THE PHYSICAL ACTIVITY AND MENTAL HEALTH RELATIONSHIP – A CONTEMPORARY PERSPECTIVE FROM QUALITATIVE RESEARCH

Diane Crone, Andy Smith*, Brendan Gough**

Faculty of Sport, Health and Social Care, University of Gloucestershire, Gloucester, United Kingdom
**School of Sport Science and Psychology, York St. John College, York, United Kingdom*
***University of Leeds, Leeds, United Kingdom*

Submitted in January, 2006

There is a known positive relationship between physical activity and mental health, and in the treatment and maintenance of mental illness. Despite this relationship however, there still remains a lack of consensus on the mechanism responsible for the relationship. This paper explores the physical activity and mental health relationship by reviewing and critiquing the biochemical, physiological and psychological mechanisms proposed to explain this phenomenon. Through this review it becomes apparent that although there are varied explanations proposed, there is little agreement except that the relationship is complex and the responsible mechanism(s) are likely to be interrelated combining the disciplines of psychology, biochemistry and physiology. In an attempt to understand further the complexities of the relationship the paper presents findings from qualitative research that investigated the relationship from the perspectives of people that experience mental health benefits from exercise. Using grounded theory methodology the study investigated the experiences of participants on exercise programmes in the UK. The paper concludes that qualitative methodologies which explore people experiences, and what helps to facilitate them, provide further insight into the interrelated nature of the physical activity and mental health relationship.

Keywords: Physical activity, mental health relationship, qualitative research.

INTRODUCTION

There is a substantial body of evidence that shows a positive relationship between physical activity and mental health and illness (Biddle et al., 2000; Biddle & Mutrie, 2001; Callaghan, 2004; Daley, 2002; Fontaine, 2000; Saxena et al., 2005). The substantial evidence linking physical activity to mental health has resulted in recommendations for exercise to be used as an adjunct to other forms of treatment in mental illness (Biddle et al., 2000; Burbach, 1997; Daley, 2002). As a consequence the publication of UK practitioner guidelines for people working in mental health services (Grant, 2000) has resulted in physical activities being developed within mental health services and with local leisure partners, within the UK. These recommendations were made despite uncertainty over the actual mechanism(s) by which physical activity affects mental health. Several mechanisms have been suggested and come from a variety of disciplines including biochemistry, physiology and psychology (Carless & Faulkner, 2003). However the mechanism responsible for the relationship remains open for debate (Biddle & Mutrie, 2001). This lack of consensus may be because researchers have focused their research on establishing a relationship, rather than investigating why a particular incident, experience or situation is important to the participant (Fox, 2000; Marsh & Sonstroem, 1995). Additionally, this area of research is currently dominated by positivist approaches and as a consequence, there are suggestions that an integrated psycho-physiological model may provide more insight into the relationship (Boutcher, 1993; Mutrie, 2000). In support of this suggestion some researchers have investigated peoples experiences of participating in exercise (e.g. McAuley et al., 1991; Wankel, 1993; McAuley et al., 1995; Turner et al., 1997; McAuley et al., 1999; Hardcastle & Taylor, 2001). Research investigating experiences and the interactions that this involves with other people and the environment may help to develop a deeper understanding into the physical activity and mental health relationship (Fox, 2000). Existing qualitative research within the exercise environment has highlighted the importance of:

- social support, social norm and social interaction to participants' positive experiences (Faulkner & Sparkes, 1999; Hardcastle & Taylor, 2001; Stathi & Fox, 2004),
- social constructs to mental health (Morrissey, 1997; Singh, 1997),
- and for exercise adherence (Smith & Biddle, 1999).

Some qualitative work has investigated perceived mental health outcomes with people with mental health problems, for example Faulkner and Sparkes, (1999), Fogarty and Happell, (2005). However, despite Mutrie's (1997) call for qualitative work concentrating on investigating the physical activity and mental health relationship (the phenomenon), there has only been one paper to date (Crone et al., 2005) that has addressed this. As a consequence, the aim of this paper is to review the current body of knowledge regarding the physical activity and mental health relationship and in response to Mutrie's (1997) calls for qualitative work in this area, concludes with an alternative perspective on the relationship from a qualitative study undertaken in the UK. It therefore presents a contemporary perspective on the physical activity and mental health relationship for consideration within this current debate.

A review and critique of proposed mechanisms

Research investigating the mechanisms by which exercise exerts its effect on mental health has not been extensively studied and are consequently not fully understood (Craft, 2005). Currently, the proposed mechanisms for the physical activity and mental health relationship fall into three main areas, biochemical, physiological and psychological. There is also a complementary body of knowledge that has not been previously proposed as responsible for the relationship but the authors of this paper have included it because they believe that it is related to the relationship due to its complex and apparent interrelatedness.

Two biochemical mechanisms are reported in the literature; the endorphin hypothesis and the monoamine hypothesis. The endorphin hypothesis originated from marathon runners experiencing a feeling of euphoria or high after long distances. It states that the production of endogenous opioid peptides (endorphins), in the brain produces a morphine like effect which reduces the sensation of pain and provides a state of euphoria (Hoffman, 1997; Paluska & Schwenk, 2000). Much of the research on this hypothesis has been on animals, due to the need to measure brain based endorphin levels but this design creates difficulties when transferring it to human subjects (Daley, 2002). Although some research has been conducted with humans, Markoff et al. (1982) have some concerns regarding this hypothesis; notably that high intensity levels of exercise are required to release endorphins and feelings of euphoria from exercise have been experienced at lower levels of intensity.

The monoamine hypothesis proposes that exercise enhances the brains aminergenic synaptic transmission (nor adrenaline, dopamine and seratonin) which affect arousal and attention (Chaouloff, 1997; Faulkner & Carless, 2003; Ransford, 1982). However there is little published research on this and the hypothesis has been criticised for being oversimplified (Dunn & Dishman, 1991) and unclear, given the lack of definitive understanding of the role seratonin has on psychological function (Faulkner & Carless, 2003).

There are two physiological mechanisms that include an improvement of physiological functioning with a link to mental health from epidemiological studies (see Biddle, 2000 for a review) and the thermogenic hypothesis (Morgan & Goldston, 1987). The link between physiological functioning and an improvement in psychological health is evident in epidemiology but in experimental studies there have been improvements in psychological health without a change in physiological status (Faulkner & Carless, 2003). The thermogenic hypothesis states that temperature rises through exercise are responsible for mood enhancement (Morgan & Goldston, 1987). According to Daley (2002) this hypothesis was developed from the notion of saunas and warm showers, and their perceived benefits. There is little support for this hypothesis however because many studies have failed to show a relationship between exercise, increased temperature and psychological state (Biddle & Mutrie, 2001; Daley, 2002; Nicoloff & Schwenk, 1995).

The psychological mechanisms include the distraction hypothesis, self-efficacy theory, mastery and social interaction. The distraction theory (Bahrke & Morgan, 1978) proposes that time away, or out of, daily life that physical activity can bring, is responsible for the benefits derived form exercise. Boutcher (1993) also stated that activities such as yoga and psychotherapy had similar effects. There is little support that this mechanism is responsible for chronic bouts of activity but Paluska and Schwenk (2000) suggest that this mechanism may be responsible for the antidepressant affects from an acute (one off) bout of exercise. Craft (2005) also supports this conclusion in her recent research investigating the effect of exercise on women with depression.

The self-efficacy theory (Bandura, 1997) proposes that an individual's confidence to exercise is strongly related to their ability to perform the behaviour. Therefore the successful adoption of exercise may lead to increases in mood, self confidence, a sense of ability or self efficacy, which impacts on a persons autonomy and their ability to cope with life (Craft, 2005; Faulkner & Carless, 2003; Paluska & Schwenk, 2000). This hypothesis links very closely with the mastery hypothesis (Greist et al., 1979) which proposes that by overcoming a challenging exercise related task there is an elevation in independence, success and a sense of control. It is suggested that these feelings transpose themselves into everyday life and improve mental health, generally. The closeness of these two hypotheses suggests that no one mechanism is responsible for this complex relationship.

The social interaction hypothesis (Ransford, 1982) proposes that social relationships and mutual support from other people in an exercise setting provides a significant proportion of the effect of exercise on mental health. However, there are mixed responses to this hypothesis because research into home based and community programmes have found social interaction to be unnecessary for the elicitation of mental well-being (Glenister, 1996). However, according to Biddle and Mutrie (2001), for some socially excluded groups, such as older people or people with depression, the opportunity for social interaction may be particularly important for their mental health.

Biddle and Mutrie (2001) conclude that consensus on the mechanism responsible for physical activity and a mental health benefit is still inconclusive and unclear. Acknowledging that the relationship appears to be complex and interrelated with physiological, biochemical and psycho-social aspects, there is a growing body of research that has investigated the experiences of exercising and concluded that it appears to be the process of exercising, rather than the exercise per se, that is influential in reducing symptoms and improving well-being (Faulkner & Sparkes, 1999; Gauvin et al., 1996; Morrissey, 1997). Research has also investigated aspects within exercise environments that may be influential to the relationship. These have included the social comparison theory (Festinger, 1954) where people are compelled to compare themselves with others, social physique anxiety (Hart et al., 1989), where anxiety is experienced by people who are concerned about how other perceive their physique, and environmental influences, such as the social environment (McAuley et al., 1999). These factors surely must play a part in the experiences of people who exercise but have not been specifically examined in terms of the physical activity and mental health relationship.

The current body of research into the mental health and physical activity phenomenon is limited and hindered by the methodological difficulties of research into mental health, with, for example sample size, design and homogeneity of participants (Craft, 2005; Daley, 2002). Research has also been dominated by positivist perspectives but one study (Crone et al., 2005) has attempted to address the dearth of qualitative research and investigated the physical activity and mental health relationship from the perspectives of the participants who experience it. This research is summarised below to provide an alternative perspective on the relationship.

A contemporary perspective

Crone et al. (2005), using grounded theory methodology (Strauss & Corbin, 1998), have developed a conceptual framework that explains the physical activity and mental health relationship from the perspectives of participants on exercise referral schemes. Exercise referral schemes are UK based programmes of exercise situated at local leisure facilities or fitness clubs. Participants access these schemes through a referral from their General practitioner or other health professional, such as a physiotherapist or dietician. Crone et al.'s (2005) research adopted the perspective that individuals produce and define their own understandings of the experiences (Tashakkori & Teddlie, 1998) and that interpretation of the social world is independent (Crotty, 1998). It accepts that to fully understand the effect of participation in exercise for a person's mental health it is necessary to investigate participant's perceptions and experiences.

Participants (n = 18, m = 5, f = 13, mean age 55.5 years, s = 10.78), from three exercise referral schemes were interviewed using focus groups and individual interviews. Participants had been referred by health professionals (typically the general practitioner) to the exercise schemes to address physical health concerns. None of the participants had a diagnosis of a mental health condition. The study therefore focused on the physical activity and mental health relationship for mentally asymptomatic individuals. Analysis included the six grounded theory strategies of simultaneous collection and data analysis, a coding process (open, axial and selective coding), comparative methods (focus groups and interviews), memo writing, purposive and theoretical sampling and the development of the conceptual framework (Charmaz, 2000). A summary of Crone et al.'s (2005) conceptual framework is discussed below.

The conceptual framework is centred around the core category, "self-acceptance". This category provides the participants conceptualisation of mental health and centred on respondents' acceptance of themselves, their health and social status, and life situation. The category provided participants with self assurance or confidence; for example "out on the bike I feel at one with the whole of life and the whole of creation (self-acceptance)... I feel that this is the extreme of what a human being can feel in pleasure and in being alive. I just love life and when you use everything, your body and your mind, to achieve the best then you get the best feeling" (Mary in Crone et al., 2005).

Self acceptance was influenced by four conditional themes, which represent a set of events that create situations relating to the core category (Strauss & Corbin, 1998). The conditions in Crone et al.'s (2005) conceptual framework were social support, social network, culture and environment.

Social support was the actual provision of support which was received from staff (both leisure and health), both formally through the professional roles and informally through their personal qualities and personalities.

Other exercisers were also givers of support and contributed to the supportive environment. Social support provided assistance with maintaining motivation and adherence, helping with confidence in the operation of fitness machines, and feeling at ease in an unfamiliar environment. Social support was facilitated through the social network. The social network included the type of scheme, the roles of the members of staff within the scheme, and the structure and protocol, or day to day workings, of the scheme. The culture theme was the atmosphere and social norms that existed within the exercise schemes. This was created by other exercisers and scheme staff and was perceived as a consequence of the behaviour patterns and attitudes of these individuals. Lastly, the environment theme was defined as the physical environment in which the exercise took place. The properties or components of this theme included the fitness equipment and the physical nature of the exercise facility, i.e. the changing rooms or the specific gym.

The conceptual framework also contains themes, described as actions, which include tactics on how people deal with different situations that they experience (Strauss & Corbin, 1998). There are three action themes including playing a role, coping mechanisms, and act of coping.

Playing a role involved social interaction and was a process whereby participants adopted a specific role or purpose within the social network of the scheme. This role included being a joker, an advocate, or a welcoming host to new scheme participants. The coping mechanism theme involved strategies that were employed by participants. Mechanisms included strategies to manage challenges such as reading exercise instructions due to poor eye sight, reducing boredom in the fitness room and coping with unpleasant factors, such as the dislike of an exercise, or use of an exercise machine. The act of coping theme included both the realization that involvement in the scheme required an ability to cope with the challenges that would be encountered, and a reliance on the scheme to facilitate coping in other aspects of life.

The conceptual framework concludes with three consequences themes which are outcomes that have resulted from the actions (Strauss & Corbin, 1998). These included a sense of belonging, a sense of purpose and physical health.

A sense of belonging is the feeling of being a part, or player, in the scheme and that it is an appropriate activity or pursuit for participants to be engaged in. A sense of purpose was derived from involvement in the scheme by having something to do and from knowing that participation in purposeful activity was beneficial. Physical health benefits included body composition changes, improved physiological functioning and a reduction in medication.

DISCUSSION

Researchers have suggested that the mechanism responsible for the physical activity and mental health relationship is complex and lies in a combination of biological, psychological and social factors (Biddle & Mutrie, 2001; Fontaine, 2000). Crone et al.'s findings would support this and further highlights the complex and interrelated nature of the relationship. For example, in Crone et al.'s (2005) framework self-acceptance (or the participants mental health) is affected by a number of factors, not solely the exercise "per se", but the physical and social contexts where the participants experiences are entrenched. Their study demonstrates that context related factors such as social network, environment, culture and social support are influential and related to the physical activity and mental health relationship for these participants. As a consequence Crone et al.'s (2005) findings provide further insight into the complexities of the relationship and of the factors that can effect it, in exercise settings. It also supports the use of interpretive methodologies in this under researched area of psychology.

For many health and exercise professionals physical activity programmes are perceived as a medium for changing people, physically, to meet an aesthetic ideal (i.e. before and after), or to achieve a physical fitness or health goal (e.g. losing fat or gaining strength). Interpretative research into exercise emphasises that the experience of exercising itself, irrespective of the outcomes it may lead to, is important. It suggests that exercise programmes have the potential to help people feel happy and content with who, and where they are now, not with who, or what, they may become in the future. Feeling good about yourself and being content are aspects of mental health that, according to Crone et al.'s research, can be influenced with successful participation on an exercise programme.

CONCLUSION

This paper, by critiquing the mechanisms provisionally presented to explain the physical activity and mental health relationship, acknowledges that the mechanism responsible is more complex and interrelated than those proposed from biochemistry, physiology and psychology would suggest. By acknowledging the interrelated nature of the relationship it concludes, through the presentation of findings from qualitative research, that there is a need for further research into this area. Research including methodological approaches from both interpretative and positive paradigms, needs to be developed if a full and definitive understanding is to be found to

explain the physical activity and mental health phenomenon. If physical activity is to continue to be used for the promotion of mental health and in the treatment of mental illness, the mechanism must be more fully understood to develop guidelines for practice that are not only based on evidence of an association, but also of the mechanism responsible for this association.

REFERENCES

Bahrke, M. S., & Morgan, W. P. (1978). Anxiety reduction following exercise and meditation. *Cognitive Therapy Research, 2(4)*, 323–333.

Bandura, A. (1997). Towards a unifying theory of behaviour change. *Psychological Review*, *84,* 191–215.

Biddle, S. J. H. (2000). Emotion, mood and physical activity. In S. J. H. Biddle, K. R. Fox, & S. H. Boutcher (Eds.), *Physical activity and psychological well-being* (pp. 63–87). London: Routledge.

Biddle, S. J. H., Fox, K. R., & Boucher, S. H. (2000). *Physical activity and psychological well-being.* London: Routledge.

Biddle, S. J. H., & Mutrie, N. (2001). *Psychology of physical activity determinants, well-being and interventions.* Routledge: London.

Boutcher, S. (1993). Emotion and aerobic exercise. In R. N. Singer, M. Murphey, & L. K. Tennent (Eds.), *Handbook of research on sport psychology* (pp. 799–814). McMillan: New York.

Burbach, F. R. (1997). The efficacy of physical activity interventions within mental health services: Anxiety and depressive disorders. *Journal of Mental Health, 6*, 543–566.

Callaghan, P. (2004). Exercise: A neglected intervention in mental health care? *Journal of Psychiatric and Mental Health Nursing*, *11(4)*, 476–483.

Carless, D., & Faulkner, G. (2003). Physical activity and mental health. In J. McKenna & C. Riddoch (Eds.), *Perspectives on health and exercise* (pp. 61–82). Palgrave Macmillan: Hampshire.

Chaouloff, F. (1997). The seratonin hypothesis. In W. P. Morgan (Ed.), *Physical activity and mental health* (pp. 179–198). Washington, DC: Taylor and Francis.

Charmaz, K. (2000). Grounded theory: Objectivist and constructivist methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed.) (pp. 509–535). CA: Sage.

Craft, L. (2005). Exercise and clinical depression: Examining two psychological mechanisms. *Psychology of Sport and Exercise, 6*, 151–171.

Crone, D., Smith, A., & Gough, B. (2005). "I feel totally alive, totally happy and totally at one": A psycho-social explanation of the physical activity and mental health relationship from the experiences of participants on exercise referral schemes. *Health Education Research, 20(5)*, 600–611.

Crotty, M. (1998). *The foundations of social research, meaning and perspective in the research process.* Sage: London.

Daley, A. (2002). Exercise therapy and mental health in clinical populations: Is exercise therapy a worthwhile intervention? *Advances in Psychiatric Treatment, 8*, 262–270.

Dunn, A. L., & Dishman, R. K. (1991). Exercise and the neurobiology of depression. *Exercise and Sports Science Reviews, 19*, 41–98.

Faulkner, G., & Carless, D. (2003). Physical activity and mental health. In J. McKenna & C. Riddoch (Eds.), *Perspectives on health and exercise* (pp. 61–105). Hampshire: Palgrave Macmillan.

Faulkner, G., & Sparkes, A. (1999). Exercise as therapy for schizophrenia: An ethnographic study. *Journal of Sport and Exercise Psychology*, *21*, 52–69.

Festinger, L. (1954). The theory of social comparison process. *Human Relations*, *7*, 117–140.

Fogarty, M., & Happell, B. (2005). Exploring the benefits of an exercise programme for people with schizophrenia: A qualitative study. *Issues in Mental Health Nursing*, *26(3)*, 341–351.

Fontaine, K. R. (2000). Physical activity improves mental health. *The Physician and Sports Medicine, 28(10)*, 83–84.

Fox, K. R. (2000). The effects of exercise on self-perceptions and self-esteem. In S. J. H. Biddle, K. R. Fox, & S. H. Boutcher (Eds.), *Physical activity and psychological well-being* (pp. 88–117). Routledge: London.

Grant, T. (Ed.). (2000). *Physical activity and mental health: National consensus statements and guidelines for practitioners.* London: Health Education Authority.

Gauvin, L., Rejeski, W. J., & Norris, J. L. (1996). A naturalistic study on the impact of acute physical activity on feeling states and affect in women. *Health Psychology, 15(5)*, 391–397.

Glenister, D. (1996). Exercise and mental health: A review. *Journal for the Royal Society of Health*, *2*, 7–13.

Greist, J. H., Ossip-Klein, M. H., Eischens, R. R., Faris, J. W., Gurman, A. S., & Morgan, W. P. (1979). Running as a treatment for depression. *Comprehensive Psychiatry, 20*, 41–54.

Hardcastle, S., & Taylor, A. H. (2001). Looking for more than weight loss and fitness gain: Psycho-social dimensions among older women in a primary health care exercise referral scheme. *Journal of Aging and Physical Activity, 9*, 313–328.

Hart, E. A., Leary, M. R., & Rejeski, W. J. (1989). The measurement of social physique anxiety. *Journal of Sport and Exercise Psychology, 11*, 94–104.

Hoffman, P. (1997). The endorphin hypothesis. In W. P. Morgan (Ed.), *Physical activity and mental health* (pp. 163–177). Washington, DC.: Taylor and Francis.

Markoff, R. A., Ryan, P., & Young, T. (1982). Endorphins and mood changes in long distance running. *Medicine and Science in Sports and Exercise*, *14(1)*, 11–15.

Marsh, H. W., & Sonstroem, R. J. (1995). Importance ratings and specific components of physical self concept: Relevance to predicting global components of self concept and exercise. *Journal of Sport and Exercise Psychology*, *17*, 84–104.

McAuley, E., Bane, S. M., Ruddolph, D. L., & Lox, C. L. (1995). Physique anxiety and exercise in middle aged adults. *Journal of Gerontology*, *50B*, 229–235.

McAuley, E., Courneya, K., & Lettunich, J. (1991). Effects of acute and long term exercise on self efficacy responses in sedentary, middle aged males and females. *The Gerontologist*, *31*, 534–542.

McAuley, E., Talbot, H., & Martinez, S. (1999). Manipulating self efficacy in the exercise environment in women: Influences on affective responses. *Health Psychology*, *18*, 288–294.

Morgan, W. P., & Goldston, S. E. (Eds.). (1987). *Exercise and mental health.* Washington: Hemisphere.

Morrissey, M. (1997). Exercise and mental health: A qualitative study. *Mental Health Nursing*, *17*, 6–8.

Mutrie, N. (1997). The therapeutic effects of exercise on the self. In K. R. Fox (Ed.), *The physical self: From motivation to well-being* (pp. 287–314). Champaign, IL: Human Kinetics.

Mutrie, N. (2000). The relationship between physical activity and clinically defined depression. In S. J. H. Biddle, K. R. Fox, & S. H. Boutcher (Eds.), *Physical activity and psychological well-being* (pp. 46–62). Routledge: London.

Nicoloff, G., & Schwenk, T. (1995). Using exercise to ward off depression. *The Physician and Sports Medicine*, *23(9)*, 44–58.

Paluska, S. A., & Schwenk, T. L. (2000). Physical activity and mental health: Current concepts. *Sports Medicine*, *29(3)*, 167–180.

Ransford, C. P. (1982). A role for amines in the anti depressant effect of exercise: A review. *Medicine and Science in Sports and Exercise, 14(1)*, 1–10.

Saxena, S., Van Ommeren, M., Tang, K., & Armstrong, T. (2005). Mental health benefits of physical activity. *Journal of Mental Health*, *14(5)*, 445–451.

Singh, S. (1997). Why are GP's exercise schemes so successful (for those who attend)? Results from a pilot study. *Journal of Management in Medicine, 11(4)*, 233–237.

Smith, R. A., & Biddle, S. J. H. (1999). Attitudes to exercise adherence: Tests of the theories of reasoned action and planned behavior. *Journal of Sport Sciences*, *17(4)*, 269–281.

Stathi, A., & Fox, K. R. (2004). The dimensions of a well-being scale designed for older adults: The ageing-well profile. *Journal of Aging and Physical Activity, 12(3)*, 298–299.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research* (2nd ed.). London: Sage.

Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, C. A.: Sage.

Turner, E., Rejeski, W. J., & Brawley, L. (1997). Psychological benefits of physical activity are influenced by the social environment. *Journal of Sport and Exercise Psychology*, *19*, 119–130.

Wankel, L. M. (1993). The importance of enjoyment to adherence and psychological benefits from physical activity. *International Journal of Sport Psychology*, *24*, 151–169.

VZTAH TĚLESNÉ AKTIVITY A DUŠEVNÍHO ZDRAVÍ – SOUČASNÝ POHLED KVALITATIVNÍHO VÝZKUMU

Pozitivní vztah mezi tělesnou aktivitou a duševním zdravím a jeho využití při léčbě duševních chorob jsou známy. Přesto stále nebylo dosaženo shody ohledně mechanismu, který je za tento vztah zodpovědný. Článek zkoumá vztah tělesné aktivity a duševního zdraví kritickým posouzením biochemických, fyziologických a psychologických mechanismů, které mají tento jev vysvětlovat. Z takového posouzení vyplývá, že přes různá navrhovaná vysvětlení panuje v této oblasti jen málo shody, s výjimkou toho, že jde o vztah komplexní a že v zodpovědném mechanismu či zodpovědných mechanismech se pravděpodobně navzájem kombinují prvky psychologické, biochemické i fyziologické. Pokus o lepší pochopení komplexnosti tohoto vztahu doplňují zjištění z kvalitativního výzkumu zkoumajícího vztah z pohledu osob, které prospěšný vliv cvičení na duševní zdraví zažívají. Pomocí metodologie kvalitativního výzkumu zjišťovala studie zkušenosti účastníků cvičebních programů ve Velké Británii. Závěrem je konstatováno, že kvalitativní metodologie zkoumající zkušenosti lidí a prostředky, které je usnadňují, poskytuje další pohled na složitou povahu vztahu tělesné aktivity a duševního zdraví.

Klíčová slova: tělesná aktivita, duševní zdraví, kvalitativní výzkum.

Dr. Diane Crone

University of Gloucestershire
Faculty of Sport,
Health and Social Care
Oxstalls Campus
Oxstall Lane
Gloucestershire
GL2 9HW
United Kingdom

Education and previous work experience

BSc in Sport, Ph.D. in Exercise psychology, 10 years in local government developing physical activity projects for the community and 7 years in higher education undertaking research, consultancy and teaching responsibilities in exercise and health related topics.

First-line publication

Physical activity and mental health and exercise referral scheme evaluation.