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Research Paper

Ketamine and physical exercise: A surprising new duo? a netnographic analysis

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ABSTRACT

There is growing interest in the role of pharmacological substances to enhance exercise-related performance, manage pain, or improve recovery. Ketamine has recently gained interest as a potential adjunct to physical exercise.

This study aims to explore ketamine use an adjunct to physical exercise, investigating reported effects, undesired effects, dosing patterns, administration routes, and purchasing modalities.

Given the limited availability of scientific data, a qualitative netnographic analysis was performed on Reddit from November 2024 until February 2025. In total, 461 comments were examined, of which 26 met the inclusion criteria, including anecdotal reports shared by Reddit users. Data were manually categorized based on effects, side effects, dosing patterns, administration routes, and purchasing sources.

Ketamine was primarily used without clinical supervision in weightlifting as pre-workout (5 posts; 19.2 %) and, to a lesser extent, in running, yoga, and snowboarding. Desired effects included increased endurance (6 posts; 23.1 %), feeling stronger (5 posts; 19.2 %), and pain reduction (3 posts; 11.5 %). Undesired effects (1 post each; 3.9 %) included dehydration, tolerance buildup, bladder discomfort and heart strain. Ketamine was predominantly insufflated, with doses varying between 25 mg (minimum) and 100 mg (maximum). Both pharmaceutical grade and street/illicit ketamine was purchased.

This study highlights an emerging trend, suggesting that ketamine may impact both performance and well-being. However, concerns related to tolerance, cardiovascular strain, and potential dependence underscore the urgency of more comprehensive research. Further studies are needed to understand the short- and long-term effects of ketamine use in the context of physical exercise.

1. Introduction

Physical exercise is defined as a subset of physical activity that is planned, structured, and repeatedly conducted, aiming to improve or maintain physical fitness (Caspersen et al., 1985). It can induce a range of benefits including enhanced subjective well-being (Buecker et al., 2021) and health-related quality of life (Ali et al., 2021), alleviated anxiety (McDowell et al., 2019), depression (Heissel et al., 2023) and suicide attempts (Fabiano et al., 2023), improved sleep quality (Kelley & Kelley, 2017), cognitive performance (Sanders et al., 2019), sexual health (Silva et al., 2017), cardiometabolic health (Edwards et al., 2023; Martínez-Vizcaíno et al., 2022; Peng et al., 2022; Recchia et al., 2023) and can help with management of chronic pain severity (Hayden et al., 2021). Physical exercise can also improve neuroimmune function by reducing the likelihood of infections (Chastin et al., 2021; Sittichai et al., 2022), various cancers (Moore et al., 2016; Stamatakis et al., 2023), neurodegenerative diseases (López-Ortiz et al., 2023; Portugal et al., 2023), cardiovascular (Dibben et al., 2023), and cerebrovascular events (Andrade, 2023; Lee et al., 2003).

Nonetheless, many individuals, including both professional and non-professional athletes, turn to various substances to support, or enhance, their physical exercise routines. These practices can be broadly categorized into three types: therapeutic use (e.g., prescribed painkillers or antidepressants to manage physical or mental health conditions), performance-enhancing use (e.g., anabolic steroids or stimulants to improve strength or endurance), and recreational use (e.g., substances

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taken for mood enhancement, altered states of consciousness, or out of curiosity). Motivations for use include improving appearance, building muscle mass (Wenbo & Yan, 2023), losing weight (Warrier et al., 2024), reducing pain Zandonai and Camporesi (2024), promoting recovery (Lardi et al., 2024; Sumaya Elmadhoun, 2024), and coping with stress or mental fatigue (Sumaya Elmadhoun, 2024). However, the use of such substances does not guarantee the attainment of desired performance outcomes and may pose significant health risks, including tolerance, dependence, and adverse physiological effects. Moreover, in competitive sports contexts, these practices also raise ethical and regulatory concerns. Substances used extramedically (without medical necessity or obtained outside professional oversight) may breach antidoping regulations or compromise athlete safety (Zandonai & Camporesi, 2024).

Recently, ketamine has emerged as a promising candidate for integration into physical exercise regimens (McCarthy, 2019). Ketamine is a dissociative anesthetic that produces a spectrum of pharmacological effects including sedation, catalepsy, somatic analgesia, bronchodilation, and sympathetic nervous system stimulation (Kurdi et al., 2014). By acting as an uncompetitive antagonist of the ionotropic *N*-methyl--*d*-aspartate (NMDA) receptor, when consumed in sub-anesthetic doses it elicits psychedelic-like effects and has rapid-acting antidepressant properties (Dinis-Oliveira, 2017). Clinically, ketamine has been widely used in anesthesiology, pain management and treatment-resistant depression (Alnefeesi et al., 2022; Kurdi et al., 2014). However, its recognized extramedical use (off-label and recreational uses) raises concerns about potential side effects, such as cognitive impairment (Zhang et al., 2020), dependence (Liu et al., 2016), and bladder dysfunction, including ketamine-induced cystitis (Anderson et al., 2022). Nonetheless, ketamine's potential in addressing chronic pain Niesters et al. (2014) and fatigue (Saligan et al., 2016), common challenges among athletes, positions it as a valuable adjunct to physical exercise. Beyond physical benefits, ketamine may enhance the psychological aspects of sports performance by promoting resilience against stress, mental fatigue and performance-related demands.

However, due to the limited availability of scientific literature on this topic, netnographic qualitative assessments offer a valuable approach to understanding the state of art of this emerging trend. As a relatively new qualitative method, netnography leverages online environments to explore digital cultures and study networked society (Smith et al., 2023). It can be useful to identify real-world patterns of use and community perceptions. With the proliferation of social networking sites, netnography has proven to be an effective method of investigation and has been successfully employed by our research group in previous studies (Corazza et al., 2013, 2011; Gill et al., 2025).

This study aims to explore the use of ketamine as an adjunct to physical exercise, with a specific focus on perceived benefits, adverse effects, usage patterns, and purchasing practices as reported by individuals in online communities, particularly on Reddit.

2. Methods

2.1. Data collection

A literature review was initially conducted to assess current knowledge regarding the use of ketamine as adjunct to physical exercise. PubMed, ScienceDirect, and Google Scholar were searched using the keywords: "psychedelics", "ketamine", "sport", "performance", "athletic", "flow state". The keywords were selected to reflect both the pharmacological nature of the substance and the psychological/physical domains relevant to its use in exercise contexts. Terms like "flow state" and "performance" were included to capture potential insight around enhanced psychological functioning and physical output, which are often associated with the use of psychoactive substances in sporting and fitness spaces. Considering the scare literature in the field, that peer reviewed, scientific articles, are not always up to date in relation to latest trends of drug use and psychoactive substances (Corazza et al., 2013, 2011), data results were integrated with a qualitative netnographic assessment of online anecdotal reports. This methodological approach has been previously employed with success (Corazza et al., 2013, 2011) to capture real-time insights into evolving hazardous substance use behaviors.

Reddit was chosen as the sole platform for this analysis due to its high user engagement (>57 million daily active users, 13 billion posts and comments and approximately 2.2 billion visits in 2024), pseudonymous format, and its recognized value in substance use research (Bianchi, 2024; Chi & Chen, 2023). While the inclusion of additional platforms or qualitative interviews could have enhanced results generalizability and depth, such extensions were beyond the scope of this study due to time and resource limitations. The Reddit analysis was carried out over a 4-month period (November 2024 - February 2025) in English by searching the terms 'ketamine', 'physical exercise', 'sports', 'motivation', 'muscles', 'pain', 'recovery'. These keywords were chosen to capture a broad range of discussions that could link ketamine use to physical activity and based on their relevance to both the physiological and psychological aspects of exercise. By including commonly used words in fitness and recovery contexts, we aimed to identify posts where ketamine might be discussed in relation to motivation, performance enhancement, or post-exercise recovery. For every term, the first 10 threads were analyzed. Any posts discussing the use of ketamine prior or post physical exercise were included. Once ketamine and physical exercise were identified, further specific searches were carried for narratives focusing on (a) the nature of ketamine's effects, including adverse reactions; (b) dosing and frequency of administration, (c) route of administration, (d) purchasing modalities and (e) any other relevant information about ketamine use in physical exercise.

2.2. Ethical considerations

Ethical approval for this study was granted by the University of Trento (Ref. 2024–083ESA).

Reddit was treated as a public data source in line with current practices in netnographic and internet-based research (Eysenbach & Till, 2001; Kozinets, 2019). While Reddit allows open access to posts without registration and explicitly advises users to use pseudonyms, ethical caution was exercised throughout data collection and analysis. No personally identifying information such as real names, emails, or locations was used or recorded.

To mitigate re-identification risks, quotes used in this manuscript were either paraphrased or, when verbatim, carefully checked to ensure they were not searchable via simple search engines. Any data collected from Reddit, such as usernames, handles, thread URLs, or direct links that could compromise anonymity, were treated as personally identifiable information and were either anonymized or omitted. The full content of posts of interest was saved onto a dedicated server for safe archiving. As no interaction or data scraping occurred and no Reddit accounts were created, the researchers maintained a purely observational, non-intrusive role, respecting users' expectations of contextual integrity (Rocha-Silva et al., 2024). Consistent with ethical standards in netnographic analyses, and given the public nature of the forum, informed consent was not deemed necessary for passive data collection (Rocha-Silva et al., 2024).

2.3. Data analysis

A two-step analysis was performed to examine the collected data. First, all data was manually analyzed and classified to identify recurring themes, patterns and narratives relevant to the study objectives. Data was then coded both inductively and deductively to capture emergent insights as well as predefined categories, including effects, motivations, dosing and frequency, route of administration and purchasing modalities. This approach was grounded in principles of thematic content analysis as outlined by Piatkowski and colleagues (2021), which is

well-established in qualitative drug research using online data sources (Piatkowski et al., 2021).

Subsequently, a more detailed content analysis was performed to ensure comprehensive data collection aligned with each study aim. Since no automated data extraction tools were used, a manual content analysis was conducted on each comment to quantify information relevant to the research. Each post was analyzed line-by-line, and relevant segments were categorized accordingly. Each effect and undesired effect reported was recorded and tabulated to determine frequency. However, for dosing and frequency data precise quantification was not feasible, and thus remained approximate due to the subjective, anecdotal nature of user reporting. This methodological strategy is in line with recent developments in the netnographic analysis of online drug-use communities (Gill et al., 2025; Lamb et al., 2025), where combining structured thematic analysis with open-ended, context-sensitive coding has proven effective in capturing nuanced and emergent behaviors.

The final dataset consisted of 26 posts, reflecting both the specificity of the research topic and the time constraints of the study period (4 months). Despite an initial pool of 461 Reddit comments, only a small subset met the inclusion criteria of directly addressing ketamine use in physical exercise with sufficient descriptive content. The limited number of relevant posts is also indicative of the niche and emerging nature of this practice, which has not yet reached widespread discussion within online communities.

3. Results

A total of 10 ketamine-related threads were analyzed, for a total of 461 comments. Of these, 26 comments met the inclusion criteria and were selected. Ketamine appeared mostly popular in relation to weightlifting with ketamine consumers referring to its use as a "pre-workout" in 5 of 26 posts (19.2 %). It was also mentioned, though to a lesser extent, in the context of running, snowboarding, yoga and as a general training aid (consumers proceed in doing different kinds of activity in the gym). A detailed report of each category of interest is present below.

3.1. Desired effects

The most commonly reported desired effect was increased endurance, described in 6 posts (23.1 %), followed by a feeling of increased strength in 5 posts (19.2 %). Ketamine was also mentioned in 3 posts (11.5 %), as helpful for reducing physical pain and improving workout motivation. Less frequently, individual posts (3.9 % each) referred to improved muscle recovery, enhanced body awareness, steadier breathing, regulated heart rate and increased mental clarity. In total, 17 of the 26 posts (65.4 %) mentioned at least one perceived benefit related to ketamine use during physical exercise. No other effects could be identified. A more in-depth representation of these categories, along with the number of posts and the most representative comments are outlined in Table 1.

3.2. Undesired effects

Undesired effects were less commonly reported, appearing in 1 post (3.9 %), as shown in Table 2. This post mentioned a combination of side effects including dehydration, tolerance build-up, bladder discomfort, heart straining, slower fitness progress, worse balance, reduced motivation, endurance strength and energy. However, the actual proportion of ketamine consumers affected by them remains unknown, making unclear how widespread these experiences are across the broader population of consumers.

Table 1
Content analysis of reports on ketamine's desired effects.

Effects	Number of reports	Percentage (%)	Representative comments
More endurance	6	23.1	*I've been running for 3 months now, sometimes on K and sometimes without. And the differences in performance are big. Without K I can run for about 30–45 min before gassing out (I can go longer but it's not necessary to go so hard, there is no reason for me). When I've had a good dose of K and do a lil warm up before my run, I can run for more than an hour. I've gone for over 90 min thinking "hey, I can just keep going" but I thought it would be safer not to, so I don't. But my heart beat is more steady, so is my breathing and my legs don't feel much fatigue. It's so interesting! I also do 45 push ups everyday as part of increasing the strength and overall health of my heart (obv coupled with running, a good diet, taking my multivitamins and good sleep!), and under the influence I can do 55 which is something I cannot do sober at all.*
Feeling stronger	5	19.2	*Q: So lifting weights on ket? Are you stronger than? A: Yeah it helps, it works in a sense where it doesn't hurt or feel sore when you lift. So it takes away the pain.*
Physical pain taken away	3	11.5	*I worked out on low to moderate doses of Ket, but only body weight exercises like push-ups and squats. I liked it because Ket is obviously an anesthetic and I could push myself further with my muscles numbed.*
More motivation	3	11.5	*It almost motivates me to workout harder and longer with triple the reward stimulus.*
Better muscle recovery	1	3.9	*I actually think it may lead to better muscle recovery if you stay hydrated and don't abuse it, but I have no evidence to base that off except personal experience.*
Better body awareness	1	3.9	*I do my own kind of meditative yoga. I have a disability so I can't "workout" but ketamine lets me go into my body and stretch each muscle individually. It's incredible.*
Steadier breathing	1	3.9	*See first comment "my breathing is more steady".*
Steadier heart-rate	1	3.9	*See first comment "my heartbeat is more steady".*
Mental clarity	1	3.9	*It gives you clarity. I've been mixing pre x ket for the past year and my mental health has been solid.*
Total reports	**26**		

3.3. Doses and frequency

Only 5 of 26 posts (19.2 %) explicitly mentioned dosage, with values ranging from 25 mg to 100 mg. Given the small number of ketamine consumers who provided specific information and the variability in reported quantities, we chose to report the general range (minimum and maximum) rather than attempt to calculate an average. Ketamine consumers appeared to establish their dose and intake frequency intuitively, as an approximation, often through trial and error, rather than following standardized guidelines or dosing regimens. Intake frequency was rarely mentioned though 2 of 5 posts referenced daily use and occasional, workout-specific use. Table 3 summarizes the dosages and intake

Table 2
Content analysis of reports on ketamine's side effects.

Side effects	Number of reports	Percentage (%)	Representative comments
Dehydration	1	3.9	*If you're going to do this anyways, at least stay very hydrated. Ketamine always makes me really thirsty and adding a workout to the mix is probably draining your fluids.*
Tolerance building	1	3.9	*I wouldn't say using k everyday is sustainable for more than a few weeks […] fun for a bit but eventually you will be upping your dose and it will progress from there.*
Bladder discomfort	1	3.9	*Thread title in r/ketamine: pre workout and pain when peeing.*
Heart straining	1	3.9	*I think I'm gonna stop though, I feel like I might be putting too much strain on my heart.*
Slower fitness progress	1	3.9	*I have noticed since starting my treatment that my progress and increases in fitness seen to have slowed quite a lot.*
Worse balance	1	3.9	*Messes with my balance.*
Nausea	1	3.9	*I get nauseous from ket and it takes a few hours to recover my appetite.*
Less motivation	1	3.9	*I started to low dose daily and I have lost motivation, energy and endurance/strength in a matter of days.*
Less endurance	1	3.9	*See comment above*
Less strength	1	3.9	*See comment above*
Less energy	1	3.9	*See comment above*
Total reports	**11**		

Table 3
Content analysis of ketamine reports about dosing.

Dose (g)	Dose (mg)	Number of reports	Percentage (%)	Frequency of use
0,06	60	1	0.2	Daily
0,04 – 0,06	40–60	1	0.2	Before workout (not specified how often)
0,02 – 0,1	20–100	1	0.2	Not specified
0,05	50	1	0.2	Not specified
0025	25	1	0.2	Not specified
Total reports	**5**			

frequencies extracted from the posts.

3.4. Routes of administration

While ketamine was sometimes administered orally, the most common intake modality was intranasal, with the latter being overwhelmingly preferred for its rapid onset and ease of use. Additional threads where ketamine consumers discussed practical tips for intranasal administration were identified. In particular they addressed the use of specific tools, ways to minimize nasal irritation/damage and how to craft homemade nasal sprays.

3.5. Purchase modalities

While few posts included information about how ketamine was sourced, the purchasing modalities were distinct. Among these some consumers reported obtaining pharmaceutical grade ketamine extramedically through pharmacies or physicians. In particular, in regions where ketamine is legal and can be prescribed by physicians, consumers expressed a preference for obtaining it through medical prescriptions. Conversely, when ketamine was not legally available, individuals typically resorted to unregulated or illicit sources such as street dealers or online sources.

4. Discussion

The hazardous use of ketamine as an adjunct to physical exercise has gained attention on social media platforms, reviling an emerging trend. Anecdotal reports and consumer experiences shape perceptions of its effects suggesting that some individuals are experimenting with ketamine to enhance or modify their exercise routines. Despite the absence of clinical oversight, individuals frequently rely on information shared by peers, rather than medical professionals, leading to variations in dosage, administration methods, and risk awareness. Ketamine is primarily used in weightlifting as a pre-workout substance, with consumers reporting perceived increases in endurance and strength. However, potential adverse effects have been noted, including the development of tolerance, bladder discomfort, and cardiovascular strain. The predominant route of administration is insufflation, although reported dosages and frequency of use vary significantly. Access to ketamine occurs through both legal and illicit means, with some individuals obtaining it via prescription from pharmacies, while others resort to unregulated sources such as street dealers or online marketplaces, increasing the risk of contamination and dependence (Van de Ven & Koenraadt, 2017).

Ketamine's effects on endurance may be attributable to its analgesic properties. While only a small proportion of reports explicitly mentioned reduced pain, this may have been misunderstood for increased endurance, especially in the context of weightlifting. This partly aligns with prior research suggesting that ketamine may reduce pain sensitivity (Baker et al., 2002; Dinis-Oliveira, 2017; Hirota & Lambert, 2011) in both acute and chronic severe pain Iacobucci et al. (2017). Analgesia is believed to be mediated by the interplay between NMDA receptor blockage, inhibition of neuronal sodium channels, anti-proinflammatory effects, and a combination of opioid system sensitization and antinociception (Kurdi et al., 2014; Persson, 2010; Sleigh et al., 2014; Wagner et al., 2001). Moreover, ketamine decreases the functional connectivity between the somatosensory network and brain regions responsible for pain sensing and its affective processing (Niesters et al., 2012). Hence, ketamine may induce a cognitive re-evaluation of pain, leading to reduced pain sensitivity and greater endurance. Additionally, ketamine-induced feeling of greater strength could result from ketamine's psychological effects, possibly enhancing the psychological aspects of performance by promoting greater resilience against mental and physical fatigue. However, only few reports described ketamine use for muscle recovery, which may be linked to pain sensitivity. Physical exercise triggers an inflammatory response from the active muscle tissue (Cerqueira et al., 2019), essential to repair processes like those resulting from physical exercise (Oishi & Manabe, 2018). Because inflammation management can relieve inflammatory pain, by reducing expression of pro-inflammatory cytokines, ketamine may contribute to relieve inflammatory pain and promote a steadier muscle recovery.

While undesired effects are not often reported, possibly be due to a sample size artifact, some of them are concerning. Particularly tolerance building, raising concerns for abuse potential and dependence. Another important concern is that ketamine may potentiate the dehydration and heart strain produced by physical exercise, which could impair metabolic processes and cause cardiovascular events (Ho et al., 2014). Interestingly, some consumers reported undesired effects such as reduced motivation, endurance, strength and energy, directly opposing some of the desired benefits. Different consumers may perceive these effects differently, likely as a result of the dose taken, whereas low doses tend to have more stimulatory effects than higher doses, which often impair psychomotor activity (EMCDDA, 2002; Giorgetti et al., 2015). Experience with ketamine may also underlie the differences in perceived desired/undesired effects. Less experienced consumers may feel overwhelmed and perceive certain effects as impairing, whereas more experienced consumers may seek such effects.

The most prevalent route of administration is intranasal, which is in

line with findings from recreational use (Dinis-Oliveira, 2017; Peltoniemi et al., 2016). Suggestions for making nasal sprays were also identified. While nebulization may improve bioavailability it can reduce dose control. The ease of use could lead to higher consumption, with sprays being discreetly used in gyms between training sessions, which may potentiate the risk for adverse effects and dependence. Lastly, it appears that, when possible, consumers prefer pharmaceutical-grade ketamine as it is purer, and its effects are more predictable. In contrast, illicit ketamine is often adulterated to cut costs and increase seller profits. Street/illicit ketamine is often adulterated with various substances, including amphetamines, MDMA, cocaine, synthetic cathinones (e.g., mephedrone, 4-MMC), benzocaine, lidocaine, alprazolam (Xanax), tramadol, xylazine, and others (Corkery et al., 2021). These combinations increase health risks, particularly cardiovascular strain when mixed with stimulants. Adulterants may also potentiate ketamine's effects, leading to unpredictable outcomes and more severe undesired effects, raising concerns about its safety as an adjunct to physical exercise.

These findings also align with the broader literature on user-generated knowledge within the image and performance enhancing drugs (IPEDs) community. In these spaces, individuals often develop detailed, experience-based understandings of pharmacological substances in the absence of formal medical guidance (Gibbs, 2023; Piatkowski et al., 2024; Turnock & Townshend, 2022; Turnock, 2022; Underwood, 2017). Similar patterns are observed among anabolic steroid consumers, nootropic communities, and other IPED cohorts, where distrust of clinical professionals and reliance on community-based expertise developed through lived experience and iterative experimentation are common (Tighe et al., 2017; Turnock et al., 2023). Like the ketamine-exercise consumers in this study, these individuals exchange dosing strategies, harm-reduction techniques, and sourcing tips through online forums, constructing a form of "lay pharmacology" that shapes risk perception, normalization of use, and self-regulated experimentation (Cox & Paoli, 2023; Piatkowski et al., 2025).

The similarities between these groups may also extend to hazardous behaviors, particularly where substances are used without reliable dosing frameworks or where consumers attempt to combine different drugs for synergistic effects (Van de Ven & Koenraadt, 2017). Although our data did not include explicit reports of ketamine co-use with other substances, the potential for polysubstance use in fitness and body enhancement contexts is well-supported in the literature (Turnock et al., 2023). Ketamine, in particular, has been reported to be co-used with stimulants, anabolic steroids, and other dissociative agents in both recreational and functional settings (Corkery et al., 2021). These combinations may increase the likelihood of adverse physiological and psychological outcomes, especially when used in unregulated environments. The combination of these substances, raises important concerns regarding long-term health risks, dependency, and the need for targeted harm reduction strategies within the fitness community.

Given these risks, there is a clear need to integrate harm reduction messaging into the spaces where these conversations take place. Strategies might include community-based education around safer dosing, awareness of tolerance and dependence potential, the dangers of polydrug use (using ketamine with stimulants or other enhancement drugs), and guidance on sourcing to avoid adulterated products. Encouraging transparency, caution, and informed decision-making within these communities could help reduce harm without relying solely on abstinence-based approaches.

4.1. Limitations

The main limitation of this research is that it relies on self-reported data. While consumers on these social media platforms usually provide accurate responses, their reports may be subject to a recall bias, social desirability bias and self-selection bias (Davis et al., 2010; Gmel & Daeppen, 2007; Latkin et al., 2017). Additionally, there was no standardization in the dosing, frequency of use, administration route, ketamine purity and physical exercise regimens, rendering it hard to draw proper conclusions regarding ketamine's effects.

A further limitation concerns platform-specific bias. Reddit, while prolific and open, attracts a particular demographic and communication style that may not be representative of the broader population using ketamine in fitness contexts. Users on Reddit may differ from those on platforms like Discord, Instagram, or private forums in terms of age, cultural background, or level of experience with substances, potentially shaping the narratives collected.

Finally, the study's qualitative nature and small dataset makes it impossible to conclude about the prevalence of this practice. Future research should incorporate multi-platform approaches, quantitative data, and structured interviews to improve generalizability, clarify patterns of use and draw evidence-based conclusions.

5. Conclusion

In conclusion, this study highlights the emerging use of ketamine as an adjunct to physical exercise, predominantly weightlifting. The findings suggest that ketamine's analgesic properties may underlie its reported benefits, while its psychotropic effects could contribute to improved psychological resilience during workouts. The study underscores significant concerns, including tolerance buildup, bladder discomfort, heart strain, and potential dependence risks. Variability in dosing, administration routes, and sources of ketamine further complicate the assessment of its safety and effects. The preference for pharmaceutical-grade ketamine suggests a desire for safer consumption, yet accessibility remains a challenge. Importantly, the study's limitations emphasize the need for future research employing standardized, quantitative approaches.

Ethical approval and informed consent statements

Commentaries were collected anonymously, and the study complied with the Italian Legislative Decree No 196/2003 on Personal Data Protection. The study was approved by the Ethics Committee at the University of Trento prior to data collection (Ref. 2024–083ESA).

CRediT authorship contribution statement

Sofia Venturini: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Marialisa Romagnoni:** Writing – review & editing, Methodology, Investigation, Formal analysis, Data curation. **Gabriele Penazzi:** Writing – review & editing, Methodology, Investigation. **Ornella Corazza:** Writing – review & editing, Writing – original draft, Visualization, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Thomas Zandonai:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

The authors have no competing interests to declare.

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