

The need for novelty in the field of physical activity and sport from self-determination theory: Reflections on a decade of evidence

La necesidad de novedad en el ámbito de la actividad física y el deporte desde la teoría de la autodeterminación: Reflexiones sobre una década de evidencias

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Abstract:

The need for novelty has been proposed as a basic psychological need from the perspective of self-determination theory. Over the last few years, a significant amount of evidence has demonstrated the important role that novelty can play in human motivation, especially in the field of physical activity and sport. In this review article, we briefly examine this evidence, enumerate the motivational strategies developed to satisfy the need for novelty, and outline some future challenges and perspectives. Although substantial progress has been made in this journey, this proposal needs to be tested in greater depth, transferring it to different contexts and evaluating the application of motivational strategies with the goal of finding the optimal dose of novelty that allows us to achieve the best results at cognitive, affective, and behavioral levels. It is highly satisfying to look back and see the path we have traveled. Let us continue taking steps to elucidate the motivational properties of novelty in the contexts of physical education, sport, and exercise.

Keywords:

Motivation; basic psychological needs; innovation; adherence; well-being.

Resumen:

La necesidad de novedad ha sido propuesta como una necesidad psicológica básica desde la perspectiva de la teoría de la autodeterminación. A lo largo de estos últimos años se han aportado muchas evidencias que demuestran el rol tan importante que puede jugar la novedad en la motivación humana, especialmente en el ámbito de la actividad física y el deporte. En este artículo de reflexión hacemos un breve repaso de estas evidencias, enumeramos las estrategias motivacionales desarrolladas para satisfacer la necesidad de novedad y planteamos algunos retos y perspectivas de futuro. Aunque hemos avanzado mucho en este viaje, es necesario testar en mayor profundidad esta propuesta, trasladándola a diferentes contextos y evaluando la aplicación de estrategias motivacionales con el objetivo de encontrar la dosis óptima de novedad que nos permita conseguir los mejores resultados a nivel cognitivo, afectivo y conductual. Resulta muy satisfactorio mirar atrás y ver el camino recorrido. Sigamos dando pasos que nos lleven a dilucidar las propiedades motivacionales de la novedad en contextos de Educación Física, deporte y ejercicio.

Palabras claves:

Motivación; necesidades psicológicas básicas; innovación; adherencia; bienestar.

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It has been almost a decade since we published the first article (González-Cutre et al., 2016) proposing that the need for novelty, understood as the need to experience things not previously experienced or that depart from one's usual routine, could be considered a basic psychological need from the perspective of self-determination theory. A decade has passed since that first article was published, although several years had already gone by before then while we were reflecting on this idea and designing the first research projects aimed at measuring this construct. Even at that time, I was already trying to teach my students in the Degree in Physical Activity and Sport Sciences the importance that fostering novelty could have in physical education, sport, and exercise contexts, providing them with the relevant scientific evidence. Shortly afterwards, this journal gave me the opportunity to publish an editorial reflecting on the role played by novelty in human motivation and its application to the field of Sport Sciences (González-Cutre, 2017).

It is gratifying to see that now, for issue 25 of the journal, I have once again been given the opportunity to reflect on this topic, which I am passionate about, by focusing on how much progress has been made over this decade, which has gone by at a dizzying pace and during which more evidence has been provided than I could have imagined, although there is still a long way to go. In this brief article, I will outline the evolution of this proposal over the last ten years by reviewing the main scientific evidence and its practical transfer when applying motivational strategies that satisfy the need for novelty of our students, athletes, and exercise participants. I will also analyze possible future challenges and lines of research and application.

Scientific evidence and motivational strategies

Several publications to date (Ferriz et al., 2023; González-Cutre, Ferriz, & Jiménez-Loaisa, 2025; González-Cutre et al., 2021) have attempted to synthesize the scientific evidence on the motivational effect of novelty and to propose ideas for intervention, especially in physical education, although these can easily be extrapolated to other contexts. As shown by the literature review (González-Cutre, Ferriz, & Jiménez-Loaisa, 2025), satisfying people's need for novelty is associated with improvements in motivation, effort, engagement, and well-being in areas such as physical education classes, exercise and sport participation, and outdoor activities (Kristensen et al., 2025), but also in others such as university teaching, language learning, the workplace, other leisure activities, and, of course, life in general. However, the frustration of this need through routine and monotony has been associated with negative affect, boredom, loss of concentration, and amotivation. These associations have been found in countries as diverse as Spain, Estonia, the United Kingdom, Canada, the United States, Australia, Japan, Malaysia, Indonesia, Taiwan, and Korea, which shows the universality of the proposal. The need for novelty seems to be an integral part of our nature that has evolved adaptively and is substantially different from the three basic psychological needs established by self-determination theory: autonomy, competence, and relatedness. In fact, the literature shows that these are distinct constructs and that they display specific associations with different outcomes (González-Cutre, Ferriz, & Jiménez-Loaisa, 2025). Human beings actively seek to satisfy their need for novelty,

and the use of strategies to foster it is clearly associated with positive affective, cognitive, and behavioral consequences.

The fulfillment of all these criteria leads us to believe that novelty could be considered an additional basic psychological need. Indeed, one of the founders of self-determination theory, Richard Ryan, together with other highly prestigious researchers (Vansteenkiste et al., 2020), has already pointed out that novelty has satisfactorily passed an initial test to be considered a basic psychological need, although more research is needed to confirm some of the criteria that have not yet been studied as firmly. In this sense, what is beyond doubt is its role as a possible basic psychological need in the field of physical activity and sport (Ntoumanis & Moller, 2025; Ryan, 2025). Therefore, it is essential that we think about how we can innovate in this field in order to generate novel experiences.

Previous works (Ferriz et al., 2023; González-Cutre, Ferriz, & Jiménez-Loaisa, 2025; González-Cutre et al., 2021) have made an important effort to devise practical strategies to foster novelty in the context of physical activity and sport, with a large number of examples at different levels. Below, we list these strategies according to their possible order of importance, taking into account their effect on motivation: (1) implementing novel tasks and content; (2) applying evidence-based pedagogical models that are innovative; (3) encouraging involvement in new challenges and learning experiences; (4) using varied and novel materials; (5) carrying out activities in different spaces; (6) modifying the structural and functional elements of activities (e.g., groups, rules, goals, dimensions, roles, ways of performing, number of repetitions, complexity); (7) taking part in a process of continuous professional development in order to innovate; (8) combining different teaching styles; (9) using technology to achieve our objectives; (10) inviting other people to present information or teach something; (11) explaining in a creative way by using personal anecdotes and a sense of humor; (12) promoting the acquisition of new resources and knowledge in order to adopt a healthy lifestyle; and (13) implementing novel formative and shared assessment processes. It is not the aim of this brief article to go into depth on these strategies, so we recommend that the reader consult the previously cited works. Nevertheless, I would like to highlight that conceptualizing novelty as a candidate basic psychological need gives greater scientific weight to educational innovation. These strategies clearly differ from those developed to foster autonomy, competence, and relatedness (Ahmadi et al., 2023; González-Cutre, Ferriz, Julián-Clemente, & Noetel, 2025; Teixeira et al., 2020), thus providing a broader range of resources for intervening in the context of physical activity and sport (and in other contexts) with the aim of optimizing participants' motivation. And I believe that this is the main contribution of this idea that emerged more than 10 years ago. Fostering novelty is not the same as fostering autonomy, competence, and relatedness, although they are complementary; it is another step forward in the pursuit of more adaptive motivational outcomes.

Challenges and future perspectives

Beyond this decade of evidence, there is no doubt that many challenges still remain if we are to advance our understanding of this topic, both from a research perspective and from a practical application perspective, always ensuring that the two go hand in hand. First, we must continue to advance in the possible conceptualization of novelty as a basic psychological need, for which it is essential to test more deeply the different criteria that it should meet (Vansteenkiste et al., 2023). Its characterization as a basic psychological need gives greater strength to this

line of research. However, as I always say, regardless of whether novelty is a basic psychological need or not, there is already sufficient evidence demonstrating its motivational properties, which supports the use of strategies that foster innovation in the field of physical activity and sport.

Second, in this regard, we must work on the development of specific strategies for each context. As I mentioned earlier, these strategies have been developed mainly for physical education classes, although they have already been adapted to the context of school sport (García López & González-Martí, 2024) and physical activity with older adults (Marcos-Pardo et al., 2022). Creating novelty-support strategies for the different manifestations of physical activity and sport makes it possible to further individualize teaching and training processes in order to foster adherence to practice, performance, and well-being. More studies are needed in the context of competitive sport, where repetition is often advocated in order to achieve higher performance. In this line, González-Cutre, Ferriz, and Jiménez-Loaisa (2025) propose four teacher/coach profiles whose effects have not yet been studied: (a) slightly innovative behavior: occasionally introduces a novel element during the intervention; (b) creative behavior: novelty is a key element within the intervention, combining different elements that provide novelty; (c) routine behavior: novelty is not considered important, and daily routines are followed while prioritizing other issues; and (d) immobile behavior: novelty is not valued as a positive element because it is not considered to promote learning.

Third, in this respect, it would be interesting to test the effects of motivational interventions that include only strategies to foster autonomy, competence, and relatedness and compare them with interventions that also include novelty-support strategies. Likewise, to determine their effectiveness, we need to know the real motivational effect of each of the novelty-support strategies mentioned above. It would therefore be useful to design trials comparing the use of some strategies with others, as well as their possible combinations and progressions. Prescribing the appropriate dose of novelty is essential. What seems clearer is that the use of evidence-based pedagogical models can play a fundamental role in satisfying the need for novelty (Cano-Cañada et al., 2025) and achieving positive outcomes, although this issue should continue to be explored in depth.

Finally, it should be highlighted that novelty is one of the features of Meaningful Physical Education (Saiz-González et al., 2026). This means that novel experiences are valued and emotionally interpreted, are useful for achieving personal goals, and become incorporated into the student's identity, which could help to promote healthy lifestyles. Given that this Meaningful Physical Education approach is recent, more studies are needed to analyze how novelty could help promote the trans-contextual effect of motivation, encouraging physical activity participation during leisure time through the motivational improvements experienced in physical education.

Conclusions

It is gratifying to look back and see how an idea planted almost a decade ago has gradually begun to grow. It has always been pursued with the aim of contributing to a better understanding of human motivation that, in this case, can be applied to the field of Sport Sciences. Scientific studies show that satisfaction of the need for novelty is associated with multiple positive affective, cognitive, and behavioral consequences across different contexts and cultures, whereas its frustration is associated with negative consequences. Studies also reveal that novelty is a

construct distinct from autonomy, competence, and relatedness. Therefore, we can implement novelty-support strategies together with strategies that support the three basic psychological needs originally established in self-determination theory. Future research in physical activity and sport contexts should be aimed at creating specific intervention strategies and clarifying the effects that each of them may have.

References

- Ahmadi, A., Noetel, M., Parker, P., Ryan, R. M., Ntoumanis, N., Reeve, J., Beauchamp, M., Dicke, T., Yeung, A., Ahmadi, M., Bartholomew, K., Chiu, T. K. F., Curran, T., Erturan, G., Flunger, B., Frederick, C., Froiland, J. M., González-Cutre, D., Haerens, L., ... Lonsdale, C. (2023). A classification system for teachers' motivational behaviours recommended in self-determination theory interventions. *Journal of Educational Psychology*, 115(8), 1158-1176. <https://doi.org/10.1037/edu0000783>
- Cano-Cañada, E., Tapia-Serrano, M. A., Saiz-González, P., Fernandez-Rio, J., & Iglesias, D. (2025). Effect of pedagogical models on novelty satisfaction in physical education: A systematic review and meta-analysis. *European Physical Education Review*. Advance online publication. <https://doi.org/10.1177/1356336X251385414>
- Ferriz, R., González-Cutre, D., & Julián-Clemente, J. A. (2023). Las conductas motivacionales docentes relacionadas con la satisfacción de las necesidades psicológicas básicas del alumnado. In R. Ferriz, D. González-Cutre, & J. A. Julián-Clemente (Eds.), *Propuestas didácticas para mejorar la motivación en Educación Física y desarrollar estilos de vida saludable* (pp. 35-66). Inde.
- García López, L. M., & González-Martí, I. (Eds.). (2024). *Plan de calidad para el deporte en edad escolar de Castilla-La Mancha*. Ediciones de la Universidad de Castilla-La Mancha. https://doi.org/10.18239/inf_2023_01.00
- González-Cutre, D. (2017). Editorial: ¿Qué papel juega la satisfacción de la necesidad de novedad en la motivación humana y cuál es su aplicación al ámbito de la actividad física y el deporte? *e-Motion: Revista de Educación, Motricidad e Investigación*, 9, 1-2. <https://doi.org/10.33776/remo.v0i9.3284>
- González-Cutre, D., Ferriz, R., & Jiménez-Loaisa, A. (2025). The important role of novelty in physical education: Conceptual definition and teachers' motivational techniques. In L. García-González, K. De Cocker, & D. González-Cutre (Eds.), *Motivation in physical education* (pp. 259-282). Springer. https://doi.org/10.1007/978-3-031-86908-2_13
- González-Cutre, D., Ferriz, R., Julián-Clemente, J. A., & Noetel, M. (2025). Transferring the classification system for teachers' motivational behaviours recommended in self-determination theory interventions to physical education. In L. García-González, K. De Cocker, & D. González-Cutre (Eds.), *Motivation in physical education* (pp. 159-186). Springer. https://doi.org/10.1007/978-3-031-86908-2_8
- González-Cutre, D., Jiménez-Loaisa, A., Abós, A., & Ferriz, R. (2021). Estrategias motivacionales para incluir novedad y variedad en Educación Física. In L. García-González (Ed.), *Cómo motivar en Educación Física. Aplicaciones prácticas para el profesorado desde la evidencia científica* (pp. 99-116). Servicio de Publicaciones Universidad de Zaragoza. <https://doi.org/10.26754/uz.978-84-18321-22-1>

- González-Cutre, D., Sicilia, A., Sierra, A. C, Ferriz, R., & Hagger, M. S. (2016) Understanding the need for novelty from the perspective of self-determination theory. *Personality and Individual Differences*, 102, 159–169. <https://doi.org/10.1016/j.paid.2016.06.036>
- Kristensen, M. S., Arvidsen, J., Smith, M., Iversen, E. B., & Thøgersen-Ntoumani, C. (2025). Beyond the ordinary: Exploring adolescents' experiences of novelty in organized nature sports from a self-determination theory perspective. *Sport, Exercise, and Performance Psychology*. Advance online publication. <https://doi.org/10.1037/spy0000396>
- Marcos-Pardo, P. J., Mañas Bote, A., & Casimiro Andújar, A. (2022). Estrategias motivacionales para incrementar la adherencia al ejercicio físico en personas adultas y mayores. In P. J. Marcos-Pardo & R. Vaquero-Cristóbal (Eds.), *Recomendaciones para un envejecimiento activo y saludable: Guía de la Red de Investigación Healthy-Age* (pp. 183–203). Wanceulen.
- Ntoumanis, N., & Moller, A. C. (2025). Self-determination theory informed research for promoting physical activity: Contributions, debates, and future directions. *Psychology of Sport and Exercise*, 80, Article 102879. <https://doi.org/10.1016/j.psychsport.2025.102879>
- Ryan, R. M. (2025). Motivation, movement, and vitality: Self-determination theory and its organismic perspective on physical activity as part of human flourishing. *Psychology of Sport and Exercise*, 80, Article 102932. <https://doi.org/10.1016/j.psychsport.2025.102932>
- Saiz-González, P., Sierra-Díaz, J., Iglesias, D., & Fernandez-Rio, J. (2026). Chasing meaningfulness in Spanish physical education: Old and new features. *Journal of Teaching in Physical Education*, 45 (1), 217–225. <https://doi.org/10.1123/jtpe.2024-0206>
- Teixeira, P. J., Marques, M. M., Silva, M. N., Brunet, J., Duda, J., Haerens, L., La Guardia, J., Lindwall, M., Lonsdale, C., Markland, D., Michie, S., Moller, A. C., Ntoumanis, N., Patrick, H., Reeve, J., Ryan, R. M., Sebire, S. J., Standage, M., Vansteenkiste, M., ... Hagger, M. S. (2020). A classification of motivation and behavior change techniques used in self-determination theory-based interventions in health contexts. *Motivation Science*, 6(4), 438–455. <https://doi.org/10.1037/mot0000172>
- Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic psychological need theory: Advancements, critical themes, and future directions. *Motivation and Emotion*, 44(1), 1–31. <https://doi.org/10.1007/s11031-019-09818-1>
- Vansteenkiste, M., Soenens, B., & Ryan, R. M. (2023). Basic psychological needs theory: A conceptual and empirical review of key criteria. In R. M. Ryan (Ed.), *The Oxford handbook of self-determination theory* (pp. 84–123). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780197600047.013.5>