Position Paper



Inner Sustainability in Sports: Promoting Internal Transformative Qualities in Athletes

Linking Sport Psychology to Positive and Environmental Psychology

Petra Jansen

Institute of Sport Science, University of Regensburg, Germany

Abstract: Sport and physical activity are crucial for social transformations, such as sustainable transformation. Drawing on evidence from positive and environmental psychology, this paper argues, within the context of sports, that the inner transformative qualities of athletes, the so-called inner sustainability, are crucial factors for the transition to a higher level of sustainable behavior. Evidence is presented that inner sustainability is connected to well-being and is a significant driver of sustainable behavior. This paper presents a road map for researchers investigating the internal transformative qualities in sports. Furthermore, examples of exercises to foster inner sustainability in sports are given. Given that sports often mirror sociopolitical dynamics, advocating for the enhancement of internal transformative qualities in sports becomes a pursuit of individual well-being and a conscientious effort toward the well-being of the entire ecosystem.

Keywords: well-being, sustainability, self-compassion, mindfulness, character strengths

Innere Nachhaltigkeit im Sport. Die Förderung der internalen transformativen Qualitäten von Athleten und Athletinnnen

Zusammenfassung: Sport und körperliche Aktivität sind entscheidend für soziale Transformationen, wie z.B. eine Transformation zu einer größeren Nachhaltigkeit. Auf der Grundlage von Erkenntnissen aus der Positiven Psychologie und der Umweltpsychologie wird in diesem Beitrag im Kontext des Sports argumentiert, dass die inneren transformativen Qualitäten von Sportlern und Sportlerinnen, die so genannte innere Nachhaltigkeit, entscheidende Faktoren für den Übergang zu einem höheren Maß an nachhaltigem Verhalten sind. Es wird der Nachweis erbracht, dass die innere Nachhaltigkeit mit dem Wohlbefinden zusammenhängt und eine wichtige Triebkraft für nachhaltiges Verhalten ist. In diesem Beitrag wird ein möglicher Forschungplan für Forscher und Forscherinnen vorgestellt, um die inneren transformativen Qualitäten im Sport näher zu untersuchen. Außerdem werden Beispiele für Übungen zur Förderung der inneren Nachhaltigkeit im Sport gegeben. Aufgrund der Tatsache, dass der Sport ein Spiegelbild der Gesellschaft ist, hat der Sport die Möglichkeit, ein Vorbild für die Entwicklung der inneren Nachhaltigkeit zu sein, und damit sowohl zum individuellen als auch zum Wohlbefinden des gesamten Ökosystems beizutragen.

Schlüsselwörter: Wohlbefinden, Nachhaltigkeit, Selbstmitgefühl, Achtsamkeit, Charakterstärken

Sport and physical activity can be viewed as crucial not only for physical and mental health but also for social-ecological transformations. One of the significant challenges of our time is to set the political and social course so that we once again live within our planetary boundaries. To date, this challenge has often been seen as an external task centered around technical or political challenges. In the meantime, however, a new perspective has emerged that assumes that in order to face the challenge of climate change, we also need some kind of internal change, such as the change to a higher level of connectedness. With this change, social-ecological transforma-

tions (Wamsler et al., 2021) and sustainable or proenvironmental behavior can be fostered – a behavior that, at the very least, does not harm the environment and, at most, perhaps benefits the environment (Steg & Vlek, 2009), for example, in the ecological domain, recycling, green purchase, saving water, and avoiding meat consumption and in the social domain, prosocial behavior.

Nevertheless, in the field of sports, the topics related to sustainability focus on external phenomena such as the sustainable aspects of sports tourism, sports events, and other collective structures. The importance of a possible inner change of athletes as a crucial factor for



Figure 1. The relationships between inner sustainability and well-being and between inner sustainability and sustainable behavior. Well-being might also be a mediator for the relationship between inner sustainability and sustainable behavior.

Table 1. Five aspects and 23 components of the IDGs

1 Being Relationship to Self	2 Thinking Cognitive Skills	3 Relating Caring for Others and the World	4 Collaborating Social Skills	5 Acting Enabling Change
Integrity and Authenticity	Complexity Awareness	Connectedness	Co-creation Skills	Creativity
Openness and Learnin Mindset	Perspective Skills	Humility	Inclusive Mindset and Intercultural Competence	Optimism
Self-awareness	Sense-making	Empathy and Compassion	Trust	Perseverance
Presence	Long-term Orientation and Visioning		Mobilization Skills	

Note. IDGs = Inner Developmental Goals. Source: https://innerdevelopmentgoals.org/framework/

the transition to a higher level of sustainable behavior has been neglected so far. However, focusing on external and internal factors toward more sustainability is essential and these types of factors complement each other: Certain internal transformational qualities influence learning, life choices, and decisions people make, including the decision to change toward a more sustainable behavior (Wamsler et al., 2021). In general, complementing internal and external factors aligns with the principles of planetary health, emphasizing the interdependence of individual health and the Earth's health. Since sports often mirror social processes, athletes can potentially assume a pioneering role in this context.

After the description of the concept of inner sustainability, this paper argues, within the context of sports, that (a) inner sustainability is connected to well-being and (b) inner sustainability might serve as a significant driver for sustainable behavior in the ecological and social domain. Well-being might be a mediator (see Figure 1).

The paper also offers insights into why fostering inner sustainability is essential and suggests ways to achieve this goal.

What Is Inner Sustainability?

First, it must be acknowledged that inner sustainability still needs to be defined. In general, inner sustainability contributes to more sustainability in individual behavior. Some approaches exist for classifying the factors of inner sustainability. For example, Wamsler et al. (2021) call those factors *internal transformative qualities* (Wamsler et al., 2021) encompassing the following five factors:

- 1. *Connection* (i.e., connectedness to oneself, e.g., self-compassion, connectedness to nature, and connectedness to the other, e.g., pro-socialness)
- 2. Awareness (i.e., self-awareness and self-reflection)
- 3. Insight (i.e., different ways of knowing, sense-making)
- 4. Purpose (i.e., activation and reflection of the own values)
- 5. *Agency* (i.e., empowerment and related skills that can foster and enhance cooperation)

Furthermore, the initiative of the Inner Developmental Goals (IDGs), a nonprofit organization, provides a practical framework for inner development. This framework organizes 23 skills across five dimensions, offering a tangible way to enhance inner sustainability (https://www.innerdevelopmentgoals.org/framework; see Table 1).

Although the 23 skills seem relevant, the completeness and the organization of the five aspects must be discussed. For example, isn't the factor of connectedness also relevant to the domain of thinking because our thinking is organized in connected networks in the brain? Moreover, connectedness (with one's self) seemed to be also relevant for the domain of being. The selection and arrangement of the terms do not seem to be sufficiently transparent. However, the inner transformative qualities and the IDGS can be seen as overlapping constructs in many parts; for example, connectedness is one component in the *relating* dimension of the IDGs, and awareness and insight in the *thinking* dimension.

In summary, at least two independent approaches exist for classifying the internal factor related to inner development that might also lead to a higher sustainable behavior.

Inner Sustainability in Athletes

Studies exploring inner sustainability in athletes are rare. Although there are studies in the sports context that investigate the relevance of the five internal transformative qualities mentioned by Wamsler et al. (2021), only some of them are related to sustainable behavior, especially if the factor *connectedness* is investigated; see the section on "Inner Sustainability and (Sustainable) Behavior in Athletes". Most of the studies are related to the performance of athletes or the personal development of athletes:

Regarding awareness, it is widely accepted that selfawareness plays a pivotal role in fostering positive changes in performance (Jackson & Csikszentmihalyi, 1999). Moreover, self-awareness regarding one's experience and mental state proves crucial for effectively applying various sports psychology methods and techniques (Ravizza & Fifer, 2014). Research on insight and the sense-making process showed that it was not easy for young athletes to gain insight into their performance development, mainly because the feedback they received from different people was inconsistent (Taylor et al., 2022). Regarding purpose and reflection on personal values, mindfulness programs in sports, such as the mindfulness-acceptance-commitment approach (MAC; Gardner & Moore 2007) or the mindful emotion program (Jansen & Hoja, 2018), integrate the reflection of the athletes' values. More recently, discussions have emerged about the potential integration of teaching moral values in the form of character strengths in the field of sports (Riedl & Klatt, 2023). Character strengths can be seen as values in action (Peterson & Seligmann, 2004). Overall, 24 character strengths are described, divided into the following six virtues: wisdom (e.g., curiosity), courage (e.g., zest),

humanity (e.g., love), justice (e.g., teamwork), temperance (e.g., forgiveness), and transcendence (e.g., gratitude). The internal transformative quality of *agency*, which fosters cooperation, is particularly evident in athletes participating in team sports. The team's success relies on interdependence and cooperation among its members (Landkammer et al., 2019).

Inner Sustainability and Well-Being

It is well accepted that sustainable behavior and well-being are interrelated, because well-being (and good health) is one of the 17 Sustainable Developmental Goals (SDGs) itself; there is also meta-analytic evidence for this positive association (Zawadzki et al., 2020). Regarding inner sustainability or inner developmental goals, it remains unclear whether well-being is solely an end product of inner sustainability or a mediating factor in the relationship between inner sustainability (internal transformative qualities or the inner developmental goals) and sustainable behavior. For example, high self-compassion can lead to a greater sense of well-being, which in turn gives one the energy to think about environmentally and socially sustainable behavior.

Furthermore, well-being holds significance for almost everyone, and there are various definitions. For instance, it can be seen as the positive evaluation of one's life, encompassing external criteria such as virtue or holiness, and as a prevalence of positive affect over negative affect (Diener, 1984). A well-known distinction, which will be taken up again in the chapter, is made between hedonic and eudaemonic well-being. Hedonic happiness involves the momentary assessment of one's own life, including associated joyful emotions. By contrast, eudaemonic happiness is understood as a fulfilled life through adherence to values important to the person, such as honesty and sincerity (Jansen & Hoja, 2018). A broader concept of well-being is flourishing, encompassing happiness, life satisfaction, mental and physical health, meaning and purpose, character and virtue, and close social relationships (Van der Weele, 2017).

Beside the fact that well-being is one of the 17 SDGs, a relationship between inner sustainability and well-being exists. Thus, for the inner sustainability aspect of connectedness, it was shown that self-love (connectedness to oneself), nature connectedness, and pro-socialness (connectedness to others), which are also related to proenvironmental behavior, are positively correlated (Jansen, Rahe et al., 2023). In a non-athlete sample, self-love and pro-socialness emerged as significant predictors of flourishing (Rahe & Jansen, 2023). Self-love involves the three

aspects of self-contact (perceiving and encountering oneself), self-acceptance (accepting one's shadow and one's strength), and self-care (treating oneself and shaping relationships; Henschke & Sedlmaier, 2023). However, connectedness to oneself is expressed not only in the concept of self-love but also in the concept of selfcompassion. Self-compassion encompasses the three positive aspects of self-kindness (to treat oneself like treating one's best friend), common humanity (to know that other persons might experience the same difficulties), and mindfulness (turning toward the pain with acceptance of the present moment), counterbalanced by the three negative aspects such as self-judgment, isolation, and overidentification (Neff, 2003). Studies have demonstrated the link between self-compassion and well-being, with meta-analyses focusing on quantitative data and standardized measures (Zessin et al., 2015). Furthermore, the experience of nature is correlated with increased wellbeing (Bratman et al., 2019), fostering the relationship between inner sustainability and well-being.

Inner Sustainability and Well-Being in Athletes

Considerable research has delved into the internal transformative qualities in athletes, particularly within the framework of the self-compassion concept. Athletes with elevated levels of self-compassion tend to experience positive emotions more frequently, which is regarded as a form of hedonic well-being (Doorley et al., 2022). Additionally, a positive correlation exists between higher self-compassion values and eudaemonic well-being. Mediating factors for these relationships may include increased initiative and self-determination (Ferguson et al., 2014). Notably, self-compassion is correlated with mental health and mental resilience in National Collegiate Athletics Association (NCAA) athletes, encompassing components like confidence, consistency, and control (Stamatis et al., 2020).

Concerning connectedness to others, physical activity is recognized for activating this sense, manifesting as beliefs in empathy or empathic concern and social responsibility (Bandura et al., 2003; Brunelle et al., 2007). A study on sports participation, well-being, and prosocial behavior in China revealed that more significant involvement in mass sports increased the likelihood of engaging in prosocial actions, with subjective well-being as a mediator (Duan et al., 2022). Additionally, athletic connectedness, defined as a sense of social belonging and connection with teammates, mediated the indirect effects of task and ego motivation in the well-being of NCAA Division III student-athletes (Wayment & Schack Walters, 2017).

Beyond connectedness, the transformative qualities of purpose and values are crucial. Well-being, being subjective, is heavily influenced by individual goals and values, especially in high-performance athletes (Uzzell et al., 2022).

Although, to the best of my knowledge, no studies on the relationship between nature connectedness and well-being in the sports context have been conducted, it is suggested that exposure to nature is the optimal intervention for enhancing the performance of mentally fatigued athletes (Sun et al., 2022). This relationship could also extend to nature connectedness and well-being, as performance and well-being are interconnected (e.g., Hammond et al., 2013).

Inner Sustainability and Sustainable Behavior

In order to understand how a change in sustainable behavior can occur, various action models have been proposed. The norm activation model, for instance, underscores factors such as awareness of consequence and ascription of responsibility that influence the formation of personal norms and, subsequently, the sense of moral obligation (Schwartz, 1977). This model has been expanded to include the importance of values (Stern et al., 1999). The theory of planned behavior, on the other hand, highlights the social-cognitive processes involved in action (Fishbein & Ajzen, 2009). These models were synthesized into the comprehensive action model of environmental behavior (Klöckner, 2013), supported by empirical data: Action intentions, perceived behavioral control, and habits are predictors of behavior. Intentions, in turn, are shaped by attitudes, personal and social norms, and perceived behavioral control. Personal norms are influenced by social norms, perceived behavioral control, awareness of consequences, accountability, ecological perspective, and values.

In contemporary discussions, a relational path has extended the comprehensive action model of environmental behavior (Thiermann & Sheate, 2020). This path incorporates the concepts of connectedness with nature, empathy, and compassion, which are integral to inner sustainability and are displayed in Figure 2. In earlier studies, it was already shown that connectedness to nature (Whitburn et al., 2020) and compassion are linked to sustainable intentions and behavior (Pfattheicher et al., 2016). The upper part of the figure shows the normative path, the lower part the relational path (internalization of motivation) with the aspects connectedness to nature,

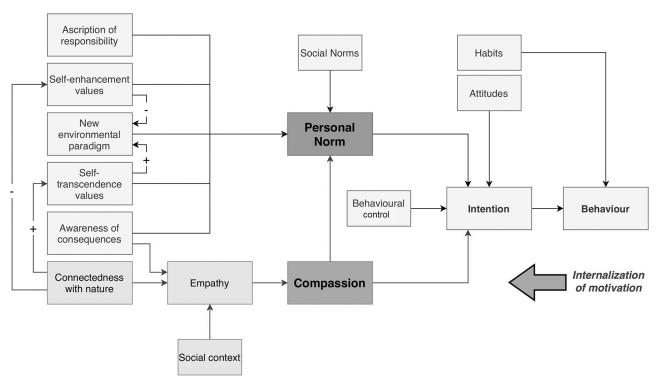


Figure 2. The two-pathway model of pro-environmental behavior from Thiermann and Sheate (2020, Figure 2).

empathy, and compassion. Individual aspects of the two paths, for example, self-transcendence values and connectedness to nature, are linked.

In my opinion, connectedness, which can be further delineated into connectedness to oneself (e.g., self-love or self-compassion), connectedness to others (manifested in empathy or compassion), and connectedness to nature, appears to be the most relevant among the five internal transformative qualities mentioned earlier. This is because it encompasses the individual (including aspects of awareness, purpose, and insight), others (including agency), and the environment. One might assume that sustainable behavior will be more evident if one feels connected to oneself, nature, and others.

Inner Sustainability and (Sustainable) Behavior in Athletes

As mentioned earlier, one aspect of inner sustainability is connectedness. In the former chapter in a previous section a relation between sports and the transformational quality of connectedness to the self, measured within the framework of self-compassion (Cormier et al., 2023; Röthlin et al., 2019), has already been demonstrated.

Additionally, sports and connectedness to others are intertwined. Physical activity has been shown to promote prosocial behavior in adolescents (Sukys et al., 2017) and

adults (Di Bartolomeo et al., 2019). Physical activity is also linked to connectedness to nature, particularly in the context of nature sports. Nature sports involve dynamic interactions between athletes and natural elements and the forces that create them, such as waves for rivers, which are essential for watersports activities (Melo et al., 2020). While the relationship between nature sports and connectedness to nature has been explored to some extent, for example, in the qualitative study with extreme sport athletes by MacIntyrre et al. (2019), more comprehensive studies are needed.

But studies on the relationship between inner sustainability and sustainable behavior in athletes are rare. To the best of my knowledge, there is only one recent study (Jansen, Hoja et al., 2023) involving 225 athletes with over 8 years of sports practice, both outdoor and indoor, and encompassing individual and team sports, where it was found that athletes engaged in outdoor sports exhibited a higher sense of connectedness to nature compared to those involved in indoor sports. However, no significant difference was observed in pro-social behavior between team sports and individual sports. This lack of distinction may be attributed to the challenges in categorizing sports as individual or team-based (Evans et al., 2012). Nevertheless, connectedness to nature and pro-social behavior positively predicted sustainable behavior, irrespective of the type of sport (individual vs. team) and the practice space (indoor vs. outdoor).

The results of that study (Jansen, Hoja et al., 2023 highlight the interconnectedness of concepts from positive psychology (such as self-compassion, self-love, prosocialness, and connectedness) and environmental psychology (sustainable attitudes and behavior) within the realm of sports. It is increasingly recognized that environmental and sustainable education can benefit from incorporating sport and physical activity. Sports education can enhance holistic learning, foster environmental awareness, and help develop crucial skills, including cooperation (Thurm et al., 2024). An exemplary resource for sustainable development in sports pedagogy is available at https://www.sg.tum.de/sportdidaktik/praxismaterialien/klima-bewegt/.

Why Should We Foster Inner Sustainability in Sports and How Can We Do This?

Traditionally, competitive sports have often embraced a worldview that emphasizes toughness, rigorous training, and viewing opponents solely as rivals. However, there is mounting evidence suggesting that specific internal transformative qualities are not only positively correlated with well-being and sustainable behavior but may also enhance athletic performance (e.g., Sun et al., 2022). These qualities do not detract from achieving peak performance; they contribute to a holistic and sustainable approach to excellence.

Noteworthy figures in the sports world, such as Phil Jackson, the renowned National Basketball Association (NBA) coach, have already recognized the importance of these internal transformative qualities (Jackson, 2013):

It takes a number of critical factors to win an NBA championship, including the right mix of talent, creativity, intelligence, toughness, and, of course, luck. But if a team doesn't have the most essential ingredient – love – none of those other factors matters. (p. 4)

How Can We Foster Inner Sustainability in Sports?

Promoting inner sustainability can be seen from a scientific and practical point of view. Inner sustainability, as discussed earlier, refers to the internal transformative qualities or the inner developmental goals crucial for instigating behavior change toward greater ecological and social sustainability and well-being. However, from a scientific point of view, much work must be done to establish a research program on inner sustainability in sports:

Promoting Inner Sustainability From a Scientific Point of View

Systematic Literature Review: Conduct a thorough review of existing literature on internal transformative qualities in general and sports. Summarize and analyze the current state of knowledge to identify gaps and areas for further exploration. Clarify whether there is a shared sense of which internal transformative qualities exist. For example, how are the classification of Wamsler et al. (2021) and the IDGs related?

Delphi Consensus Study: Present a series of questionnaires or "rounds," combined with controlled feedback, with the aim of establishing a dependable consensus of expert opinions regarding the relevance of inner sustainability in sports and their relation to well-being and ecological and social sustainable behavior.

Athlete Interviews: Engage in interviews with athletes across different competition levels. Explore the internal transformative abilities deemed necessary for transitioning to higher levels of well-being and sustainable behavior. Gain insights into personal experiences and perspectives.

Correlational Studies: Undertake correlational studies to examine the relationship between inner sustainability and sustainable behavior in the sporting context. Utilize quantitative methods to assess and quantify potential correlations, providing empirical evidence for the interconnectedness of these variables.

Intervention Studies: Implement intervention studies aimed at training and enhancing inner sustainability in athletes. Develop and implement programs that target specific internal transformative qualities or the inner developmental goals. Assess the impact of these interventions on both the athletes' internal states and their subsequent ecological and social sustainable behavior.

By following this road map, researchers can contribute valuable insights into the role of internal transformative qualities in sports, shedding light on their correlation with sustainable behavior and providing practical interventions for fostering inner sustainability.

Promoting Inner Sustainability From a Practical Point of View

Alongside sports-specific initiatives designed to cultivate aspects of inner sustainability in sports, such as the Olympic education program (Höfer & Lämmer, 2009) or the Post-Event Reflection (PER) program (Chow & Luzzeri, 2019), it is essential to integrate programs from the science of positive psychology into sports psychology. This integration serves a dual purpose: enhancing the well-being of athletes and fostering ecological and social sustainable behavior. The following section focuses exemplarily on three programs of inner sustainability, which

have been investigated in relation to sports on the one hand and to well-being and sustainable attitudes and behavior on the other: Self-compassion (related to sport, see Cormier et al., 2023; related to sustainable attitudes, see Richter & Hunecke, 2020; Winkelmair et al., 2023), mindfulness (related to sports, see Jansen & Hoja, 2018; related to sustainable attitudes and behaviors, see Geiger et al., 2018; Geiger et al., 2019), and the training of character strengths (in relation to sports, Tomé-Lourido et al., 2022).

Here, example exercises for each of the three training programs from positive psychology are provided:

Self-Compassion in Sport (see Cormier et al., 2023; Jansen, 2024).

One effective exercise for promoting self-compassion involves asking the athlete to recall a moment of defeat in a competition that left them feeling regretful. The key is encouraging the athletes to treat themselves with the same kindness and support they would offer to a close friend experiencing a challenging time. This entails providing oneself with attention, compassion, and comforting gestures.

The nuance lies in identifying the most suitable means for self-support in the given situation. While this might seem straightforward, it requires a tailored approach. For instance, some athletes may find solace in physical gestures that offer warmth, allowing them to reconnect with their bodies. Others might benefit from expressing loving affirmations to reframe their cognitive mindset positively. In some instances, expressing frustration or disappointment verbally can serve as a cathartic release, allowing the athlete to process and move on from the emotions associated with a lost game.

Mindfulness in Sport (see Jansen et al., 2018; Jekauc et al., 2022)

In situations where negative thoughts, such as those arising from a defeat in competition, become overwhelming, a simple yet effective mindfulness method is the STOP method:

- S = Stop: Stop your current activities or train of thought.T = Take a Breath: Inhale deeply, focusing on the sensation of your breath.
- O = Observe: Pay attention to your thoughts, emotions, and surroundings without judgment.
- *P* = *Proceed:* Make a conscious decision on how to proceed, considering the observed thoughts and emotions.

This brief intervention acts as a pause button, allowing individuals to step back from the situation. With regular practice, it becomes a valuable tool in preventing overwhelming emotions from taking control.

Character Strength Training in Sport (see Tomé-Lourido et al., 2022)

As a means of nurturing character strengths such as gratitude and love, athletes can engage in a reflective activity. They are invited to create a metaphorical "family tree" representing the individuals who have been instrumental in supporting them throughout their sporting journey. Following the visualization, athletes are prompted to express their gratitude by articulating specific reasons for appreciation toward each person. This exercise strengthens the bonds of gratitude and reinforces feelings of love and appreciation for the support network that has played a significant role in their athletic endeavors.

Conclusion

This paper has posited a connection between inner sustainability and well-being and sustainable behavior, emphasizing the potential of positive psychology concepts to fortify these inner transformative qualities. Given that sports often mirror sociopolitical dynamics, advocating for the enhancement of inner sustainability in sports becomes not only a pursuit of individual well-being but also a conscientious effort toward the well-being of the entire ecosystem. This broader perspective underscores the transformative power of sports, aligning it with the imperative to foster sustainability and collective flourishing.

However, it is essential to acknowledge two key considerations:

- As already mentioned in the Introduction, promoting inner sustainability in athletes does not negate the necessity for external changes in the sports system. External circumstances undeniably influence sustainable behavior in sports and the well-being of athletes. Nevertheless, fortifying of internal transformative qualities plays a pivotal role, acting as a catalyst for enduring positive change toward more sustainable behavior.
- 2. The promotion of inner sustainability in athletes is not intended to replace existing concepts in sports but rather to complement them. Established ideas like Olympic education (Höfer & Lämmer, 2009) and traditional sports psychological training such as stress reduction, autogenic training, and mindfulness training are valuable in enhancing athlete well-being. However, the emphasis on inner sustainability adds a broader context by intertwining well-being with sustainable behavior. This integration provides a more comprehensive framework that aligns with the evolving landscape of sports psychology.

In conclusion, this article invites sports psychologists, collaborating with researchers from positive psychology and environmental psychology, to delve into the crucial realm of internal transformative qualities - termed inner sustainability - in athletes. There is a call for researchers to explore the construct validity of internal sustainability and its profound relevance for fostering sustainable behavior within sports. I would suggest starting with one key internal transformative quality, which is in included in the approach of the five internal transformative qualities (Wamsler et al., 2021) and the inner developmental goals: connectedness. It seems obvious that connectedness to oneself, to others, and to nature are relevant aspects. However, connectedness to oneself can be expressed, for example, by the concepts of self-esteem, self-concept, self-love, and selfcompassion. How do they relate to each other, and how are they different? Which aspect is the most relevant to sport research? The same holds true for the connectedness to others: Connectedness on an interpersonal level may be enacted and manifest through diverse facets such as empathy, altruism, or compassion. Again, the question of convergent and discriminant validity must be raised as well as its relevance to the sports context.

Concurrently, practitioners are encouraged to collaboratively construct a versatile toolbox of inner sustainability exercises. This resource, developed through the collective efforts of sports psychologists, coaches, athletes, and anyone interested in nurturing the intrinsic well-being and sustainable behavior of individuals within the sports community, will be a testament to our shared commitment to advancing sports psychology.

References

- Bandura, A., Caprara, G. V., Barbaranelli, C., Gerbino, M., & Pastorelli, C. (2003). Role of affective self-regulatory efficacy in diverse spheres of psychosocial functioning. *Child Develop*ment, 74, 769e783. https://doi.org/10.1111/1467-8624.00567
- Bratman, G. N., Anderson, C. B., Berman, M. G., Cochran, B., De Vries, S., Flanders, J., Folke, C., Frumkin, H., Gross, J. J., Hartig, T., Kahn Jr., P. H., Kuo, M., Lawler, J. J., Levin, P. S., Lindahl, T., Meyer-Lindenberg, A., Mitchell, R., Ouyang, Z., Roe, J., ... Daily, G. C. (2019). Nature and mental health: An ecosystem service perspective. *ScienceAdvances*, 5(7). https://doi.org/10.1126/sciadv.aax.0903
- Brunelle, J., Danish, S. J., & Forneris, T. (2007). The impact of a sport-based life skill program on adolescent prosocial values. *Applied Developmental Science*, *11*, 43e–55. https://doi.org/10.1080/1088690709336722
- Chow, G. M., & Luzzeri, M. (2019). Post-event reflection: A tool to facilitate self-awareness, self-monitoring, and self-regulation in athletes. *Journal of Sport Psychology in Action*, 10(2), 106–118. https://doi.org/10.1080/21520704.2018.1555565
- Cormier, D. L., Kowalski, K. C., Ferguson, L. J., Mosewich, A. D., McHugh, T.-L. F., & Röthlin, P. (2023). Self-compassion in sport:

- A scoping review. International Review of Sport and Exercise Psychology. https://doi.org/10.1080/1750984X.2022.2161064
- Di Bartolomeo, G., & Papa, S. (2019). The effects of physical activity on social interactions: The case of trust and trustworthiness. *Journal of Sport Economics*, 20, 50-71. https://doi.org/10.1177/1527002517717299
- Diener, E. (1984). Subjective well-being. *Psychonomic Bulletin*, 95(3), 542-575. https://doi.org/10.1037/0033-2909.95.3.542
- Doorley, J. D., Kashdan, T.B., Weppner, C. H., & Glass, C. R. (2022). The effects of self-compassion on daily emotion regulation and performance rebound among college athletes: Comparisons with confidence, grit, and hope. *Psychology of Sport and Exercise*, 58, 102081. https://doi.org/10.1016/j.psychsport.2021.102081
- Duan, X., Wang, X., Li, X., Li, S., Zhong, Y., & Bu, T. (2022) Effect of mass sports activity on prosocial behavior: A sequential mediation model of flow trait and subjective wellbeing. *Frontiers in Public Health, 10*, 960870. https://doi.org/10.3389/fpubh.2022.960870
- Evans, M. B., Eys, M. A., & Bruner, M. W. (2012). Seeing the "we" in "me" sports: The need to consider individual sport team environments. *Canadian Psychology / Psychologie Canadienne*, 53(4), 301 308. https://doi.org/10.1037/a0030202
- Ferguson, L. J., Kowalski, K. C., Mack, D. E., & Sabiston, C. M. (2014). Exploring self-compassion and eudaimonic well-being in young women athletes. *Journal of Sport and Exercise Psychology*, 36(2), 203 – 216. https://doi.org/10.1123/jsep.2013-0096
- Fishbein, M., & Ajzen, I. (2009). Predicting and changing behavior: The reasoned action approach. Taylor & Francis.
- Gardner, F. L., & Moore, Z. E. (2007). The psychology of enhancing human performance: The mindfulness-acceptance-commitment (MAC) approach. Springer.
- Geiger, S. M., Grossman, P., & Schrader, U. (2019). Mindfulness and sustainability: Correlation or causation? *Current Opinion in Psychology*, 28, 23–27. https://doi.org/10.1016/j.cogpsyc.20 18.09.010
- Geiger, S. M., Otto, S., & Schrader, U. (2018). Mindfully green and healthy: An indirect path from mindfulness to ecological behavior. Frontiers in Psychology, 8, 2306. https://doi.org/10. 3389/f.psyg.2017.02306
- Hammond, T., Gialloreto, C., Kubas, H., & Hap Davies., H. (2013). The prevalence of failure-based depression among elite athletes. *Clinical Journal of Sport Medicine*, 23(4), 273-277. https://doi.org/10.1097/JSM.0b013e318287b870
- Henschke, E., & Sedlmeier, P. (2023). What is self-love? Redefinition of a controversial construct. *The Humanistic Psychologist*, 51(3), 281 302. https://doi.org/10.1037/hum0000266
- Höfer, A., & Lämmer, M. (Eds.) (2009). *Die Olympischen Werte und die Zukunft des Sports* [Olympic values and the future of sports]. Deutsche Olympische Akademie Willi Daume.
- Jackson, P. (2013). Eleven rings. The Penguin Press.
- Jackson, S. A., & Csikszentmihalyi, M. (1999). Flow in sports: The keys to optimal experiences and performances. Human Kinetics. Jansen, P. (2024). Selbstmitgefühl im Sport. Springer.
- Jansen, P., & Hoja, S. (2018). Macht Sport wirklich glücklich? Ein systematisches Review [Does sport really make you happy? A sytematic review]. *Zeitschrift für Sportpsychologie, 25,* 21 32. https://doi.org/10.1026/1612-5010/a000211
- Jansen, P., Hoja, S., & Rahe, M. (2023). Connectedness and sustainable attitudes and behavior in athletes. *German Journal of Exercise and Sports Research*, 54, 55 63. https://doi.org/10.1007/s12662-023-0089-2
- Jansen, P., Rahe, M., & Hoja, S. (2023). Connectedness as a relevant factor for sustainable consumption. Frontiers in Psychology: Positive Psychology, 14, 1216944. https://doi.org/10. 3389/fpsyg.2023.1216944
- Jansen, P., Richter, S., & Seidl, F. (2018). Achtsamkeit im Sport [Mindfulness in sport]. Springer.

- https://econtent.hogrefe.com/doi/pdf/10.1026/2941-7597/a000019 Monday, September 23, 2024 4:54:12 AM OTH Regensburg Ostbayerische Technische Hochschule Regensburg / Hochschulbibliothek IP Address:132.199.243.24
- Jekauc, D., Mülberger, L., & Weyland, S. (2022). Achtsamkeitstraining im Sport [Mindfulness training in sport]. Springer.
- Klöckner, C. A. (2013). A comprehensive model of the psychology of environmental behaviour - a meta-analysis. Global Environmental Change, 23(5), 1028-1038. https://doi.org/10.1016/j. gloenvcha.2013.05.014
- Landkammer, F., Winter, K., Thiel, A., & Sassenberg, K. (2019). Team sports off the field: Competing excludes cooperating for individual but not for team athletes. Frontiers in Psychology, 10, 2470. https://doi.org/10.3389/fpsyg.2019.02470
- MacIntyre T. E., Walkin, A. M., Beckmann, J., Calogiui, G., Gritzka, S., Oliver, G., Donnelly, A. A., & Warrington, G. (2019). An exploratory study of extreme sport athletes' nature interactions: From wellbeing to pro-environmental behavior. Frontiers in Psychology, 10, 1233. https://doi.org/10.3389/fpsyg.2019.01233
- Melo, R., Van Rheenen, D., & Gammon, S. J. (2020). Part I: nature sports: A unifiying concept. Annals of Leisure Research, 23, 1 - 18. https://doi.org.10.1080/11745398.2019.1672307
- Neff, K. D. (2003). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. Self and Identity, 2, 85 – 102. https://doi.org/10.1080/15298860309032
- Peterson, C., & Seligman, M. E. P. (2004). Character strengths and virtues. A handbook and classification. Oxford University Press.
- Pfattheicher, S., Sassenrath, C., & Schindler, S. (2016). Feelings for the suffering of others and the environment: Compassion fosters proenvironmental tendencies. Environment and Behavior, 48(7), 929-945. https://doi.org/10.1177/0013916515574549
- Rahe, M., & Jansen, P. (2023). A closer look at the relationship between the aspects of connectedness and flourishing. Frontiers in Psychology: Positive Psychology, 14, 1137752. https:// doi.org/10.3389/fpsyg.2023.1137752
- Ravizza, K., & Fifer, A. (2014). Increasing awareness for sport performance. In J. M. Williams & V. Krane (Eds.), Applied sport psychology: Personal growth to peak performance (7th ed., pp. 176 - 287). McGraw-Hill.
- Richter, N., & Hunecke, M. (2020). Factes of mindfulness in stage of behaviour change toward organic food consumption. Mindfulness, 11, 1134-1369. https://doi.org/10.1007/s12671-020-01351-4
- Riedl, N., & Klatt, S. (2023). Character strengths in sports opportunities and research approaches. Zeitschrift für Sportpsychologie, 30(1), 37 - 38. https://doi.org/10.1026/1612-5010/a000387
- Röthlin, P., Horvath, S., & Birrer, D. (2019). Go soft or go home? A scoping review of empirical studies on the role of self-compassion in the competitive sport setting. Current Issues in Sport Science, 4, Article 013. https://doi.org/10.15203/CISS_2019.013
- Schwartz, S. H. (1977). Normative influences on altruism. Advances in Experimental Social Psychology, 221 - 279. https:// doi.org/10.1016/s0065-2601(08)60358-5
- Stamatis, A., Deal, P. J., Morgan, G. B., Forsse, J. S., Papadakis, Z., McKinley-Barnard, S., Scudamore, E. M., & Koutakis, P. (2020). Can athletes be tough yet compassionate to themselves? Practical implications for NCAA mental health best practice no. 4. PLOS ONE, 15(12), Article e0244579. https://doi.org/10. 1371/journal.pone.0244579
- Steg, L., & Vlek, C. (2009). Encouraging pro-environmental behaviour: An integrative review and research agenda. Journal of Environmental Psychology, 29(3), 309-317. https://doi.org/10. 1016/j.jenvp.2008.10.004
- Stern, P. C., Dietz, T., Abel, T. D., Guagnano, G. A., & Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. Human Ecology Review, 6(2), 81-97. https://www.humanecologyreview.org/pastissues/her62/62sterne tal.pdf

- Sukys, S., Majauskiene, D., & Dumciene, A. (2017). The effects of a three-year integrated olympic education programme on adolescents' prosocial behaviours. European Journal of Sport Science, 17, 335-342. https://doi.org/10.1080/17461391.2016. 1254280
- Sun, H., Soh, K. G., Samsilah, R., Norjali W.M. R., Alireza, M., Cong, D., & Zijan, Z. (2022). Nature exposure might be the intervention to improve the self-regulation and skilled performance in mentally fatigue athletes: A narrative review and conceptual framework. Frontiers in Psychology: Performance Science, 13, 941299. https://doi.org/10.3389/fpsyg.2022.941299
- Taylor, J., Collins, D., & Cruickshank, A. (2022). To many cooks, not enough gourmets: Examing provision and use of feedback for the developing athlete. The Sport Psychologist, 36(2), 89-100. https://doi.org/10.1123/tsp.2021-0037
- Thiermann, U. B., & Sheate, W. R. (2020). Motivating individuals for social transition: The 2-pathway model and experiential strategies for pro-environmental behaviour. Ecological Economics, 174, 106668. https://doi.org/10.1016/j.ecolecon.2020.106668
- Thurm, S., Frank, P., Greve, S., & Schröder, S. (2024). Can learning to move foster sustainable development? A systematic literature review examining the potential of sport and physical activity in the context of environmental and sustainability German Journal of Exercise and Sport Research, education. 54, 29-42. https://doi.org/10.1007/s12662-023-00908-4
- Tomé-Lourido, D., Flórez-Domínguez, E. A., Fraga-García, L., Salanova, M., Sors, F., & Murgia, M. (2022). DÉPORVIDA: A character strengths positive intervention among young soccer players. Sport Sciences for Health, 18(3), 807 - 821. https://doi. org/10.1007/s11332-021-00859-z
- Uzzell, K. S., Knight, C. J., & Hill, D. M. (2022). Understanding and recognizing high-peformance swimmers' well-being. Sport, Exercise, and Performance Psychology, 11(1), 12-27. https://doi. org/10.1037/spy0000284
- Van der Weele, T. J. (2017). On the promotion of human flourishing. Proceedings of the National Academy of Sciences, 114(31), 8148 - 8156. https://doi.org/10.1073/pnas.1702996114
- Wamsler, C., Osberg, G., Osika, W., Herndersson, H., & Mundaca, L. (2021). Linking internal and external transformation for sustainability and climate action: Towards a new research and policy agenda. Global Environmental Change, 71, 102373. https://doi. org/10.1016/j.gloenvcha.2021.102373
- Wayment, H. A., & Schack Walters, A. (2017). Goal orientation and well-being in college athletes: The importance of athletic social connectedness. Journal of Sports Sciences, 35(21), 2114-2120. https://doi.org/10.1080/02640414.2016.1257147
- Whitburn, J., Linklater, W., & Abrahamse, W. (2020). Meta-analysis of human connection to nature and pro-environmental behavior. Conservation Biology, 34(1), 180-193. https://doi.org/10. 1111/cobi.13381
- Winkelmair, A., Siebertz, M., Jost, L., Schroter, F. A., Bartenschlager, C. T. J., & Jansen, P. (2023). Explicit and implicit affective attitudes toward sustainability: The role of mindfulness, heartfulness, connectedness to nature and prosocialness. International Journal of Applied Positive Psychology, 8, 571-598. https://doi.org/10.1007/s41042-023-00107-4
- Zawadzki, S. J., Steg, L., & Bouman, T. (2020). Meta-analytic evidence for a robust and positive association between individuals' pro-environmental behaviors and their subjective wellbeing. Environmental Research Letters, 15, 123007. https://doi. org/10.1088/1748-9326/abc4ae
- Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. Applied Psychology: Health and Well-Being, 7(3), 340 – 364. https://doi.org/10.1111/aphw.12051

Published online July 19, 2024

Acknowledgments:

I am very grateful for the valuable suggestions of two anonymous reviewers.

Funding

Open access publication enabled by University Library of Regensburg.

ORCID

Petra Jansen

https://orcid.org/0000-0002-0973-2158

Prof. Dr. Petra Jansen

Institute of Sport Science Faculty of Human Science University of Regensburg Universitätsstr. 31 93053 Regensburg Germany petra.jansen@ur.de