire (CDDQ; Gati, Krausz, & Osipow, 1996)
- h. Career Decision Scale (Osipow, Carney, Winer, Yanico, & Koschier, 1976)
- i. Career Decision-Making Self-efficacy (Betz, Klein, & Taylor, 1996)
- j. COPE inventory (Carver, Scheier, & Weintraub, 1989)
- k. Five-Step Career Planning Strategy (5-SCP; Stambulova, 2010)
- l. Revised Causal Dimension Scale (CDS-II; McAuley, Duncan, & Russell, 1992)
- m. Life Roles Inventory (Stryker & Serpe, 1994)
- n. Objective Measure of Ego Identity Status (Adams, Shea, & Fitch, 1979)
- o. Private-Public Athletic Identity Scale (Nasco & Webb, 2006)

4. Attention, Focus, and Concentration

- a. Blood Pressure (see Griffin, Robergs, & Heyward, 1997)
- b. Breathing Rate (see Gray, Schwartz, Pliego, & Raymond, 2005)
- c. Distraction drills
- d. Dual-Task Paradigm
- e. Heart Rate (see Albanese, Neofytou, Ouarrak, Schneider, Schöls, 2016)
- f. Neuroscientific Tests (i.e. fMRI, EEG, TMS) (see Helmchen, Konnerth, & Yuste, 2011)
- g. Reaction time (see Salthouse & Hedden, 2002)
- h. Test of Attentional and Interpersonal Style (Nideffer, 1976)

5. Burnout and Overtraining

- a. Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001)
- b. Biochemical indicators (i.e. C-reactive proteins) (see Simmons & Foster, 2008)
- c. Heart Rate (i.e. during workout and during recovery) (see Albanese, Neofytou, Ouarrak, Schneider, Schöls, 2016)
- d. Maslach Burnout Inventory (MBI; Maslach, Jackson, & Leiter, 1997)
- e. Maximal Oxygen Consumption (see Shephard, 1984)
- f. Profile of Mood Swings (POMS; McNair, Lorr, & Droppleman, 1992)
- g. Recovery-Stress Questionnaire for Athletes (RESTQ; Kellmann & Kallus, 2001)
- h. Self-Determination Theory (Deci & Ryan, 2002)
 - i. Behavioral Regulation in Exercise Questionnaire (BREQ; Mullan et al., 1997)

- ii. Behavioural Regulation in Sport Questionnaire (BRSQ; Lonsdale, Hodge, & Rose, 2008)
- iii. Sport Motivation Scale (SMS; Pelletier et al., 1995)
- i. Short Overtraining Symptoms Questionnaire (SOSQ; Lemyre et al., 2007)

6. Competition and Cooperation (see Motivation)

- a. Competitiveness Index (Smither & Houston, 1992)
- b. Competitive Orientation Inventory (COI; Vealey, 1986)
- c. Competitiveness Index (Smither & Houston, 1992)
- d. Competitiveness Questionnaire (Griffin-Pierson, 1988)
- e. Concentration Ratios (see Summers & Moran, 2011)
- f. Cooperative/Competitive Strategy Scale (Simmons, Wehner, Tucker, & King, 1987)
- g. Jenkins Activity Scale (JAS; Matteson & Ivancevich, 1980)
- h. Revised Competitiveness INdex (Houston et al., 2002)
- i. Social Interdependence Scale (Johnson and Norem-Hebeisen, 1979)
- j. Sport Orientation Questionnaire (SOQ; Gill & Deeter, 1988)
- k. Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda, 1989)
- l. Work and Family Orientation Questionnaire (Helmreich and Spence, 1978)

7. Confidence

- a. Borg Category Ratio (CR-10; Borg, 2011)
- b. Carolina Sport Confidence Inventory (CSCI; Manzo, Silva, & Mink, 2001)
- c. Competitive Orientation Inventory (COI; Vealey, 1986)
- d. Competitive State Anxiety Inventory-2 (CSAI-2; Martens, Vealey, & Burton, 1990)
- e. Multidimensional Self-Esteem Inventory (MSEI; O'Brien & Epstein, 1987)
- f. Physical Self-Efficacy Scale (Ryckman, Robbins, Thornton, & Cantrell, 1982)
- g. State Sport-Confidence Inventory (SSCI; Vealey, 1986)
- h. Trait Sport-Confidence Inventory (TSCI; Vealey, 1986)

8. Coping and Emotions

- a. Athletic Coping Skills Inventory (Petrie, 1993; Smith, Smoll, & Ptacek, 1990; Smith, Racek, & Smoll, 1992)
- b. Competitive Aggressiveness and Anger Scale (Maxwell & Moores, 1983)
- c. Competitive State Anxiety Inventory-2 (CSAI-2; Martens, Vealey, & Burton, 1990)
- d. COPE inventory (Carver, Scheier, & Weintraub, 1989)
- e. Heart Rate (see Albanese, Neofytou, Ouarrak, Schneider, Schöls, 2016)
- f. Positive and Negative Affect Scale (Watson, Clark, and Tellegen, 1988)
- g. Psychological Skills Inventory for Sport (PSIS; Mahoney & Avenier, 1977)
- h. Self-Handicapping Scale (SHS; Wu, Wang, & Lin, 2004)
- i. Skin Conductance (see Lyyken & Venables, 1971)
- j. Sport Competition Anxiety Test (SCAT; Martens, 1997)
- k. Sport Emotion Questionnaire (Jones, Lane, Bray, Uphill, & Catlin, 2005)
- l. Sport Anxiety Scale (Smith, Smoll, & Schutz, 1990)

9. Exercise and Sport Adherence

- a. The Compulsive Exercise Test (CET; Taranis, Touyz, & Meyer, 2011)
- b. Health Belief Model (Heinzelmann & Bagley, 1970)
- c. Motivation for Physical Activity Measures (MPAM; Frederick & Ryan, 1993)
- d. Physical Activity Model (Dishman, 1993)
- e. Self Efficacy Theory (Poag-DuCharme & Brawley, 1993)
- f. Sport Commitment Scale (Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993)
- g. Theory of Planned Behavior (TPB; Ajzen, 1985, 1988, 1991)
- h. Theory of Reasoned Action (TRA; Ajzen & Fishbein; 1980)

10. Goal Setting

- a. Goal-setting interventions (see Lock & Latham, 1985; see Weinberg & Butt, 2014)
 - i. Adaptive versus Static
 - ii. Difficult versus easy
 - iii. Goal evaluation
 - iv. Individual Differences
 - v. Perception
 - vi. Practice versus Competition Goals
 - vii. Process, Outcome, and Performance Goals
 - viii. Short- versus long-term
 - ix. Specific versus general
 - x. Spoken/Shared
 - xi. Timing
 - xii. Written
- b. Goal-Setting Inventory (Rushall & Fisdell, 1992)
- c. Goal-Setting Theory (Locke, 1966, 1968; Locke & Latham, 1990; 2006)

11. Imagery and Visualization

- a. Imagery Use Questionnaire (IUQ; Hall et al., 1990)
- b. Motivational Imagery Ability Measure for Sport (Gregg & Hall, 2006)
- c. Movement Imagery Questionnaire - Revised (Hall & Martin, 1997)
 - i. Movement Imagery Questionnaire for Children (MIQ-C; Carter, Yoxon, Ste-Marie, Cumming, & Martini, 2013)
- d. Sport Imagery Ability Measure (SIAM; Watt, Morris, & Andersen, 2004)
- e. Sport Imagery Ability Questionnaire (SIAQ; Williams & Cumming, 2015)
- f. Sport Imagery Questionnaire (SIQ; Hall et al., 1998)
- g. Vividness of Visual Imagery Questionnaire (VVIQ; Marks, 1973)

12. Injury

- a. ACL-Return to Sport After Injury Scale (ACL-RSI; Webster, Feller, & Lambros, 2008)
- b. Athletic Injury Psychological Acceptance Scale (AIPAS; Tatsumi, 2013)

- c. Injury-Psychological Readiness to Return to Sport (I-PRRS; Glazer, 2009)
- d. Rehabilitation Overadherence Questionnaire (Podlog, Gao, Kenow, Kleinert, Granquist, Newton, & Hannon, 2013)
- e. Re-injury Anxiety Inventory (RIAI; Walker, Thatcher, & Lavelle, 2010)
- f. Sport Injury Appraisal Scale (Cassidy, 2006)
- g. Sport Injury Rehabilitation Adherence Scale (SIRAS; Brewer, Van Raalte, Petitpas, Sklar, Pohlman, & Krushell, 2000)
- h. Sports Injury Rehabilitation Beliefs Survey (SIRBS; Taylor & May, 1996)
- i. Sports Inventory for Pain (SIP; Meyers, Bourgeois, & LeUnes, 2004)

13. Leadership

- a. Coach-Athlete Relationship Questionnaire (CART-Q; Jowett and Ntoumanis, 2004)
- b. Coaching Behavior Scale for Sports (CBS-S; Cote, et al., 1999)
- c. Contingency Model of Leadership Effectiveness to the Sport Situation (Fiedler, 1967)
- d. Leader Behavior Description Questionnaire (Halpin, 1957)
- e. Leadership Opinion Questionnaire (Fleishman, 1957)
- f. Leadership Scale for Sports (LSS; Chelladurai & Saleh, 1978)
- g. Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 2000; Avolio & Bass, 2004)

14. Mental Health, Wellness, and Unhealthy Behaviors

- a. Actigraph (for sleep patterns) (Evenson, Goto, & Furberg, 2015)
- b. Body Dissatisfaction Scale (Mutale, Stiller, Dunn, & Larkin, 2016)
- a. Center for Epidemiological Studies - Depression Inventory (CES-D; Radloff, 1977)
- b. Contextual Body Image Questionnaire for Athletes (CBIQA; de Bruin, Oudejans, Bakker, & Woertman, 2001)
- c. Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995)
- d. Eating Attitudes Test (EAT-26; Garner et al., 1982)
- e. Illness Attitudes Scales (IAS; Kellner, 1986, 1987)
- f. Journal or log
- g. Kessler Psychological Distress Scale (K10; Kessler & Mroczek, 1994)
- h. Rosenberg Self-Esteem Scale (SES; Rosenberg, 1965)
- i. Satisfaction With Life Scale (Diener, Emmons, Larson & Griffin, 1985)
- j. The SCOFF Questionnaire (Morgan, Reid, & Lacey, 1999)
- k. Taylor Manifest Anxiety Scale (TMAS; Radloff, 1977)

15. Motivation

- a. Achievement Motivation
 - i. Chinese 2 × 2 Achievement Goal Questionnaire for Physical Education (CAGQ-PE; Chen, 2007)
 - ii. Motivation for Physical Activities Measure - Revised (MPAM-R; Ryan, Frederick, Lepes, Rubio, & Sheldon, 1997)

- iii. Motivational Orientation Scale (Nicholls, 1989)
- iv. Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda, 1989)
- b. Autonomy
 - i. Relative Autonomy Index (RAI; Grolnick & Ryan, 1987)
- c. Motivational Climate
 - i. Perceived Motivational Climate in Sport Questionnaire (PMCSQ; Newton, Duda, & Yin, 2000)
 - ii. Situational Motivational Scale (SIMS; Guay, Vallerand, & Blanchard, 2000)
 - iii. Mastery Motivational Climate (see Ntoumanis & Biddle, 1999)
 - iv. Performance Motivational Climate
 - 1. Perception of Success Questionnaire (POSQ; Roberts et al., 1998)
 - 2. Performance Failure Appraisal Inventory (PFAI; Conroy, Willow, & Metzler, 2002)
 - v. Other-Initiated Motivational Climate (see Davies, Babkes Stellino, Nichols, & Coleman, 2016)
 - 1. Peer-Initiated Motivational Climate (see Ntoumanis & Biddle, 2007)
- d. Self-Determination Theory
 - i. Behavioral Regulation in Exercise Questionnaire (BREQ; Mullan et al., 1997)
 - ii. Behavioural Regulation in Sport Questionnaire (BRSQ; Lonsdale, Hodge, & Rose, 2008)
 - iii. Exercise Motivation Inventory (EMI; Markland & Hardy, 1993)
 - iv. Exercise Motivation Scale (EMS; Li, 1999)
 - v. Participation Motivation Questionnaire (PMQ; Gill, Gross, & Huddleston, 1983)
 - vi. Physical Activity and Leisure Motivation Scale (PALMS; Molanorouzi, Khoo, & Morris, 2014)
 - vii. Recreational Exercise Motivation Measure (REMM; Rogers, 2000)
 - viii. Sport Motivation Scale (SMS; Pelletier et al., 1995)
 - ix. Extrinsic Motivation
 - 1. Sport Motivation Scale (SMS; Pelletier et al., 1995)
 - x. Intrinsic Motivation
 - 1. Intrinsic Motivation Index (McAuley, Duncan, & Tammen, 1987)
 - 2. Intrinsic Motivation Inventory (IMI; Ryan & Deci, 1992)

16. Music and Exercise

- a. Brunel Music Rating Inventory (BMRI; Karageorghis, Terry, & Lane, 2010)
- b. Brunel Music Rating Inventory (BMRI-2; Karageorghis, Priest, Terry, Chatzisarantis, & Lane, 2005)
- c. Exercise Imagery Questionnaire (EIQ; Hall, Rogers, & Barr, 1990)

- d. Music Loudness (see Corigliano, 2017; Edworthy & Waring, 2007; Karageorghis & Pries, 2011)
- e. Music Mood Regulation Scale (MMRS; Hewston, Lane, & Karageorghis, 2008)
- f. Music Tempo (see Corigliano, 2017; Edworthy & Waring, 2007; Karageorghis & Pries, 2011)

17. Psychological Skills Training

- a. Psychological Skills Inventory for Sports (PSIS; Mahoney et al., 1987)
- b. Test of Performance Strategies (TOPS; Thomas, Murphy, & Hardy, 1999)

18. Resiliency

- a. Academic Resilience Scale (ARS-30; Cassidy, 2016)
- b. Brief Resilience Scale (BRS; Smith et al., 2008)
- c. Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003)
- d. Ego Resiliency Scale (Block & Kremen, 1996)
- e. Resilience Scale (RS; Wagnild & Young, 1993)
- f. Scale of Protective Factors (SPF; Ponce-Garcia, Madwell, & Kennison, 2015)
- g. Sport Explanatory Style Questionnaire (SESQ; Martin-Krumm, Sarrazin, Fontayne, & Famose, 2001)

19. Self-Talk

- a. Automatic Self-Talk Questionnaire for Sports (ASTQS; Nikos, Hatzigeorgiadis, Chroni, Theodorakis, & Papaioannou, 2009)
- b. Self-Talk Questionnaire for Sports (S-TQ; Zervas, Stavrou, & Psychountaki, 2004)
- c. Self-Talk Scale (STS; Brinthaup et al., 2009)

20. Team Dynamics

- a. Conduct in Sport Towards Opponent Scale (Yukhymenko-Lescroart, 2015)
- b. Group Environment Questionnaire (GEQ; Brawley, Carron, & Widmeyer, 1987)
- c. Sport Cohesion Inventory (SCI; Yukelson, Weinberg, & Jackson, 1984)
- d. Sport Cohesiveness Questionnaire (SCQ; Martens & Peterson, 1971)
- e. Sport Interpersonal Relationships Questionnaires (SIRQ; Wylleman, Vanden Auweele, De Knop, Sloore, & De Martelaer, 1995)
- f. Team Cohesion Questionnaire (TCQ; Gruber & Grey, 1981)
- g. Team Psychology Questionnaire (TPQ; Partington & Shangji, 1992)

21. Youth in Sports

- a. Active Play
 - i. Accelerometer (see Sylvia, Bernstein, Hubbard, Keating, & Anderson, 2013)
 - ii. Energy Expenditure Values (see Hills, Mokhtar, & Byrne, 2014)
 - iii. Frequency/Amount of Time Spent Being Active (see Cui, Guo, Santiago-Torres, Schoeller, Esmond, Allen, Henderson, Rendon, & Carrel, 2015)

- iv. Heart Rate (see Albanese, Neofytou, Ouarrak, Schneider, Schöls, 2016)
- v. Intensity (see Dishman, Washburn, & Schoeller, 2011)
- vi. Pedometer (see Sylvia, Bernstein, Hubbard, Keating, & Anderson, 2013)
- vii. System for Observing Play and Leisure Activity in Youth (SOPLAY; McKenzie, 2006)
- viii. Type of Activity (see Dishman, Washburn, & Schoeller, 2011)
- b. Commitment
 - i. Sport Commitment Model (see Scanlan et al., 1993b for Youth Sport Domain)
- c. Goal Achievement
 - i. Achievement Goal Scale (Smith et al., 2008)
- d. Motivational Climate
 - i. Motivational Climate Scale for Youth Sports (MCSYS; Smith, Cumming, & Smoll, 2008)
 - ii. Peer Motivational Climate in Youth Sports (Peer MCSYS; Ntoumanis & Vazou, 2005)
- e. Parental Involvement
 - i. Parents' Involvement in Sports Questionnaire (PISQ; Lee & MacLean, 1997)
- f. Psychobiosocial Descriptors (see Bortoli et al., 2009)
- g. Underserved Youth (see Forneris, Whitley, & Bryce, 2013)
- h. Values in Youth Sport
 - i. Youth Sport Values Questionnaire (YSVQ; Lee, Whitehead, & Balchin, 2000)
- i. Youth Development
 - i. Peer Relations Questionnaire for Children (Rigby & Slee, 1993)
 - ii. Sport Friendships Quality Scale (SFQS; Weiss & Smith, 1999)
 - iii. Youth Sport Environment Questionnaire (YSEQ; Eys et al., 2009)