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Mental health Interventions in Sport: Evidence from Systematic Reviews, Consensus statements and Programme Implementation.

*Gavin Breslin, Nora Sullivan, Stephen Shannon, & Bradley Donohue

Research focused on mental health in sport has revealed a need to develop evidence-supported mental health practices that are sensitive to sport culture, for elite and non-elite athletes (Breslin and Leavey, 2019). In recent years several consensus statements have been produced to assist effective mental health awareness program development and evaluation. The purpose of this symposium is to highlight the available international evidence to aid those practitioners and researchers developing programs. The first presenter will provide evidence from an updated systematic review of interventions to increase awareness of mental health and well-being in athletes, coaches, officials and parents (Breslin et al., 2022). Presentation 2 will include the findings from a recent systematic review of mental health awareness programme targeted at adolescents. The third and fourth presentation will include descriptions and evaluations of two interventions, the State of Mind Ireland Program (Shannon et al, 2019) and The Optimum Performance Program in Sports (TOPPS) (Donohue et al 2022) delivered in the USA, both are evidence-based service delivery models for athletes. A theme throughout the presentations will be a critical review of international evidence- informed programme content, and research evaluation.

Presentation 1: An updated systematic review of interventions to increase awareness of mental health and well-being in athletes, coaches, officials and parents

*Gavin Breslin, PhD, Stephen Shannon, PhD, Michael Cummings, Gerard Leavey, PhD.

Interventions designed to increase mental health awareness in sport have grown substantially in the last five years. The aim was to update a 2017 systematic review that determined the effect of sport-specific mental health awareness programs to improve mental health knowledge and help-seeking among sports coaches, athletes, and officials. The review was extended to incorporate parents as a source of help-seeking, and report the validity of outcome measures and quality of research design that occurred since the original review. Five electronic databases were searched: Psychinfo, Medline (OVID interface), Scopus, Cochrane and Cinahl. Risk of bias was assessed using the Cochrane and QATSQ tools. The findings revealed twenty-eight articles for inclusion, eighteen additional articles since the original review. Eighteen studies targeted athletes, five with coaches, one sport officials (i.e., referees), one 'at risk children', and three with parents. One of the studies was a combination of athletes, coaches and parents. In terms of study outcomes, health referral-efficacy was improved in seven studies; twelve studies reported an increase in knowledge about mental health disorders. Proportionally, higher quality research designs were evident, as three of ten studies within the previous review did not demonstrate a high risk of bias, whereas thirteen of the eighteen additional studies did not display a high risk of bias. Only one study included a behaviour change model in both the programme design and evaluation. Findings from the updated systematic review shows improvements in the methodological design of recent studies compared to the first review. There was also evidence of the extension of programme delivery to parents. In conclusion, researchers, practitioners and policy makers should consider methodological guidance and the application of theory when developing and evaluating complex interventions.

Presentation 2: A Systematic Review of Sport-based Mental Health Awareness Interventions for Adolescents

*Nora Sullivan, Marian McLaughlin, Stephen Shannon, Gerry Leavey and Gavin Breslin

Adolescent mental illness is of increasing concern, with prevalence statistics indicating an increase across Ireland and the United Kingdom. Service-related barriers have historically deterred help-seeking, yet creative ways to encourage help-seeking through evidence and theory-based interventions are emerging. However, studies exploring help-seeking and mental health literacy (MHL) in sport settings have mainly been conducted with adults, and it remains unclear to what extent studies are conducted amongst young people. The aim of this systematic review was to identify the effect, risk of bias, and research methods adopted amongst sport-based adolescent mental health awareness programmes in young people. To do this, six electronic databases (MEDLINE Ovid, PsycINFO, Scopus, CINAHL, SPORTDiscus, and Cochrane) were searched from September 2012-2022. Studies were included if they included adolescents aged 11-17, addressed mental health outcomes (recognition and management of psychological or emotional problems, or interventions tailored to focus on a specific mental health disorder) and contained a sport component. Six studies met the inclusion criteria and were all conducted in Australia. Sample size ranged from 9 to 816 participants. Study designs varied, from a randomised control trial, a retrospective qualitative method, and mixed-methods. Four distinct programs were evaluated, two where the content was theory-informed. Findings suggest that areas of MHL, attitudes towards recognition, help-seeking intentions, and resilience were improved. Using a sport setting was acknowledged as a valuable design feature and an attractive setting for the dissemination of mental health awareness messages. To conclude, given the limited number of theory informed interventions, there is a need for researchers to explicitly adopt behaviour change theories when designing and evaluating sports based mental health awareness interventions for adolescents.

Presentation 3: Effects of a Mental Health Intervention in Athletes: Applying Self-Determination Theory

*Stephen Shannon, Donncha Hanna Tandy Haughey, Gerard Leavey, Conor McGeown and Gavin Breslin

Student-athletes are prone to stress and mental health challenges because of co-existing academic, social, and sporting demands, yet are often overlooked when it comes to mental health support. The State of Mind Ireland (SOMI) programme was developed in response to the few existing evidence-based intervention programmes, incorporating Self-Determination Theory (SDT) into the SOMI's most recent iteration. The primary aim was to enhance competence in mental health awareness self-management through an instructional workshop and home-directed mindfulness programme comprising daily sessions. A 2 (groups) x 2 (time-point) non-randomised controlled trial was conducted comprising 238 student-athletes, with 108 in the SOMI intervention group, and 130 in the control group. The mean age was 20.47 years (SD=3.30); 57.6% percent were males and 42.4% were females. A regression model assessing singular and serial indirect mediating mechanisms was conducted, in which mental health competence and mindfulness awareness were tested as mediators predicting change stress and well-being. The findings showed that the intervention was directly related to positive changes in mental health competence ($\beta=.39$, $p < .05$), subsequently resulting in indirect effects on mindfulness awareness ($\beta=.07$, $p < .05$), stress

($\beta = -.06$, $p < .05$), and well-being ($\beta = .05$, $p < .05$). Further effects on stress and well-being were present through competence and mindfulness awareness in sequence ($\beta = -.02$, $p < .05$ and $\beta = .01$, $p < .05$, respectively). To conclude, mindfulness-based mental health interventions may be effective at reducing stress and promoting well-being in athletes, through the mechanism of improved mental health competence. We propose that future programmes go beyond initial awareness raising to include applied practices that are of benefit to self-regulation of stressors among athletes. However, increasing adherence to such methods remains a challenge to those involved in programme design, and future efforts may benefit from inclusion of a co-production model.

Presentation 4: The Optimum Performance Program in Sports (TOPPS)

*Bradley Donohue

The Optimum Performance Program in Sports (TOPPS) was developed from Family Behavioral Therapy, a well-established comprehensive intervention that incorporates significant others of clients to reduce mental health/substance use symptomology in adolescents and adults in randomized controlled trials funded by the National Institutes of Health (NIMH, NIDA). TOPPS works under the premise of optimization theory; which posits that thoughts, behaviors, and feelings reciprocally influence performance in sport and life; thus, cognitive and behavioral skill sets are taught to optimize performance. TOPPS involves 12 to 16 performance meetings of 60 to 90 mins. duration, with intervention components including performance orientation, self- and environmental control, gratitude exchange, motivational enhancement, financial management, dream job, job-getting skills training, and communication skills training. An overview of TOPPS and its scientific support followed by a discussion relevant to implementing sport-specific interventions with athletes and performers will be presented. Studies that were funded by the National Institutes of Health in the United States in supporting TOPPS will be reviewed. These include more than a dozen outcome evaluation studies that have demonstrated TOPPS is both engaging, and effective in the improvement of mental health, substance use, factors that interfere with sport performance, and relationships with teammates, coaches, and family. A review of the psychometric evaluations of mental health screening instruments for use in collegiate athletes will also be included. Lastly, obstacles and strategies that are relevant to successful implementation of TOPPS in real world settings will be outlined. Topics of discussion will include methods of implementing mental health interventions in non-academic settings that are sport-specific, adjustments to standardized protocols that need to be made to address the various mental health disorders, strategies specific to athlete/performer engagement, and issues that often influence mental health screening.

Discussant

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