



Tactical Skills Proficiency, Physical Readiness, Safety Practices, and Mental Resilience among Collegiate Rodeo Athletes

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Abstract

This mixed-methods study examined the levels and interrelationships of tactical skill proficiency, physical readiness, safety practices, and mental resilience among collegiate rodeo athletes in the Philippines, a context where rodeo remains underrepresented in empirical research despite its cultural and institutional importance. Grounded in Albert Bandura's Self-Efficacy Theory, the study employed an explanatory sequential design, integrating quantitative data from 122 survey respondents and qualitative insights from 16 interview participants drawn from State Universities and Colleges competing in the Philippine Rodeo Finals in Masbate City. Descriptive findings indicated that safety practices achieved the highest level ($M = 3.55$, $SD = 0.431$), while physical readiness emerged as the lowest-rated dimension ($M = 3.30$). Correlational analysis revealed that all variables were significantly related ($p < .000$), with physical readiness demonstrating the strongest associations with safety practices ($r = .612$) and tactical skill proficiency ($r = .592$). These results underscore the central role of physical conditioning in supporting both performance and safety outcomes. Qualitative analysis generated five overarching themes: (1) mental resilience as a driver of focus and persistence; (2) physical conditioning as the foundation of performance readiness; (3) safety awareness and risk management; (4) experiential learning in skill development and tactical adaptability; and (5) training support as an area needing enhancement. The study concludes that rodeo performance is inherently multidimensional and interconnected, shaped by experiential learning, sustained practice, and authentic competition exposure. By contributing to the limited body of literature on collegiate rodeo athletes in the Philippines, the findings provide valuable insights for the development of integrated, evidence-based athlete training programs.

Keywords: rodeo, collegiate rodeo, tactical skill proficiency, physical readiness, safety practices, mental resilience, self-efficacy, Philippines



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INTRODUCTION

Rodeo is a high-risk, physically demanding sport requiring athletes to execute complex technical skills under uncertainty, rapid physical responses, and high-impact forces while interacting directly with large, unpredictable animals (Watts et al., 2021). In the Philippines, rodeo carries deep cultural significance, particularly in Masbate Province the recognized Rodeo Capital of the Philippines and host of the Philippine Rodeo Finals (Executive Order No. 120, s. 2002; Serafica, 2024).

Within this setting, collegiate rodeo athletes train and compete under informal systems, limited equipment access, and inconsistent safety enforcement, conditions that shape both their development and their risk of injury.

Effective rodeo performance rests on four interconnected domains: tactical skill proficiency, the rapid perception and decision-making demanded by unpredictable competition (Cao et al., 2024; Inns et al., 2023); physical readiness, the strength and movement efficiency needed to execute sport-specific demands safely (Bowen, 2022); safety practices,

the technique, preparation, and equipment use that reduce injury risk (Chen et al., 2025); and mental resilience, the capacity to regulate stress and recover from adversity in a sport where mistakes can cause serious injury (Gupta & McCarthy, 2022; Mei et al., 2025). Structured conditioning, injury-prevention protocols, and decision-making under pressure have each been linked to improved performance and reduced injury in high-risk sport settings (Bowen, 2022; Carlson et al., 2024; Carlson et al., 2025; Chen et al., 2025; Inns et al., 2023; Richards et al., 2025; Lee et al., 2025; Espinoza & Cho, 2024). Yet these four domains are typically studied in isolation, and almost entirely within structured sporting systems outside the Philippines, leaving their combined, interactive role unexamined in culturally embedded, less formalized sports such as collegiate rodeo. This gap is what the present study addresses: by jointly assessing tactical skill proficiency, physical readiness, safety practices, and mental resilience among collegiate rodeo athletes in the Philippine Rodeo Finals, the study clarifies how these domains interrelate and informs evidence-based training, safety, and resilience programs for an under-researched athlete population.

Theoretical Framework. This study is anchored on Albert Bandura's (1997) Self-Efficacy Theory, which holds that individuals' beliefs in their capability to organize and execute a course of action shape their confidence, effort, persistence, and emotional regulation when facing difficult or risky tasks. Athletes with strong self-efficacy approach challenges with confidence and recover from setbacks, while those with low self-efficacy doubt their capabilities and show reduced persistence under pressure.

Bandura (1997) further identified four processes through which self-efficacy operates: cognitive (focus and strategic thinking), motivational (goal setting and persistence), affective (emotional regulation and confidence under pressure), and behavioral (adaptive, disciplined action). These processes are especially salient in rodeo, where athletes must think quickly,

manage fear, and execute precise movements simultaneously in high-risk conditions.

Applied to the four domains, self-efficacy shapes athletes' confidence and persistence in executing tactical skills under unpredictable competition conditions; their commitment to strength, endurance, and conditioning training despite fatigue and academic demands; their proactive safety behavior through proper technique, gear use, and situational judgment; and their ability to regulate stress, sustain motivation, and recover from setbacks in an environment where errors carry injury risk. In sum, self-efficacy functions as the integrating psychological mechanism connecting all four domains of this study.

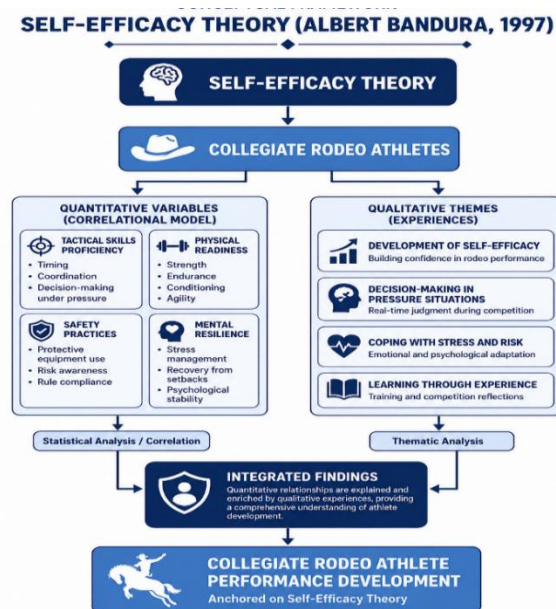


Figure 1
Quantitative and Qualitative Pathways of Rodeo Performance Anchored on Self-Efficacy

Conceptual Framework. The conceptual framework of this study is anchored on Albert Bandura's Self-Efficacy Theory (1997), which emphasizes the role of an individual's belief in their capability to perform tasks, overcome challenges, and achieve desired outcomes. In the context of collegiate rodeo athletes, self-efficacy influences athletic performance, decision-making, emotional control, and adaptation to competitive and high-risk situations.

The framework integrates both quantitative and qualitative approaches to provide a comprehensive understanding of athlete performance development. The quantitative component examines the relationships among tactical skills proficiency, physical readiness, safety practices, and mental resilience. Meanwhile, the qualitative component explores the lived experiences of collegiate rodeo athletes, particularly in developing confidence, making decisions under pressure, coping with stress and risk, and learning through training and competition experiences.

As depicted in the model, self-efficacy is positioned as the antecedent psychological mechanism that drives both strands of inquiry. On the quantitative side, physical readiness is treated as the most proximal predictor of safety practices and tactical skill proficiency, consistent with its central role in the correlational results, while mental resilience is positioned as a supporting rather than a primary driver of performance. On the qualitative side, athletes' development of self-efficacy precedes and informs their decision-making, coping, and experiential learning. The two strands converge at the level of integrated findings, where statistical relationships among the four domains are explained and enriched by athletes' lived experiences, jointly producing the model of collegiate rodeo athlete performance development shown above.

METHODS

Research Design. This study employed a mixed methods design to investigate the tactical skill proficiency, physical readiness, safety practices, and mental resilience of collegiate rodeo athletes in the Philippines. Specifically, it utilized an explanatory sequential approach in which quantitative data were collected and analyzed first to determine the levels and relationships among the key variables, followed by qualitative data to provide context, explanation, and deeper understanding of the numerical results (Creswell & Clark, 2017; Tashakkori & Teddlie, 2021). Surveys were employed to quantify the prevalence and

patterns of training, safety, and resilience practices, while in-depth interviews captured the athletes' lived experiences, perceptions, and coping strategies during training and competition.

Research Participants and Sampling. The participants of this study were collegiate rodeo athletes from State Universities and Colleges (SUCs) across the Philippines who actively participated in Rodeo Masbateño. They were selected based on their direct involvement in competitive rodeo to ensure that the data reflects the experiences of student-athletes engaged in high-risk events.

The selection criteria for participants included: (1) active participation in collegiate rodeo competitions, ensuring that respondents were currently engaged in the sport; (2) participation in the Philippine Rodeo Finals or other recognized Rodeo Masbateño events, which established their exposure to formal and competitive rodeo settings; (3) willingness to share personal experiences; and (4) being 18 years old and above, while individuals below 18 years old were excluded from the study. Age eligibility was verified through a participant screening process prior to data collection.

Based on records from the most recent Philippine Rodeo Finals, approximately 158 collegiate athletes from 13 teams participated (P. G. Sese, personal communication, February 2026). During the actual data gathering at Rodeo Masbateño week, the total population of student athletes was 132 across 8 universities and 9 teams. For the quantitative phase, 122 athletes (92% response rate) completed the survey assessing tactical skill proficiency, physical readiness, safety practices, and mental resilience. The remaining 10 potential participants were not included due to unavailability during the data collection schedule and conflicts in competition and training timetables. In addition, four of the identified athletes were unable to participate because of pre-existing injuries sustained prior to the data gathering period. Purposive sampling was employed to select participants

who met the inclusion criteria, ensuring survey responses were meaningful, relevant, and representative of collegiate rodeo athletes nationwide (Creswell & Creswell, 2018).

Research Locale. The study was conducted at the annual Rodeo Masbateño National Finals in Masbate Province the Rodeo Capital of the Philippines and the only national venue where collegiate rodeo athletes from all regions converge to compete providing access to a large, diverse, representative sample of student-athletes from multiple universities in a single setting.

Data Gathering Procedure. Data collection began after securing ethical clearance and approval from relevant institutions and Rodeo Masbateño Incorporated (RMI). The researcher coordinated with RMI and participating State Universities and Colleges (SUCs) to facilitate the recruitment of eligible student-rodeo athletes and to schedule data collection during the National Rodeo Finals in Masbate.

For the quantitative phase, participants completed a structured survey questionnaire measuring tactical skills proficiency, physical readiness, safety practices, and mental resilience. The survey provided baseline data on the levels and patterns of these variables among collegiate rodeo athletes.

Following the quantitative phase, 16 respondents participated in semi-structured interviews. These interviews explored the participants' lived experiences related to training routines, safety practices, risk perception, and resilience-building strategies within the context of competitive rodeo. Interviews were audio-recorded with participant consent, transcribed verbatim, and conducted until data saturation was achieved.

Data Analysis Procedure. For the quantitative phase, survey responses were organized, coded, and analyzed using appropriate statistical software.

Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to determine the levels of tactical skill proficiency, physical readiness, safety practices, and mental resilience among collegiate rodeo athletes.

Inferential statistics – t-test and analysis of variance (ANOVA) were utilized, and Pearson r was used to determine the relationship among the 4 variables of the study.

Prior to conducting parametric analyses, the dataset was screened for compliance with statistical assumptions. Normality was verified using the Shapiro–Wilk test, while homogeneity of variance was confirmed through Levene's test. Scatterplot inspection indicated linearity and homoscedasticity, supporting the use of Pearson correlation. No substantial violations were detected. In addition, the four-point Likert scale responses were treated as approximating interval data, consistent with established practice in social and behavioral research. This treatment was justified by the evenly spaced response options and the aggregation of item scores into composite domain means, which approximate continuous distributions. These checks ensured that the statistical procedures applied were both appropriate and valid for the dataset.

For the qualitative phase, interview transcripts were analyzed using Braun and Clarke's (2006) Thematic Analysis, which systematically identifies, reviews, and interprets patterns and themes in qualitative data. This framework was suitable for exploring the athletes' lived experiences and provided insight into how they integrate training practices, safety measures, and mental resilience in their preparation and competitive routines.

Research Instrument. This study utilized separate instruments for quantitative and qualitative phases, designed to measure and explore the key variables of tactical skills proficiency, physical readiness, safety practices, and mental resilience among collegiate rodeo athletes.

For the quantitative phase, a structured survey questionnaire was used. The instrument consisted of 28 items distributed across four domains: tactical skill proficiency (items 1–7), physical readiness (items 8–14), safety practices (items 15–20), and mental resilience (items 21–27), with item 28 as an open-ended question designed to capture participants' integrated perceptions of the four domains. All items were measured using a 4-point Likert scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree).

To ensure contextual relevance, the adopted standardized instruments were adapted to fit the unique demands of Rodeo Masbateño, a high-risk livestock-based sport. Items were modified and recorded to reflect rodeo-specific activities such as bull riding, roping, horse handling, and cattle management. General sport and physical activity statements were contextualized into rodeo training and competition settings. Likewise, safety-related items were tailored to include rodeo-specific practices such as proper handling of livestock, use of protective gear, and adherence to event-specific safety protocols. Mental resilience items were also framed in relation to coping with fear, injury risk, and competitive pressure inherent in rodeo participation. These adaptations ensured that the instruments accurately reflected the lived experiences of collegiate rodeo athletes while maintaining the original constructs of the standardized scales.

Tactical skill proficiency items were adapted from the Test of Performance Strategies (TOPS) developed by Thomas et al. (1999), which measures athletes' use of cognitive and performance strategies, with reported reliability coefficients ranging from Cronbach's $\alpha = 0.66$ to 0.81 . In the present study, the scale demonstrated good internal consistency, with a Cronbach's alpha of 0.839 . Physical readiness items were derived from components of the International Physical Activity Questionnaire (IPAQ) developed by Craig et al. (2003), which has demonstrated acceptable reliability with coefficients generally at $\alpha \geq 0.70$ across diverse populations. In this study, the scale yielded a

Cronbach's alpha of 0.842 , indicating good reliability.

Safety practices were adapted from the Safety Attitudes Questionnaire (SAQ) developed by Sexton et al. (2006), with reported reliability indices ranging from $\alpha = 0.68$ to 0.86 . The adapted scale in this study produced a Cronbach's alpha of 0.836 , indicating good internal consistency. Mental resilience was assessed using the Connor-Davidson Resilience Scale (CD-RISC) developed by Connor and Davidson (2003), which demonstrates high internal consistency with a reported reliability coefficient of $\alpha = 0.89$. In this study, the instrument yielded a Cronbach's alpha of 0.889 , confirming good reliability.

The survey instrument underwent pilot testing to ensure clarity, appropriateness, and contextual relevance to collegiate rodeo athletes. A group of respondents with characteristics similar to the target participants were selected for pilot testing. The reliability of each domain was assessed using Cronbach's alpha coefficient. A reliability result of $.939$ was considered highly acceptable.

Beyond internal consistency, the adaptation of standardized instruments to the rodeo context required careful validation. Content validity was established through expert review by the researcher's thesis adviser and two rodeo-affiliated coaches, who evaluated whether each reworded item still represented the construct it was drawn from once contextualized to bull riding, roping, horse handling, and cattle management. Items were revised based on their feedback prior to pilot testing, ensuring fidelity to the original constructs while reflecting rodeo-specific demands. Construct validity was further supported by the consistently good-to-excellent Cronbach's alpha values obtained for all four domains ($.836$ – $.889$), which approximate the reliability ranges reported for the original TOPS, IPAQ, SAQ, and CD-RISC instruments and indicate that the rodeo-specific adaptation preserved the integrity of the underlying constructs. In addition, convergent validity was

evident in the alignment between quantitative scores and qualitative themes (e.g., physical readiness scores corroborated by athletes' emphasis on conditioning routines). This triangulation of expert judgment, statistical reliability, and thematic consistency demonstrates that the adapted instruments measured the intended constructs accurately within the unique context of collegiate rodeo.

Statistical Treatment. Frequency and percentage were used to describe the respondents background through profile variables and to determine the values needed to position them. While mean was used to assess and interpret the overall respondents' responses in the survey questionnaire.

Data collected were assigned a weight of 1 to 4, with 1 being the lowest and 4 being the highest. The Likert scales parameters and interpretations are shown below.

Table 1
Likert scales parameters and interpretations

Point Value	Scale Range	Qualitative Description	Interpretation
4	3.51 – 4.00	Strongly Agree	Highly Practiced/Highly proficient/ Highly resilient/Very much ready
3	2.51 – 3.50	Agree	Practiced/Proficient/Resilient/Ready
2	1.51 – 2.50	Disagree	Partially Practiced/Less proficient/ Slightly resilient/Slightly ready
1	1.00 – 1.50	Strongly Disagree	Not Practiced/Not proficient/Not resilient/Not ready

For the inferential problems, t-test was used to compare two variables like the sex of the respondents to the main variables while Pearson was utilized to determine whether a significant relationship among the variables exist.

Ethical Considerations. Ethical protocols were strictly observed throughout the study. University permissions and institutional clearance were secured prior to data collection.

Informed consent was obtained from all participants, who were briefed on the voluntary nature of participation and their right to withdraw at any time without penalty.

RESULTS

This section presents the findings of the study on collegiate rodeo athletes in terms of tactical skill proficiency, physical readiness, safety practices, mental resilience, and the relationships among these variables. Quantitative findings are presented through descriptive and correlational analyses, while qualitative findings are presented through thematic analysis of participants' lived experiences.

Tactical Skill Proficiency. Table 2 presents the respondents' assessment of rodeo performance in terms of tactical skill proficiency.

Table 2
Assessment of the Respondents on Rodeo Performance in Terms of Tactical Skill Proficiency

Indicator	Weighted Mean	Standard Deviation	Qualitative Description	Verbal Interpretation	Rank
I understand the proper techniques required in my rodeo event.	3.61	0.567	Strongly Agree	Highly Proficient	1
I can apply appropriate strategies during rodeo competitions.	3.44	0.656	Agree	Proficient	2
I am able to adjust my technique when facing different competition situations.	3.39	0.663	Agree	Proficient	3
I feel confident in executing the technical skills required in rodeo.	3.22	0.766	Agree	Proficient	5
I regularly practice skills that improve my rodeo performance.	3.20	0.799	Agree	Proficient	6.5
I can maintain proper body control while performing rodeo skills.	3.20	0.768	Agree	Proficient	6.5
I make effective decisions under pressure during competitions.	3.27	0.750	Agree	Proficient	4
Overall Mean	3.33	0.512	Agree	Proficient	

Legend: 3.51 – 4.00 (Strongly Agree–Highly Proficient); 2.51 – 3.50 (Agree–Proficient); 1.51 – 2.50 (Disagree–Less Proficient); 1.00 – 1.50 (Strongly Disagree–Not Proficient)

Table 2 shows that respondents generally perceived themselves as proficient in tactical skill performance, with an overall mean of 3.33. The highest-rated indicator was understanding the proper techniques required in rodeo events ($M = 3.61$), while the lowest-rated indicators were regular practice and maintaining proper body control (both $M = 3.20$).

The following qualitative theme contextualizes these quantitative findings by illuminating the experiential processes through which athletes develop and refine their tactical skills.

Experience-Based Skill Development and Tactical Adaptability. Participants described tactical skill development as a gradual process shaped by repeated practice, observation, coaching, mentorship, and actual exposure to cattle. Results emphasized the importance of learning from experience and adapting techniques depending on competition situation.

Table 3

Participants' Verbatim Responses on Experience-Based Skill Development and Tactical Adaptability

Participant	Representative Verbatim Response
A	"I watch what others are doing, then I apply it in the actual game."
C	"Lassoing takes a lot of tries before I mastered it."
F	"I improved through consistent practice and applying trainer instructions."
H	"After many years of repeated training, my skill improved."
O	"Repetition is the key to improving lassoing skills."

Physical Readiness. Table 4 presents the respondents' assessment of physical readiness for rodeo performance.

Table 4

Assessment of the Respondents on Rodeo Performance in Terms of Physical Readiness

Indicator	Weighted Mean	Standard Deviation	Qualitative Description	Verbal Interpretation	Rank
I engage in regular physical training to prepare for rodeo competitions.	3.19	0.742	Agree	Ready	6
My strength helps me perform effectively during rodeo events.	3.39	0.661	Agree	Ready	2
My endurance allows me to sustain performance during training and competition.	3.35	0.667	Agree	Ready	3.5
I feel physically prepared before participating in a rodeo event.	3.20	0.703	Agree	Ready	5
My physical condition helps reduce fatigue during competition.	3.35	0.679	Agree	Ready	3.5
I maintain a fitness routine to support my rodeo performance.	3.18	0.727	Agree	Ready	7
I warm up and stretch before competitions to prevent injury.	3.40	0.700	Agree	Ready	1
Overall Mean	3.30	0.502	Agree	Ready	

Legend: 3.51 – 4.00 (Strongly Agree–Very much ready); 2.51 – 3.50 (Agree–Ready); 1.51 – 2.50 (Disagree–Partially ready); 1.00 – 1.50 (Strongly Disagree–Not ready)

Table 4 shows that respondents generally perceived themselves as physically ready for rodeo participation, with an overall mean of 3.30. The highest-rated indicator was warming up and stretching before competitions to prevent injury ($M = 3.40$), while maintaining a fitness routine obtained the lowest mean ($M = 3.18$). This relatively lower rating is consistent with Theme 5 in the qualitative findings (Table 12), where athletes attributed inconsistent conditioning to limited training time, competing academic workload, and restricted facilities.

The following qualitative theme provides experiential context for the physical readiness scores, explaining both the conditioning strategies athletes employ and the structural barriers that limit consistency.

Physical Conditioning as the Foundation of Rodeo Readiness. Participants identified physical conditioning as an important aspect of rodeo readiness. Common preparation activities included jogging, running, stretching, weightlifting, endurance exercises, and strength training. Respondents also emphasized the importance of recovery, proper diet, and balancing training with academic responsibilities.

Table 5

Participants' Verbatim Responses on Physical Conditioning as the Foundation of Rodeo Readiness

Participant	Representative Verbatim Response
B	"Every morning, I go jogging... it helps improve my stamina, I don't get tired easily."
C	"Jogging helped me finish the game without fainting despite harsh conditions."
E	"Even when there is no training, I still go jogging. Sometimes I also go to the gym."
L	"Strength training, endurance training, and a healthy diet. I avoid junk foods."

Safety Practices. Table 6 presents the respondents' assessment of safety practices in rodeo performance.

Table 6

Assessment of the Respondents on Rodeo Performance in Terms of Safety Practices

Indicator	Weighted Mean	Standard Deviation	Qualitative Description	Verbal Interpretation	Rank
I follow safety guidelines during rodeo training.	3.55	0.576	Strongly Agree	Highly Practiced	4
I use appropriate protective equipment when participating in rodeo activities.	3.39	0.650	Agree	Practiced	6
Safety is emphasized during our rodeo training sessions.	3.58	0.558	Strongly Agree	Highly Practiced	3
I identify and consider potential risks before performing rodeo activities.	3.52	0.564	Strongly Agree	Highly Practiced	5
I follow the instructions of coaches or trainers regarding safety.	3.65	0.513	Strongly Agree	Highly Practiced	1
I prioritize my safety when participating in rodeo events.	3.61	0.597	Strongly Agree	Highly Practiced	2
Overall Mean	3.55	0.431	Strongly Agree	Highly Practiced	

Legend: 3.51 – 4.00 (Strongly Agree–Highly practiced); 2.51 – 3.50 (Agree–Practiced); 1.51 – 2.50 (Disagree–Partially practiced); 1.00 – 1.50 (Strongly Disagree–Not practiced)

Table 6 indicates that respondents highly practiced safety measures during rodeo participation, with an overall mean of 3.55. The highest-rated indicator was following the instructions of coaches or trainers regarding safety ($M = 3.65$), while the use of appropriate protective equipment obtained the lowest mean

(M = 3.39). The high rating for coach-guided safety is mirrored in Theme 3 of the qualitative findings (Table 7), where participants described stopping or adjusting their performance whenever a coach or referee signaled risk, while the comparatively lower score for protective equipment reflects participants' reports of limited gear availability for some events.

The following qualitative theme elaborates on how athletes perceive and enact safety in practice, explaining the high coach-instruction rating and the comparatively lower protective equipment score.

Safety Awareness and Risk Management in a High-Risk Sport. Participants described safety as an essential aspect of rodeo participation. Respondents emphasized coach supervision, proper attire, risk awareness, situational judgment, and observing cattle behavior as important safety practices during training and competition.

Table 7
Participants' Verbatim Responses on Safety Awareness and Risk Management in a High-Risk Sport

Participant	Representative Verbatim Response
A	"If the cow cannot be handled, we stop and follow the coach or referee."
B	"I observe the cow's movements to see if it is wild or calm."
D	"If you are not focused, you won't be able to do safety moves like a sidestep."
E	"Safety first. If we can no longer handle it, we stop immediately."
H	"You are the only one who can cause harm to yourself if you lose focus."
K	"We observe the cow before starting to assess if it is calm or wild."

Table 8
Assessment of the Respondents on Rodeo Performance in Terms of Mental Resilience

Indicator	Weighted Mean	Standard Deviation	Qualitative Description	Verbal Interpretation	Rank
I remain focused even when facing difficult situations during competition.	3.35	0.679	Agree	Resilient	3.5
I stay motivated despite the risks involved in rodeo sports.	3.50	0.606	Agree	Resilient	1
I can manage fear or nervousness before competitions.	3.19	0.764	Agree	Resilient	7
I recover quickly from mistakes during competitions.	3.20	0.746	Agree	Resilient	6
I stay calm under pressure during rodeo events.	3.22	0.733	Agree	Resilient	5
I maintain a positive mindset when facing challenges in rodeo.	3.35	0.715	Agree	Resilient	3.5
I use mental strategies, such as visualization or self-talk, to prepare for competitions.	3.48	0.619	Agree	Resilient	2
Overall Mean	3.33	0.541	Agree	Resilient	

Legend: 3.51 – 4.00 (Strongly Agree–Highly resilient); 2.51 – 3.50 (Agree–Resilient); 1.51 – 2.50 (Disagree–Slightly resilient); 1.00 – 1.50 (Strongly Disagree–Not resilient)

Mental Resilience. Table 8 presents the respondents' assessment of mental resilience in rodeo performance.

Table 8 shows that respondents generally perceived themselves as resilient in handling the psychological demands of rodeo participation, with an overall mean of 3.33. The highest-rated indicator stayed motivated despite the risks involved in rodeo sports (M = 3.50), while managing fear or nervousness before competitions obtained the lowest mean (M = 3.19).

The following qualitative theme reveals the specific coping mechanisms athletes employ to sustain resilience, explaining the strong motivation ratings and the comparatively lower scores on fear management and error recovery.

Mental Resilience as a Source of Focus, Confidence, and Persistence. Participants described fear, nervousness, pressure, and uncertainty as common experiences before and during competition. Despite these challenges, respondents shared that they used strategies such as self-talk, prayer, breathing exercises, focus, and positive thinking to manage pressure and remain composed during competition.

Table 9
Participants' Verbatim Responses on Mental Resilience as a Source of Focus, Confidence, and Persistence

Participant	Representative Verbatim Response
A	"Overthinking is really common, especially since it's my first time. But I just think, 'I can do this.'"
B	"I just keep thinking that I can do it, I can do it no matter what."
E	"Once inside the arena, it disappears. You just focus on the task you no longer hear the crowd."
K	"I feel nervous, but I tell myself, 'I can do this.' I stay focused even when I feel nervous."
M	"I pray for guidance, courage, and wisdom."
O	"I create mental simulations to keep my mind away from pressure."

The findings indicate that mental resilience helped respondents maintain confidence, focus, and motivation despite the risks and pressures associated with rodeo participation.

Summary of Rodeo Performance Variables. Table 10 presents the summary of the respondents' assessment of the major rodeo performance variables.

Table 10

Summary of the Respondents' Assessment on Rodeo Performance Variables

Variables	Overall Mean	Standard Deviation	Qualitative Description	Verbal Interpretation	Rank
Safety Practices	3.55	0.431	Strongly Agree	Highly Practiced	1
Tactical Skill Proficiency	3.33	0.512	Agree	Proficient	2.5
Mental Resilience	3.33	0.541	Agree	Resilient	2.5
Physical Readiness	3.30	0.502	Agree	Ready	4
Overall	3.38	0.497	Agree		

Legend: 3.51 – 4.00 (Strongly Agree–Highly Practiced/Highly proficient/Highly resilient/Very much ready); 2.51 – 3.50 (Agree–/Practiced/Proficient/Resilient/Ready); 1.51 – 2.50 (Disagree–Partially practiced/Less proficient/Slightly resilient/Slightly ready); 1.00 – 1.50 (Strongly Disagree–Not Practiced/Not proficient/Not resilient/Not ready)

Respondents generally demonstrated positive levels across all rodeo performance variables, with an overall mean of 3.38. Safety practices obtained the highest overall mean ($M = 3.55$), while physical readiness obtained the lowest overall mean ($M = 3.30$).

Correlation among Rodeo Performance Variables. Table 11 presents the correlation among tactical skill proficiency, physical readiness, safety practices, and mental resilience.

Table 11

Correlation among Rodeo Performance Variables

Variable 1	Variable 2	Computed r	Sig.	Decision on H_0	Interpretation
Tactical Skill Proficiency	Physical Readiness	0.592	0.000	Rejected	Significant
Tactical Skill Proficiency	Safety Practices	0.383	0.000	Rejected	Significant
Tactical Skill Proficiency	Mental Resilience	0.574	0.000	Rejected	Significant
Physical Readiness	Safety Practices	0.612	0.000	Rejected	Significant
Physical Readiness	Mental Resilience	0.488	0.000	Rejected	Significant
Safety Practices	Mental Resilience	0.337	0.000	Rejected	Significant

Relationships among the major rodeo performance variables were statistically significant ($p = 0.000$). The strongest was observed between physical readiness and safety practices ($r = 0.612$), while the weakest was found between safety practices and mental resilience ($r = 0.337$). The findings indicate that the different dimensions of rodeo performance are significantly interconnected. The qualitative themes that follow help explain these statistical relationships, particularly the strong physical readiness–safety link and the comparatively weaker role of mental resilience.

The fifth theme cuts across all four performance domains, identifying the structural and institutional constraints that collectively limit athlete development in Philippine collegiate rodeo.

Training Support, Facilities, and Exposure as Areas for Improvement. Participants identified several challenges affecting their preparation, including limited training facilities, lack of equipment, insufficient training time, and limited exposure to actual cattle.

Table 12

Participants' Verbatim Responses on Training Support, Facilities, and Exposure as Areas for Improvement

Participant	Representative Verbatim Response
B	"One week of training is not enough, especially for cattle exposure."
D	"I still lack training, especially in bull riding."
G	"We need better facilities because our space is small."
K	"Sometimes we cannot train because of school workload."
L	"More practice is really important to improve performance."

DISCUSSION

Tactical Skill Proficiency. Tactical skill proficiency obtained an overall mean of 3.33, interpreted as proficient, indicating that athletes possess functional but not yet advanced tactical competence. The highest-rated indicator understanding proper rodeo techniques ($M = 3.61$) reflects strong declarative knowledge: athletes know what correct technique looks like because they acquire it through observation, coaching, and imitation of more experienced peers, as described in Theme 4 (Table 3). This type of cognitive, knowledge-based learning is accessible even in low-resource training environments. In contrast, the lowest-rated indicators were regular practice and body control (both $M = 3.20$), which require repeated physical execution with actual cattle to develop procedural, automatic skill. Theme 4 explains that athletes recognize this gap themselves they describe repetition and real cattle exposure as essential, yet Theme 5 (Table 12) shows that short preparation periods, undersized facilities, and academic workload collectively restrict that exposure. This distinction between knowing and doing is theoretically significant: Bandura's (1997)

cognitive self-efficacy process supports knowledge acquisition and motivation to practice, but structural barriers prevent the sustained physical engagement needed to translate efficacy beliefs into automatic motor competence. The practical implication is that extended pre-competition training access not just competition-week exposure is necessary to close this performance gap.

Physical Readiness. Physical readiness obtained an overall mean of 3.30, the lowest of the four domains, interpreted as ready but inconsistent. The highest-rated indicator was warming up and stretching before competition ($M = 3.40$), which is individually controllable it requires no equipment, no institutional support, and minimal time explaining why athletes score it highly even when broader conditioning is constrained. The lowest-rated indicator was maintaining a regular fitness routine ($M = 3.18$), which demands consistency across weeks and months and is therefore most sensitive to the structural barriers athletes face. Theme 2 (Table 5) makes this explicit: athletes describe jogging and strength work as primarily self-directed and conducted outside formal training hours, confirming that conditioning relies on individual initiative rather than institutional programming. Theme 5 (Table 12) further explains that limited facilities, short training periods, and academic workload systematically interrupt that initiative.

Theoretically, this pattern reflects Bandura's (1997) motivational process operating without adequate environmental support: athletes' self-efficacy beliefs are sufficient to sustain informal conditioning but insufficient to overcome the absence of structured programs. This finding signal that physical readiness, despite being the most directly linked domain to both performance and injury safety, receives the least institutional investment a critical gap for SUC athletic programs to address.

Safety Practices. Safety practices obtained an overall mean of 3.55, the highest of the four domains, interpreted as highly practiced. This result is interpretively significant: safety scored

highest not because it receives the most institutional support it does not but because it is non-negotiable in a sport where non-compliance carries immediate and potentially severe injury risk. The highest-rated indicator was following coach and trainer instructions ($M = 3.65$), which Theme 3 (Table 7) explains directly: athletes describe stopping or modifying performance the moment a coach or referee signals danger, and they read animal behavior as a continuous safety cue. Safety behavior in rodeo is situationally enforced rather than discretionary, which elevates compliance regardless of resource availability. The lowest-rated indicator was protective equipment use ($M = 3.39$), and Theme 3 makes clear why: athletes acknowledge gear as essential, but report access is event-dependent and institutionally inconsistent a structural gap, not a behavioral one.

Bandura's (1997) behavioral self-efficacy process accounts for this: athletes who believe they can manage risk engage proactively within whatever constraints they face. The practical implication is that behavior-level safety is effectively internalized; what requires institutional intervention is standardized, mandatory equipment provision across events.

Mental Resilience. Mental resilience obtained an overall mean of 3.33, interpreted as resilient, indicating that athletes are generally capable of managing psychological demands in rodeo (Ashford et al., 2024; Collins et al., 2024). The highest-rated indicator was staying motivated despite risks ($M = 3.50$), reflecting intrinsic commitment driven by passion, personal goals, and institutional pride (Chen, 2024; Theme 1, Table 8). Managing fear ($M = 3.19$) and recovering from mistakes ($M = 3.20$) were the lowest-rated, suggesting that while athletes sustain motivation effectively supported through self-talk, prayer, and breathing techniques (Theme 1)—in-the-moment emotional regulation and error recovery remain areas needing development, consistent with evidence that anxiety and fear significantly impair performance in high-risk environments (Qian et al., 2025).

Summary of Variables. Overall findings show that respondents demonstrate positive performance across all variables, with safety practices rated highest and physical readiness lowest. This supports the multidimensional nature of athletic performance, where technical, physical, psychological, and safety factors interact (Collins et al., 2024).

Correlation of Variables. All variables were significantly correlated, indicating that rodeo performance is highly interconnected across physical, technical, safety, and psychological domains. Physical readiness showed the strongest relationship with safety practices ($r = 0.612$), suggesting that higher levels of physical fitness contribute significantly to safer and more controlled performance in high-risk rodeo situations.

Tactical skill proficiency was also strongly related to both physical readiness and mental resilience, indicating that effective skill execution depends not only on physical capacity but also on psychological stability and readiness under pressure. This suggests that athletes who are physically prepared and mentally composed are more capable of applying technical skills efficiently during unpredictable competition scenarios.

Mental resilience showed weaker but still significant relationships with the other variables, indicating that psychological factors function as supporting mechanisms rather than sole determinants of performance outcomes. While mental resilience alone may not directly drive performance, it enhances the ability of athletes to cope with pressure, maintain focus, and sustain execution under stress.

These interconnected patterns confirm that rodeo performance is holistic and integrated, consistent with ecological and systems-based perspectives in sport science (Larkin et al., 2022; Collins et al., 2024; Stoyanova et al., 2023), where performance outcomes emerge from the interaction of multiple interdependent domains rather than isolated factors.

Qualitative Findings (Themes 1–5). The five themes generated from semi-structured interviews elaborate the quantitative findings. Theme 1 (Table 9) shows that mental resilience was sustained through positive self-talk, prayer, and breathing techniques that converted fear into focus explaining strong motivation ratings but moderate scores on fear management and error recovery. Theme 2 (Table 5) reveals that physical conditioning centered on jogging, strength work, and stretching routines conducted largely outside formal training hours, contextualizing the ready but inconsistent physical readiness scores. Theme 3 (Table 7) demonstrates that safety behavior was situational and coach-directed athletes read animal cues and deferred referee decisions which accounts for the high coach-instruction rating and the comparatively lower equipment-use rating linked to resource limitations.

Theme 4 (Table 3) illustrates that tactical skill development was experiential, and gradual built through observation, repetition, and mentorship supporting the ecological dynamics perspective (Williams & Hodges, 2023; Collins et al., 2024) and explains why technical understanding scored high while regular practice and body control scored lower due to limited cattle exposure. Theme 5 (Table 12) identifies structural barriers insufficient equipment, short preparation windows, restricted training spaces, travel costs, and academic workload as the primary constraints on athlete development across all four domains. Together, the five themes reveal that rodeo performance emerges from self-directed preparation and adaptive coping in an environment where institutional support has not yet caught up with the demands the sport places on student-athletes, a finding that has direct implications for how SUCs structure athletic support programs.

Conclusions. This mixed-methods study provides a domain-integrated synthesis of the tactical, physical, safety, and psychological performance attributes underlying collegiate rodeo performance in the Philippines. By

combining quantitative and qualitative evidence, the study addresses gaps in the literature on rodeo as a high-risk, under-researched collegiate sport and offers a multidimensional framework for understanding athlete development and performance.

The findings confirm that collegiate rodeo performance is strongly multidimensional, with tactical skill proficiency, physical readiness, safety practices, and mental resilience operating as interrelated domains rather than isolated constructs. Correlational results demonstrate that improvements in one domain are associated with enhancements in others, with physical readiness emerging as a central foundation that supports technical execution, safety behavior, and psychological confidence.

The results further highlight that safety practices represent the most consistently developed domain among athletes, reflecting strong risk awareness and adherence to protective behaviors during training and competition. In contrast, physical readiness emerged as relatively less developed, suggesting challenges in maintaining consistent conditioning due to academic demands, limited training opportunities, and resource constraints.

Overall, the study concludes that collegiate rodeo performance is best understood through an integrated and ecological perspective, where physical, technical, safety-related, and psychological factors interact dynamically. Effective athlete development, therefore, requires a holistic training approach that simultaneously enhances conditioning, skill acquisition, safety awareness, and mental resilience within authentic sport-specific environments.

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Ethics approval statement. This study involving human participants was reviewed and approved by the St. Paul University Philippines Research Ethics Committee (SPUP REC) under protocol code SPUP-2026-0169-SR-LA. The study was conducted in accordance with ethical principles for research involving human participants, ensuring voluntary participation, informed consent, confidentiality, and protection of participants' rights throughout the research process.

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Data availability statement. The datasets generated and/or analyzed during the current study are not publicly available due to ethical restrictions and the protection of participants' confidentiality. However, the data may be made available from the corresponding author upon reasonable request, subject to appropriate ethical considerations and approval.

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