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مجلة علمية فصلية مُحكمة متخصصة

بعلوم الرياضة تصدر عن

كلية التربية البدنية وعلوم الرياضة

جامعة بغداد

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وزارة التعليم العالي والبحث العلمي
جامعة بغداد
كلية التربية البدنية وعلوم الرياضة

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تأسست عام (1990)

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تصميم الغلاف: د. ياسر وجيه قدوري

تعليمات النشر في مجلة التربية الرياضية

أولاً: تعليمات عامة:

- مجلة علمية رياضية فصلية غير ربحية، متخصصة بنشر البحوث العلمية الخاصة بعلوم الرياضة، لأغراض النشر العلمي، تصدرها كلية التربية البدنية وعلوم الرياضة / جامعة بغداد.
- تعتمد المجلة سياسة التحكيم السري المزدوج والوصول الحر للبحوث دون قيد او شرط.
- يتم استخدام الأسماء وعناوين البريد الإلكتروني والهواتف في قاعدة بيانات المجلة للأغراض العلمية فقط الخاصة بالمجلة ولن تكون متاحة للجميع أو تستعمل لغرض آخر.
- تعتد مجلة التربية الرياضية الرخصة (CC BY 4.0)  (a Creative Commons Attribution 4.0 International license) وهي بذلك تحفظ حقوق الملكية الفكرية للباحثين الناشرين فيها، وفي الوقت نفسه تتيح للاخرين بتحميل ومشاركة وإعادة اسخدام وتوزيع البحث في نطاق واسع. للمزيد من المعلومات، انقر على الرابط ادناه: https://creativecommons.org/licenses/by/4.0/
- تتم إجراءات المراجعة الأولية للبحث المرسل من قبل هيئة التحرير واجراء الاستلال الاليكتوني، ويتم اعلام الباحث بأي مشكلة خلال الأسبوع الاول من استلام البحث.
- يتم إحالة البحث للتحكيم العلمي من قبل هيئة التحرير لمحكمين أثنين معتمدين من قبل المجلة وبشكل سري.
- تتم عملية التحكيم خلال مدة (3) اسابيع وفق تعليمات المجلة (ارشادات المحكمين).
- بالاعتماد على توصية المحكمين، يتم قبول البحث كما هو او قبولة بعد اجراء التعديلات او رفضه، ويتم اعلام الباحث بذلك.
- بعد الانتهاء من التحكيم، يتم طلب دفع رسوم النشر البالغة (120000) الف دينار عراقي. علماً إن المجلة غير ربحية والنفقات أعلاه لتغطية أجور التحكيم والنشر والترجمة فقط.
- يكون النشر للباحثين من خارج العراق مجاني وبشكل كامل ولحد نهاية سنة (2021).
- كل إجراءات تحكيم البحوث تكون الكترونياً اعتماداً على نظام المجلات المفتوحة (OJS).

ثانياً: شروط كتابة البحث:

تتبع مجلة التربية الرياضية (JOPE) طريقة (IMRAD) في كتابة البحوث وهي ترمز الى الحروف الأولى لكلمات: المقدمة (Introduction). الطريقة والأدوات (Materials and Methods). النتائج (Results) و (And). المناقشة (Discussion).

ورقة واجهة البحث: ويجب أن تتضمن الاتي:

- **عنوان البحث (Research Title):** يعد عنوان البحث الجزء المميز منه الذي يقرأه عدد كبير من الباحثين ويحتوي العنوان ايضا اسم الباحث (الباحثين) وعنواوينهم (طرائق التواصل معهم).
- **شروط عنوان البحث:**
  - ✓ يحوي على عدد قليل من الكلمات كلما امكن ذلك، و بما لا يزيد عن (12) كلمة.
  - ✓ يكون واضح وسهل الفهم ولا يحتوي على المختصرات.
  - ✓ يشرح محتويات البحث بدقة وبشكل محدد.
  - ✓ ان لا يكون بصيغة استفهامية كما في المقالات الصحفية.
  - ✓ يشير الى موضوع البحث وليس النتائج.
- **اسم المؤلف (المؤلفون)(Authors):** مؤلف البحث هو الشخص او الأشخاص الذين أسهموا بشكل فعلي في تخطيط وتنفيذ البحث. ويتم تثبيت أسماء المؤلفين بتسلسل منطقي نسبة الى أهمية مشاركتهم في البحث، اذ يُعد الاسم الأول بالبحث هو كبير معدي البحث وبكلام اخر المؤلف الأول (Senior Author) في حين يتم ترتيب باقي المؤلفين نسبة الى أهمية وقدر مشاركتهم في إتمام البحث. يكون طالب الدراسات العليا المؤلف الاول في اطروحته او رسالته يليه المشرف الرئيس بوصفه المؤلف الثاني وهكذا، علماً ان المجلة تعتمد تسلسل الباحثين حسب ما هو مثبت في البحث المرسل للمجلة. يجب ادراج هامش يشير الى المعلومات الخاصة عن المؤلفين كافة للاتصال بهم بهدف التعاون او الاستيضاح او اي شأن يخص البحث ومجال الاختصاص، ويجب ملاحظة ان يكتب الأسم الثلاثي واللقب للمؤلفين مع ذكر عنوان العمل و وسيله الاتصال (البريد الالكتروني– رقم الهاتف) وباللغتين العربية والانكليزية.
- **مستخلص البحث (Abstract):** ينقل الملخص معلومات البحث القائم فعلا مع مراعاة عدم استعمال عبارات الوعود (سوف يقدم، سوف يعرض.... وغيرها)، ويكون ملخص البحث بمعدل (150–250) كلمة ويكتب في فقرة واحدة باللغتين الإنكليزية والعربية. يبدأ الملخص بترتيب متسلسل بعرض الاهداف ثم توضيح الإجراءات المستعملة واهم النتائج المتضمنة حقائق جديدة

تتعلق بتحقيق الأهداف، وأخيرا الاستنتاجات الرئيسة ومستوى دلالتها (Sig). وتكتب افعال جمل عرض الأهداف والمقدمة ومناقشة النتائج والاستنتاجات في الزمن المضارع، في حين تكتب الإجراءات والأختبارات والنتائج في الزمن الماضي. يجب ان لا يحتوي ملخص البحث على الاتي:

- ✓ الاختصارات (الاحرف المختصرة) الا اذا كانت معيارية او معروفة مسبقا مثل (Vo2Max).
- ✓ الإشارة الى الجداول او الاشكال في متن البحث والاستشهاد بالمصادر.
- ✓ أي معلومات او استنتاج غير موجود في متن البحث والجمل العامة والجمل المطولة او المعقدة او الملتوية (المراوغة).
- ✓ تجنب ذكر البيانات الكمية بشكل مفصل وكذلك المعالجات الاحصائية والمصطلحات الطويلة جدا.
- ✓ ذكر المتوسط الحسابي والانحراف المعياري لاعمار وأوزان وأطوال عينة البحث. مثال: (متوسط الطول) متر (± الانحراف المعياري).

- **الكلمات المفتاحية (Key Words):** يجب ان يتضمن البحث كلمات مفتاحية بعدد لا يتجاوز (6) كلمات، ويجب ان تكون محددة بالدراسة وغير الكلمات الموجودة في عنوان البحث، وعلى ان تكتب في نهاية ملخص البحث بفقرة منفصلة وباللغتين الإنكليزية والعربية.
- **المقدمة (Introduction):** تكون مقدمة البحث الجيدة قصيرة نسبياً، تشرح أهمية الدراسة وتحديد اهدافها من خلال البحث في الادبيات ذات العلاقة من مراجع ودراسات، ويكون ذلك عن طريق استعراض مختصر لهذه الدراسات والتي تكون ذات علاقة بمشكلة البحث والتي يجب ان لا تقل عن خمسة دراسات حديثة ومناسبة لتعزيز البحث، كما ان المقدمة تُعَرِف بالمصطلحات الخاصة او المختصرات التي سيتضمنها متن البحث لاحقاً، ويفضل أن لا تتجاوز عدد الكلمات في مقدمة البحث عن (500) كلمة وأن لا تتضمن تكرار لعبارات او مفاهيم ذكرت في اي موقع من الملخص، مع مراعاة تجنب العبارات الانشائية والجمل التي لا تضيف للقارئ معلومة مثل إعادة الحقائق والحالات البديهية.
- **الطريقة والادوات (Materials and Methods):** ان الغرض من هذا القسم هو لعرض ما تم عمله، وكيف تم، وأين تم، وذلك بطريقة مباشرة وبسيطة فضلاً عن التعريف بكيفية جمع البيانات وعرضها وتحليلها. اذ يجب ان يوفر هذا القسم من البحث كل المعلومات الضرورية اللازمة للسماح للمؤلفين الآخرين للحكم على الدراسة والإفادة منها، ويجب مراعاة ترتيب

الاجراءات الميدانية زمنياً مع توفير كافة المعلومات الضـــرورية فقط، وعلى وفق ذلك يتطلب ان يتضمن هذا القسم من البحث على الآتي مع أهمية تسلل الفقرات:

- ✓ منهج البحث وتصميمه المستعمل.
- ✓ الوصف الدقيق لعينة البحث من حيث (الجنس والعمر والوزن.... وغيرها).
- ✓ تصـــميم التجربة مع عدد مرات اجراء الاختبار او القياس وإيجاز الإجراءات المســـتعملة لاخذ العينات (إجراءات الاختبارت).
- ✓ ذكر الأجهزة والادوات المستعملة مع مواصفاتها الفنية الدقيقة وعددها ومصدرها وطريقة العمل بها (الضرورية منها فقط غير شائعة الاستعمال). ويجب استعمال الأسماء العلمية للأجهزة بدلاً عن اسمائها التجارية مع ذكر أسماء الشركات المصنعة للجهاز واية معلومات تفيد القارئ.
- ✓ وصف التعديلات اذا ما تم اجراءها على القياسات الروتينية (الاختبارات)، اما إذا ما تم استعمال اجراء جديد (اختبار جديد) فيجب ذكره وشرحه بالتفصيل.
- ✓ توضـــيح طريقة اجراءات البحث من تجربة واختبارات ورقية، وعملية، وشـــفوية او على جهاز الحاسوب.
- ✓ الطريقة الإحصائية (او/و) الرياضية المستعملة لتحليل وتلخيص البيانات.
- ✓ يحق للمجلة ان تطلب من المؤلفين تفاصيل او معلومات إضافية عن أي جزء من أجزاء البحث.

وبشـــكل عام يجب ان يضـــع المؤلفين بعين الاعتبار الأمور الآتية عند كتابته لإجراءات البحث:

- ✓ لايجوز استعمال المختصرات (بأي لغة كانت) قبل تعريفها في ملخص البحث او مقدمته.
- ✓ تحديد نظام وحدات القياس الدولية المستخدم في البحث، مثل (المتر، كيلوغرام، الثانية ... الخ)
- ✓ توضـيح جميع المواد المسـتعملة في الدراسـة بحيث يمكن للقارئ اسـتعمالها في بحوث مشـابهة أخرى.
- ✓ وصـف اهداف واجراءات القياس لكل اختبار (اختبار قبلي – اختبار بعدي– اختبار احتفاظ ... وهكذا) .
- ✓ وصـف كل التقنيات والاختبارات المسـتعملة بذكر اسـمها فقط اذا كانت معروفة وقياسـية او ذكر التفاصيل في حالة كونها جديدة او تم اجراء تعديل عليها.
- ✓ لا يجوز اضافة معلومات لا تمت بصلة بالنتائج، والتي يمكن ان تربك القارئ.
- ✓ استخدام الافعال بصيغة الماضي في عرض اجراءات البحث.

- **النتائج (Results):** يُقدم هذا القسم من البحث المعلومات الجديدة التي توصل لها الباحث، لذا يعد على انه أساس (مركز) البحث. ويلاحظ ان مقدمة البحث والإجراءات صُممت للإجابة عن التساؤلات؛ لماذا وكيف وصل الباحث (الباحثين) لهذه النتائج والتي سيتم تفسيرها في قسم المناقشة، لذا فان قيمة البحث تكون بما يتضمنه من نتائج، ويجب ان يتم عرضها بطريقة واضحة جداً ومباشرة وباستعمال العدد الضروري من الكلمات دون اسهاب او اختصار، وعادة ما يكون عرض النتائج اسهل فهماً اذا ما تم ترتيب العرض على وفق تسلسل اهداف البحث التي تم ذكرها في مقدمة البحث.

إرشادات حول عرض نتائج البحث:

- ✓ أعرض نتائج البحث بشكل بسيط وواضح في جداول او اشكال وذلك لتسهيل فهمها ومقارنتها. ملاحظة ان الجداول تعرض أرقاما دقيقة في حين ان الاشكال تظهر الاتجاهات ذات الخصائص ولا يجوز عرض ارقام الجداول نفسها في الاشكال.
- ✓ لا يجوز اعادة النتائج كتابةً بعد عرضها في الجداول أو الاشكال التوضيحية، ويمكن فقط الإشارة الى اهم ما مؤشر في الجداول او الاشكال (أي عدم استعمال العرض الكتابي للجداول).
- ✓ وثق واعرض فقط البيانات الضرورية بدلاً من الاسهاب والتكرار في عرض البيانات ولا تعرض بيانات كثيرة واختصرها بالتحليل الاحصائي ولخصها لعرضها في جداول او اشكال وذلك لتسهيل فهمها ومقارنتها.
- ✓ ضمن نتائج البحث بالنتائج السلبية (ما لم يتحقق) إن كان ذلك مفيدا لتفسير النتائج.
- ✓ عند كتابة النتائج يتم الاشارة الى الجداول أو الاشكال بارقامها (الجدول1) (الشكل1).

المناقشة Discussion: في هذا القسم من البحث يفسر الباحث (الباحثون) مضمون النتائج ودلالاتها والاثار المترتبة عليها. وتُبين المناقشة أهمية وقيمة العمل المنجز كما انها تربط كل أجزاء البحث معا. ان مهارة الباحث (الباحثين) في تفسير النتائج الجديدة، على وفق الحقائق المعروفة باستخدام نتائج البحث هي دليل على التغيرات المبتكرة (الابداعية) للسلوك الملاحظ، ويجب ان تدفع حدود معرفة القارئ (توسع مداركه) وتثير حماسته. وعلى الباحث ان يلتزم بالاتي في مناقشته للنتائج:

- ✓ ناقش على ضوء معنوية النتائج.
- ✓ لا تكرر ما تم ذكره في الدراسات السابقة.

- ✓ تتضمن مناقشة النتائج تفسير اتفاقها او عدمه مع المعلومة او المعرفة في الدراسات المنشورة سابقاً.
- ✓ تدعيم النتائج التي توصلت اليها بأساس نظري علمي (ما هي الأسباب العلمية للنتائج المتحققة).
- ✓ اقترح بحوث مستقبلية مخطط لها اوبحوث بحاجة الى متابعة (دراسة).
- ✓ لا يجوز اضافة معلومات لم يتناولها البحث، وان يتم التعامل مع النتائج الموثقة في الدراسة الحالية فقط.
- ✓ تجنب التعميم والتخمين للنتائج والتي لم تؤكدها الدراسة.
- ✓ تكتب المناقشة بصيغة المضارع والماضي، اذ تكتب المعارف المتوافرة من الادبيات والأبحاث بصيغة المضارع، في حين تكتب مناقشة نتائج البحث الحالي بصيغة الماضي.

الاستنتاجات (Conclusions): الاستنتاجات ليست إعادة صياغة لنتائج البحث، انما هي مستنبطة منها. فالاستنتاجات تشير الى الخطوط العريضة للدراسات المستقبلية استناداً على نتائج الدراسة الحالية. ويمكن تخصص فقرة مستقلة للاستنتاجات.

الشكر والتقدير (Acknowledgments): تسمح المجلة بتضمين كلمات الشكر والتقدير في نهاية البحث ويخصص لشكر المؤسسات والافراد الذين قاموا بمساعدة حقيقية للباحث لاجراء بحثه اذ يُقدم الشكر للشركة، او المؤسسة التي قدمت الأموال لدعم البحث، او المختبرات التي زودت الباحث بالادوات والأجهزة، او الى الأشخاص الذين قدموا للباحث النصيحة والمساعدة في جميع البيانات، او التحليل او أي أمر اخر مهم. كما ان هذا القسم يعد مكاناً لذكر اصل البحث وبكلام اخر اذ كان البحث مستلاً من رسالة ماجستير او أطروحة دكتوراه.

المصادر (References): تتضمن قائمة المصادر كل الاستشهادات المعتمدة في متن البحث فقط وبطرقة (APA) الإصدار السادس حصراً وفق نظام (Microsoft Word 2010) صعوداً أو برنامج (Mendeley) أو (EndNote). ان الاستشهادات النصية في متن البحث يجب ان تتطابق تماما مع قائمة المصادر.

الملاحق (Appendix): يمكن ادراج أي معلومات تخص البحث المهمة منها حصراً ضمن الملاحق، إذ تحتوي الملاحق على تفاصيل المنهاج التدريبي او البيانات او الجداول الكبيرة (الجداول المعيارية) أو اداوات البحث مثل الاستبيانات وبرامج الحاسوب المستعملة او الأجهزة المصنعة والتي يجب عرضها وشرحها لاهميتها والتي لا يمكن ادراجها ضمن متن البحث بسبب كبر حجمها.

جدول توضيحي يلخص طريقة امراد (IMRAD)

ت	القسم	الغرض او الهدف
1	العنوان	عن ماذا البحث.
2	المؤلفون (الباحثون)	أسماء وانتماءات المؤلفين.
3	الكلمات المفتاحية	الكلمات غير الموجودة في العنوان والتي توصف البحث.
4	الملخص	شرح قصير عن ذلك البحث.
5	المقدمة	لماذا هذا البحث؟ والمشكلة وماهو غير المعلوم واهداف البحث؟
6	الأدوات والإجراءات	كيف تم اجراء البحث؟
7	النتائج	ماذا وجدت؟
8	المناقشة	ماذا يعني ذلك؟ وما التالي؟ وتفسير النتائج والتوجه المستقبلي.
9	الاستنتاجات	الاثار المحتمليه (الممكنة)
10	الشكر والتقدير	لمن ساعدوك وكيف؟ وماهو مصدر التمويل؟
11	المصادر	تفاصيل عن استشهادات البحث.
12	الملاحق	المواد التكميلة.

ثالثاً: شروط استلام البحث لغرض النشر في مجلة التربية الرياضية:

- ✓ أنّ لا تزيد عدد كلمات البحث عن (2500–3000) كلمة.
- ✓ أنّ يطبع البحث بنظام (Microsoft Word 2010) صعوداً بحجم خط (12) لمتن البحث و (14) غامق للعناوين الرئيسة وبنوع (Simplified Arabic) للغة العربية و (Times New Roman) للغة الإنكليزية بابعاد الصفحة القياسية (عمودي – 2.54×3.17 سم). وبمسافة منفردة بين الاسطر و (1) بين الفقرات.
- ✓ أنّ يثبت اسم الباحثين الكامل والصحيح باللغتين العربية والإنكليزي اسفل عنوان البحث، في حين تثبت ملعوماتهم (الشهادة، والقابهم العلمية ومكان عملهم ووسيلة الاتصال بهم البريد الاليكتروني ورقم الهاتف مع المفتاح الدولي) في هامش الصفحة الاولى.
- ✓ ترقم صفحات البحث الكترونياً أسفل ووسط الصفحة.
- ✓ تكون أبعاد الصور او الاشكال متناسقة وباسعمال الماسح الضوئي حصراً وبدقة عالية.

- ✓ يكتب رقم الجدول وعنوانه بشكل مختصر ووافي اعلى الجدول في حين يكتب رقم وعنوان الصورة او الشكل في الأسفل وبشكل ومختصر ووافي.
- ✓ ينشـر البحث باللغة الإنكليزية بعد ان يتم ترجمته من قبل المجلة يمكن ارسـال البحوث او يمكن ارساله باللغة الإنكليزية.
- ✓ تطبع الأرقام بالصيغة العربية حصراً (0 1 2 3 4)، وعند استعمال الاقواس لا يتم ترك مسافة بين الاقواس مثل: (2540)، وعدم ترك مسافة قبل علامات الترقيم مثل الفارزة، او النقطتين، او النقطة. مثال: التدريب الرياضي، التعلم الحركي، علم النفس الرياضي.
- ✓ لا يجوز اسـتعمال برامج الترجمة الفورية او مواقع الانترنت للترجمة للغة الانكليزية مثل (google translate) وغيرها.
- ✓ استعمال المصطلحات العلمية المعروفة والمتداولة، وعلى الباحثين المقديمن لبحثهم باللغة العربية ادراج المصطلحات العلمية باللغة الإنكليزية في متن البحث.
- ✓ الاسـتشـهاد بالمصـادر يكون وفق أسـلوب (APA) الإصـدار السـادس حصـراً وفق نظام (Microsoft Word 2010) صعوداً أو برنامج (Mendeley) أو (EndNote).
- ✓ يجب ان تتطابق الاستشهادات النصية في متن البحث تماماً مع قائمة المصادر.
- ✓ لا يقبل الاستشهاد من المواقع الاليكترونية العامة والضعيفة.
- ✓ يقبل الاستشهاد من المواقع العلمية الرصينة الرصينة بالاعتماد على البحوث المنشورة المجلات المُحكمة والكتب العلمية والرسائل والاطاريح الجامعية المحلية او الدولية.
- ✓ يجب أنّ لا تقل الاستشهادات بالمصادر العلمية عن (25) مصدر رصين وبواقع (50%) من البحوث العلمية كحد أدنى، و (50%) كحد أعلى من الكتب العلمية.
- ✓ يجب ان تكون المصادر حديثة (اخر خمس سنوات)، مع وجود بعض الاستثناءات الضرورية.

ثبت المحتويات

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The effect of neuromuscular training on improving some skill performances in basketball

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Abstract:
The aim of the recent study was to examine the effect of neuromuscular training on performance layup and free throw shots performance among female basketball students. Study sample was female students of physical education and sport sciences department (Age 20.21±39.0) who volunteered to participate in this study. Thirty-seven female students participated in this study, where (21) female students were selected to be experimental group of neuromuscular exercises. A sample of (16) female students was used for the exploratory study from the original community. Results showed that neuromuscular exercises can improve the chosen basketball skills (free-throw and layup-shot shooting). The contribution of neuromuscular training in a positive way to the free-throw and layup-shooting skills.
Keywords: shooting, basketball, neuromuscular exercises.

Introduction

Neuromuscular training is defined as a combination of exercises that promote motor sensory function during physical performance in most sports (Sañudo et al., 2019), and Rogasch et al., 2009) considers that it is an integrative training program aimed at enhancing fitness and preventing the accumulation of neuromuscular fatigue residues, as well as improving the motor efficiency of working muscles.

Studies have shown that neuromuscular training improves responses between the nervous system and the muscular system, which activates muscles and their recruitment patterns and promotes compatibility and strength in athletes (Santos et al, 2021, Akbar, et al, 2022). In addition, studies have demonstrated that neuromuscular training can help athletes develop compatibility and balance, which are necessary to carry out complex motor tasks accurately and efficiently during various sporting activities in group games in particular, which can make the difference between success and failure in competitive sports (Pardos et al, 2021, Roso-Moliner et al, 2023

Neuromuscular training can also improve an athlete's ability to produce force quickly, known as Rate of Force Development. (RDF) which is critical in sports requiring explosive movements, such as jumping, jump and running where enhancing RFD through neuromuscular training can lead to significant improvements in athletic performance (Maffiuletti et al, 2016). Neuromuscular function affects an athlete's stamina and ability to resist fatigue during exercise for long periods,

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as the muscle nervous system continuously recruits muscle fibers to maintain continuity of effort allowing well-trained neuromuscular pathways to use energy efficiently and delay the appearance of fatigue and improve overall stamina. (Akbar et sl, 2022, Jurasz et al, 2022)

Several studies have also shown that neuromuscular training can reduce the risk of injury especially in the lower limbs of the body (Bergeron et al, 2015 Schmidt et al, 2022). This was the conclusion of a study by Hadzovic et al., 2020, where researchers found that a program of neuromuscular exercises on knee injuries had led to improvements in motor balance, allergic abilities, balance and flexibility, as well as vital mechanical abilities related to anterior cruciate ligament injuries, which contributed to improved athletic performance among female basketball players.

Basketball is one of the most widespread group games in the world after football as it is a highly popular fan game between females and males alike. Playing basketball requires a lot of physical skills such as speed, strength, ability to change direction, balance, endurance and other fitness elements that contribute to an athlete's performance efficiency (Torres-Ronda et al, 2016, Sebastian Hernandez et al, 2018, Stojanović et al, 2018, Cherni et al, 2021.(

Many studies have addressed the impact of neuromuscular training on the skill and physical performance of basketball, where studies have shown that neuromuscular training programmers have significantly improved the vertical jumps of female basketball players (Benis; M. L. Russo; A. La Torre. 2014, Cherni et al, 2021, Kooroshfard et al 2022, Brini et al, 2023)

In a study of Noyes et al., 2015, to determine whether a sports training program could improve the indicators of neuromuscular performance of female high school basketball players, 57 female athletes between the ages of 14 and 17 were studied in a 6-week program at a rate of 3 days per week for approximately 90-120 minutes per session. Researchers have concluded that there has been a marked improvement in the jump test and maximum aerobic strength of high school basketball players.

Correction is a key skill in the basketball game, which directly contributes to the team's success. Effective shooting includes accurate correction, muscular compatibility and effective accuracy to guide the ball towards the basket. The ability to shoot from different distances and angles and in different playing situations is crucial to scoring points and winning games. Basketball correction requires the integration of multiple physiological mechanisms for optimal performance. In a study conducted by Bahmani et al. (2019), the importance of muscle strength and the consistency of its work in the efficiency and accuracy of correction performance were highlighted. The results revealed that elite basketball players showed superior muscle strength in the upper body, especially in the shoulders, forearms and wrists, directly affecting the accuracy of their correction. Furthermore, the researchers concluded that the correction process requires high muscle compatibility, including synergistic action of different muscle groups to generate the perfect force to push the ball towards the basket.

In a Canli study (Canli, 2019) assessing the impact of the 8-week neuromuscular training program on the motor and basketball skills selected by male basketball players before puberty, the study found that neuromuscular training has important effects on the motor and correction skills of male basketball players before puberty. Hence, it is clear that basketball correction depends on a complex interaction between the nervous system and the muscle system in order to improve the accuracy of basketball correction performance. Understanding the multifaceted role of basketball correction will help players, coaches and researchers develop effective training strategies and enhance overall performance on the field.

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The researcher noted the low level of female students in peaceful correction and free throwing skills in basketball despite the efforts made in the teaching process and to ascertain that observation, reference was made to the results of two previous semesters education ", where the overall level of peaceful correction and free throwing skills was weak for most female students And this may be due to the use of only one method of education, which depends entirely on the teacher and the learner's role is to implement what he is asked to do strictly without thinking, Also, the non-use of various exercises with a thoughtful effect such as neuromuscular drills, which may contribute to improving students' skill performance And that's what led the researcher to use a set of neuromuscular exercises .

Research Objective:

-Identify the impact of neuromuscular workouts on the skill level of peaceful correction and free throwing skills of basketball course students

Search Assumptions:

-There are statistically significant differences between the mediums of tribal and post measurement of the research group in the skill level of peaceful correction skill in basketball in favor of dimensional measurement

-Statistical discrepancies between the averages of tribal and post measurement scores in the skill performance of the basketball free throw skill in favour of dimensional measurement

Search Terms:

Neuromuscular drills:

A set of enhanced exercises for unconscious motor responses by stimulating both incoming signals and central mechanisms responsible for dynamic joint control. (Risberg, Mork, Jenssen, & Holm, 2001)

Accuracy of correction:

Player's susceptibility to target by directing voluntary movements of working and corresponding muscles in the execution of movements in the direction required for target injury (Delimi et al., 2010)

Search Procedures:
-Research curriculum: The researcher used the one-set experimental curriculum to suit the type and nature of this research using tribal and postgraduate measurement.
-Areas of research:
Human Field: The research was applied to some female basketball course students
Spatial field: Gymnasium in the Department of Physical Education and Sports Sciences - Sultan Qaboos University.
Time field: First semester of the university year 2023-2024.
-Research society: Students of basketball course - Department of Physical Education and Sports Sciences - Sultan Qaboos University - for the university year (2023-2024)

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-Sample research: The sample of the research was chosen in a deliberate manner from the original research community. 37 students were selected. 21 students were selected to apply the group of neuromuscular trainings. A sample was also used for the survey study from the original community of 16 students.

Procedures for the implementation of the study:

Implementation of the program: The training program lasted for six weeks at the rate of three units per week with a time of 45 minutes per training module. The implementation of the training program was selected on the basis of (Brini et al., 2023;Canli) 2019

Devices and tools used:

- Rastameter for Height Measurement - Medical Device for Weight Measurement - Computer to
- PhotoCell - Data Collection Form - Conquer
- Stopwatches - Core Basket

Tribal measurement: The researcher performed the tribal measurement of the research group between 7/9 and 11/9/2023.

Dimensional measurements: After the completion of the basic study, the dimensional measurement of the research group was carried out between 20/11 and 21/11/2023

Scientific transactions of tests (Validity - consistency(

A- Physical Test Certification Coefficient:

Table (3)
Differences between the distinctive group and the unmarked group in physical tests to find the factor of honesty

Statistical Indicators / tests		special group n = 8		Unmarked Group n = 8		The difference between the two averages	T	Validity
		mean	Std.division	mean	Std.division			
Reaction speed (second time)(		0.34	0.07	0.59	0.18	0.25	**4.03	0.84
agility		12.25	0.43	13.59	0.29	1.34	**6.43	0.92
Speed 20 m (Time)(		3.43	0.09	3.94	0.11	0.50	**14.37	0.98
balance	Right Balance	53.75	6.94	12.37	10.91	41.37	**8.64	0.96
	Left Balance	59.87	0.35	20.87	10.10	39.00	**10.74	0.97
Vertical jump		50.12	4.54	38.12	1.81	12.00	**7.05	0.94

* ** Significant at the 0.01 level = 2.97 * ** Significant at the 0.05 level = 2.14

Table No. (3) on differences between the distinctive group and the non-distinctive group in physical tests to find the factor of honesty shows that there are statistically significant differences at the level of (0.01) where the value was (v) calculated greater than the value of (v) tabular at the same level where the value was (v) The tabular of physical tests is limited to (4.03: 14.37). The factor of honesty is between (0.84: 0.97). This indicates the sincerity of the test under schedule.

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Physical Test Stability Coefficient :

Table (4)

Differences between application and reapplication Physical tests to find the stability factor

tests / Statistical Indicators		Practical		Re-Practical		The difference between the two averages	T	Validity
		Mean	Std.division	Mean	Std.division			
Reaction speed (second time)(		0.46	0.19	0.48	0.18	0.01	1.00	0.96
agility		12.92	0.78	13.04	0.71	0.12	1.27	0.87
Speed 20 m (Time)(		3.69	0.28	3.77	0.28	0.08	1.59	0.73
balance	Right Balance	33.06	23.12	34.94	21.04	1.87	1.46	0.98
	Left Balance	40.37	21.09	41.75	19.27	1.37	1.74	0.99
Vertical jump		44.12	7.01	45.43	6.47	1.31	1.42	0.85

** Significant at the 0.01 level = 2.95* Significant at level 0.05 = 2.13

It is clear from Table No. (4), which concerns the differences between application and reapplication in physical tests to find the reliability coefficient, that there are no statistically significant differences at the level (0.01), as the calculated (t) value was less than the tabulated (t) value, as the (t) value ranged The calculation for the physical tests ranged between (1.00: 1.74), and the reliability coefficient was between (0.73: 0.99), and this indicates the reliability of the test.

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Validity and reliability coefficient of skill tests:

A- Validity coefficient of skill tests:

Table (5)

Differences between the distinguished group and the non-distinctive group in testing the peaceful shot skill and the free throw skill to find the validity coefficient

Statistical Indicators / tests	special group n = 8		Unmarked Group n = 8		The difference between the two averages	T	Validity
	Mean	Std.division	Mean	Std.division			
Testing the skill of shooting a ladder	6.87	1.45	3.62	0.92	3.25	**4.33	0.85
Free throw skill test	5.37	1.06	1.62	0.74	3.75	*10.25 *	0.97

**Significant at the 0.01 level = 2.97* Significant at the level of 0.05 = 2.14

Table No. (5), which concerns the differences between the distinguished group and the non-distinctive group in testing the peaceful shot skill and the free throw skill to find the honesty factor, that there are statistically significant differences at the level (0.01), where the calculated (t) value was greater than the (t) value. The tabular value is at the same level, where the tabular T value for the ladder shot skill test was 4.33 and the validity coefficient was 0.85, and the T value for the free throw skill questionnaire was 10.25, and the honesty coefficient was 0.97. This indicates the validity of the tests in the table.

B- Reliability coefficient of skill tests:

Table (6)

Differences between application and re-application in testing the ladder shot skill and free throw skill to find the reliability coefficient n = 16

Statistical Indicators / tests	special group n = 8		Unmarked Group n = 8		The difference between the two averages	T Mean	Validity
	Mean	Std.division	Mean	Std.division			
Testing the skill of shooting a ladder	5.25	2.05	5.50	2.09	0.25	0.94	0.87
Free throw skill test	3.50	2.13	3.87	1.89	0.37	1.46	0.88

**Significant at the 0.01 level = 2.95* Significant at level 0.05 = 2.13

Table No. (6), which concerns the differences between application and reapplication in the performance accuracy test and the performance level assessment form for the skill of scrolling forward and upward to find the reliability coefficient, that there are no statistically significant differences at the level of (0.01), as the calculated (t) value was less than the (t) value. T)

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Tabulation, the reliability coefficient was 0.87, and the value of (T) in the free throw skill test was 0.88, and this indicates the reliability of the test.

Homogeneity of the study sample:

A- Basic variables (age - height – weight)

Table (1)

Statistical description of the research group in basic variables before the experiment

Variables	Statistical significance of characterization			
	Mean	median	std deviation	Skewness
age	20.09	20	0.83	2.12
height	159.09	160	4.88	0.953
Weight	54.25	54.70	6.07	0.230

It is

Clear from Table No. (1), which relates to the statistical description of the research group, that there is no dispersion in the data, as the values of the skewness coefficient for the physical variables ranged between (-3, +3), which means that they fall under the moderate curve, which indicates the homogeneity of the sample members.

B- Physical tests

Table (2)

Statistical characterization of the research group in physical tests before the experiment

Variables		Statistical significance of characterization			
		Mean	median	std deviation	Skewness
Reaction speed (second time)(		0.47	0.50	0.16	1.76
agility		12.94	13.00	0.68	-0.41
Speed 20 m (Time)(		3.70	3.75	0.24	-0.12
balance	Right Balance	37.14	36.00	22.70	-0.37
	Left Balance	41.52	50.00	18.94	-0.52
Vertical jump		44.00	44.00	6.15	0.63

Table No. (2) is based in particular on the statistical assignment to the research group because there is no correlation in the distinct data, as skewness trade-off values for the variables were reached between (-3, +3), which means that they fall below the moderate level, which indicates the integration of the sample.

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C- Skill performance test

Table (7)
Statistical description of the experimental group in the ladder shot skill test and the free throw skill testBefore the experiment

Variables	Statistical significance of characterization			
	Mean	median	std deviation	Skewness
Testing the skill of shooting a ladder	5.38	6.00	1.80	0.44
Free throw skill test	3.14	3.00	2.00	0.52

Table No. (7), which relates to the statistical description of the research group, that there is no dispersion in the data, as the values of the skewness coefficient for the physical variables ranged between (-3, +3), which means that they fall under the moderate curve, which indicates the homogeneity of the sample members.

Discussing the results of the first hypothesis:
The first hypothesis: - There are statistically significant differences between the average scores of the pre- and post-measurements in the skill performance of the ladder shot skill in basketball in favor of the post-measurement.

Table (8)
Significance of the differences between the average measurements (pre-post) and the percentage of improvement for the skill performance of the ladder shot skill in basketball in favor of the post measurement

Measurements / Variables	Pre-measurement		Dimensional measurement		The difference between the two averages	t	Improvement rate %
	Mean	Std.division	Mean	Stddivion			
Testing the skill of shooting a ladder	5.38	1.80	7.24	1.13	1.85	**5.15	34.58

Table No. (8) Regarding the significance of the differences between the average measurements (pre-post) and the percentage of improvement for the skill performance of the ladder shot skill that there are significant differences in favor of the post measurement at the level of (0.01), where the calculated (t) value was greater than the (t) value. T) Tabular, and the percentage of improvement for the skills test was (34.58%.(
According to the studies, the researcher believes that neuromuscular training focuses on developing muscular strength, coordination, balance, and accuracy, both of which are necessary to implement precise shooting techniques and maintain effective shooting performance, as Preisel

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et al. (2007) point out in a study to examine the effect of motivational training on participants' shooting performance in basketball. Those who received proprioceptive training had enhanced shooting accuracy and coordination compared to the control group. The researchers attribute this improvement to the precise sense of body position and movement that is achieved through training in neuromuscular exercises and through enhancing proprioceptive capabilities. The study proved that players can maintain a more stable aiming performance, which leads to improved performance results.

The results of the current study are consistent with the study of Hassan et al. (2023) in which an eight-week program, consisting of weight training, plyometric exercises, and core exercises, led to improvements in muscle strength and shooting accuracy in young basketball players.

In addition to a study conducted by Dugramasi et al. (2020) in which he evaluated the effects of a neuromuscular training program on the shooting accuracy of basketball players. The training program included exercises focused on improving shooting techniques, strengthening relevant muscle groups, and improving coordination between working muscles. The results indicated that participants who underwent neuromuscular training showed better accuracy in aiming compared to the control group, which supports the fact that training in neuromuscular exercises can enhance motor control and muscle coordination, which positively affects aiming performance.

Discussing the results of the second hypothesis:

The second hypothesis: - There are statistically significant differences between the average scores of the pre- and post-measurements in the skill performance of the free throw skill in basketball in favor of the post-measurement.

Table (9)

Significance of the differences between the average measurements (pre-post) and the percentage of improvement for the skill performance of the free throw skill in basketball in favor of the post measurement

Measurements / Variables	Pre-measurement		Dimensional measurement		The difference between the two averages	t	Improvement rate %
	Mean	Std.division	Mean	Stddivion			
Free throw skill test	3.14	2.00	5.09	1.67	1.95	**3.80	62.10

Table No. (9) Regarding the significance of the differences between the average measurements (pre-post) and the percentage of improvement in the skill performance of the free throw skill that there are significant differences in favor of the post measurement at the level of (0.01), where the calculated (t) value was greater than the (t) value. T) Tabular and the percentage of improvement for the skill test was (62.10%(

In this regard, the researcher points out the effectiveness of neuromuscular training on the performance of free-throw shooting skills, as it confirms the results of a study conducted by Smith et al. (2018) to evaluate the effect of neuromuscular training for a period of 12 weeks on the

shooting performance of basketball players through a program that included balance, strength, and coordination exercises. . The results showed a noticeable improvement in the aiming accuracy of the participants compared to the control group.

Likewise, the results of the current study are consistent with Johnson et al.'s (2019) study on the effect of a 10-week plyometric training program on the shooting ability of young basketball players. The applied program included plyometric exercises and explosive movements aimed at enhancing muscle strength and coordination, and the results showed a noticeable improvement in the accuracy and speed of aiming in the plyometric training group compared to the control group.

In addition, Thompson et al. (2020) conducted a review of data collected through multiple studies on neuromuscular exercise training and shooting ability, where the analysis revealed a consistent positive effect of such training on shooting performance, noting improvements in shooting accuracy and range of agreement in shooting. Performing movements related to shooting. This is consistent with what was shown by an analysis of data from previous studies conducted by Brown and colleagues (2020) who concluded that neuromuscular exercise training led to significant improvements in shooting accuracy, shooting percentage, and overall shooting performance in basketball players across different age groups and skill levels.

The results of the current study are also consistent with the study of the results of Der McInnis et al. (2017), where the study investigated the effects of a neuromuscular training program on the ability to shoot a basketball and jump performance. The results showed a noticeable improvement in shooting accuracy, jumping height, and muscular strength among the participants after completing the training program. These improvements indicate that increased muscular strength and stability developed through neuromuscular training contribute to improved shooting efficiency.

Conclusions:

-There are significant differences between the pre and post measurements in favor of the post measurement for the research sample.

-A noticeable improvement in the free throw and free throw skills among the research sample in the post-measurement.

Recommendations:

Scientific evidence supports the positive effect of neuromuscular training on the shooting ability of basketball players.

-Integrating neuromuscular exercise training into the training system for basketball players to improve shooting performance and develop skill performance.

-Conduct more research on the effect of neuromuscular training in reducing the risk of injuries.

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The contribution of The Mindfulness and its relationship to risk-taking behavior in predicting sports injury among junior footballers in the Kingdom of Saudi Arabia

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Abstract:
The study aimed to identify the level of mental alertness and risk-taking behavior among soccer players, and to identify the relationship between mental alertness and risk-taking behavior, and to identify the differences in mental alertness and risk-taking behavior in the light of the following demographic variables (training age, degree of injury severity, number of injury times, centers playing), and knowing the extent of the contribution of mental alertness and its relationship to risky behavior to predict sports injury in football youths, and the study used the descriptive approach, and the study population consisted of junior high-class clubs, and the sample included (300) youths, who were chosen in a simple random way, and the study was used in The tools are a measure of mental alertness (Johnson, et al, 2016), a measure of risk-taking behavior (Abdel-Fattah, Mahmoud, 2019), and a form for the player's primary data. There is an inverse (negative) statistically significant correlation between the total degree of mental alertness and risk-taking behavior and its dimensions. Mental alertness and risk-taking behavior according to the following variables (training age - playing position), and there are statistically significant differences in mental alertness according to the number of sports injuries in the past and current season and the severity of the injury in favor of the players whose number of injuries is from (1-3), and whose severity Their injury is light, and there are statistically significant differences in the risk-taking behavior according to the number of injury times for the two seasons and the severity of the injury in favor of the players whose number of times of injury is from (1-3) times and whose severity of injury is light, and since the higher the degrees of mental alertness among soccer players, this leads to The decrease in risk-taking behavior among young people, which is reflected in the reduction of sports injuries, so mental alertness predicted the risk-taking behavior, which was reflected in the decrease in the rate of sports injuries.

Keywords: Mindfulness - risk-taking behavior - sports injury - junior footballers

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Introduction

The current era is witnessing a clear increase in the spread of various daily distractions resulting from scientific and technological progress in various aspects of life, which in turn affects the individual and his ability to pay attention and remain alert. This is what prompted researchers in the field of psychology to search for factors and variables that help the individual to remain alert and focused on what is going on around him, and one of these concepts is mental alertness. (Al Raja, 2021).

During the past twenty years, interest in mental alertness has appeared in all aspects of life, and it has occupied a place in psychology and has been recorded as a psychological concept that researchers have addressed in studies related to many meditative practices to reduce disturbed behaviors. Great progress has also been achieved in the field of research and studies related to the brain, with increased interest by researchers and scientists in mental alertness. Considering that it includes many competencies or abilities that can be learned, many researchers and scientists have emerged who have taken upon themselves the task of formulating and crystallizing the various concepts of mental alertness, and at the same time they have realized the role that genetics plays in developing mental alertness. The state of attention and awareness of an individual. (Mokhtar, 2019).

Mindfulness is classified as one of the modern concepts associated with positive psychology, and its spread has been observed over the past years. Due to its importance in an individual's life in all aspects of life in general, it has occupied a great place in various fields. At the sports level, many researches have been conducted due to its importance, and it has received the attention of researchers in the field of sports psychology. There are many definitions of mental alertness according to researchers, trends, and theories. Some of them see it as a psychological concept, others see it as a trait, and others see it as a skill. (Mohamed, 2020).

(Kiken & Shock, 2011) believe that mental alertness allows the individual to evaluate his current situation more objectively, away from negative biases, so that the individual becomes less dependent on preconceived ideas and beliefs. Mindfulness also works at the same time to control attention and reduce rumination. It protects the individual from negative experiences and reduces hasty responses to situational stimuli.

Acting without awareness and alertness, the individual often loses the information necessary to deal with the situations he faces, which leads to a lack of flexibility in cognitive processing and thus he is not open to new experiences. This is what mindfulness achieves, making the individual alert and aware of his or her thoughts and feelings. (Rania, 2018).

Mindfulness makes the individual accept his current situation, even if he is exposed to emotional pressure or psychological pain. He is able to confront the situation rather than avoid it. This acceptance helps the individual protect himself from excessive anxiety and be alert to the physiological states that accompany emotions. (Hyena, Talab, 2013).

Kohkamp (2015) explained that mindfulness practices enhance and increase an individual's ability to pay attention, thus facilitating and increasing the state of flow. Those with the characteristics and characteristics of high mental alertness are better and more capable of self-organization and behavior regulation, and they show better and optimal performance. Self-regulation of attention, as a component of mindfulness, is an important component of an individual's mental capacity that increases their experience of flow.

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One of the first theories that explained mental alertness was Langer's theory (1989), which stated that it is cognitive knowledge concerned with self-awareness and mental openness in more than one aspect. She considered it one of the most important elements of an individual's mental health, especially in increasing the ability to find innovative solutions, and identified four components for it: including searching for new things, communication, offering new things, and then flexibility. (Ismail, 2017).

Mukhtar (2019) also points out the importance of studying the mental alertness of athletes in achieving ideal performance, and because every sporting activity has an optimal degree of experience in maintaining a state of mental alertness, which varies depending on the nature of the sporting activity, so the level of mental alertness of the athlete and each sporting activity must be known. Separately. Its importance is also evident in the necessity of identifying mentally untrained players for the possibility of preparing mental training programs to improve the mental state to achieve a state of mental alertness, regardless of the circumstances and situations during sports performance.

Therefore, it has received the attention of many researchers in the field of sports psychology, and evidence indicates its effectiveness in improving cognitive performance and emotional awareness. (Higgins, Eden, and Moed, 2016), as young football players are exposed to psychological pressures in training and competitions, which leads to the emergence of many negative effects of these pressures on the youngster, which may put him in a state of confusion and confusion. It reduces his ability to think and understand what is going on around him correctly. He loses the ability to concentrate. The challenges and difficulties faced by young football players cause them to engage in so-called risk-taking behavior (Sapat, 2001).

Researchers have confirmed that risk-taking behavior, which mainly arises from inaccurate risk perception, is an important factor, and psychological research has also found that there are cognitive interactions between emotions and risk perception. (Texier et al., 2014).

Bandura (1997) suggested that athletes who view a situation as risky have lower self-efficacy, a greater expectation of failure, and thus a greater likelihood of injury. Conversely, athletes with high self-efficacy are more likely to attempt difficult skill risks and take calculated risks, as opposed to reckless risks, so athletes with high self-efficacy should be more likely to engage in risk-taking in sports. Bandura expanded this hypothesis to indicate Some individuals may overestimate their abilities or view themselves as better than they are. In fact, overestimating ability may lead to feelings of invulnerability and a decision to engage in more risky and potentially harmful behaviors. For example, young soccer players who overestimate their abilities and inaccurately view playing soccer as a low-risk activity may engage in risky behaviors. On the pitch, such as late tackles and aggressive play, which could put them at risk of injury.

In the sports field, they rely on the fact that there are some young people who are more inclined to take risks while competing with their colleagues and competing in their teams, and this may lead to a large percentage of the possibility of becoming famous. Some believe that these players are characterized by boldness and courage, and therefore they have a wrong belief in the sports field. Boldness and courage are clearly different from the indefinite variety, because the player who is characterized by the indefinite variety in behavior is addressed as being characterized by preparation, aptitude or sports knowledge, the basic skill that must be acquired, so those players who are characterized by a tendency towards variety or trying to acquire it how to reduce or

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Avoid the dangerous situation of Taylor's farmers by increasing their information and knowledge about such trends in sports specialization that are seen as discrimination. (Allawi, 1998).

Bargman (1993) also pointed out that some studies found a link between sports fame and some brands among players, which is represented by a lack of emotional control, self-control, self-confidence, effectiveness, self-efficacy, and other elements. . There are also some studies related to the sports month and everything that violates control, anxiety, and harmful advice from others. Because both (Sehultz, D. Sehultz, s. 1990) that there is a type of personality, it is more ready than others to fall into the call, as its individuals have a fairly fixed psychological and physiological talent, and they are largely responsible for them in the request.

Hajjaj (2010) confirmed that his high level of multimedia vocabulary is highly appreciated by football players, and has a significant impact on the player's self-confidence. However, if its level is exaggeratedly high, it leads to involvement or targeting of sports fame and its frequent repetition as a result of the attempt. The type of player who achieves the highest level of performance often exceeds their abilities and physical fitness.

The light and the above and the abundance of what the foot is exposed to from your watch. (Said 1999), (Koh, D. 1997), (Young & 2005). The topic has attracted the attention of researchers trying to determine the extent of interest in racism and its relationship to its behavior in predicting sports injury. Therefore, the company conducted careful research into the internal view that might contribute to a sports month, as the researcher prepared to study many accuracy and behavior and the extent of the possibility of listening to this view in its emerging sports sciences from football in the Kingdom of Saudi Arabia, and solved the problem in the following question:

How accurate is mental awareness and its relationship to multiple behaviors in predicting sports in

the importance of studying:

The importance of the study lies in the following points:

First: the final importance:

.1It is one of the recent studies related to biological diversity and multiple behaviors to predict sports injuries.

.2The study may be too late in reducing the sporting aspirations of young football players in the Kingdom of Saudi Arabia.

.3Enriching the Arabic library, as the diversities of the current study exceed modern concepts in sports psychology.

Second: Practical importance:

.1This study was improved by adding mental training programs to monitor foot affairs.

.2The results of this study may be useful in predicting injuries in football sports affairs in the Kingdom of Saudi Arabia.

.3It may help us through the conditions of criteria in the psychological and mental choice of our football affairs.

research aims:

1. Identifying the level of mental alertness among emerging football players in the Kingdom of Saudi Arabia.
2. Identify the level of risk-taking behavior among emerging football players in the Kingdom of Saudi Arabia.

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3. Identify the relationship between mental alertness and risk-taking behavior among young football players in the Kingdom of Saudi Arabia.
4. Identifying the differences in mental alertness among football juniors in light of the following demographic variables (age of training - degree of injury severity - number of times injured - playing positions).
5. Identify the differences in risk-taking behavior among emerging football players in light of the following demographic variables (age of training - degree of injury severity - number of times injury - playing positions).
6. Knowing the extent to which mental alertness and its relationship to risk-taking behavior contribute to predicting sports injuries among emerging football players in the Kingdom of Saudi Arabia.

Questions:

.1What is the level of mental alertness among emerging football players in the Kingdom of Saudi Arabia?

.2What is the level of risk-taking behavior among football youth in the Kingdom of Saudi Arabia?

.3Is there a statistically significant relationship between mental alertness and risk-taking behavior among emerging football players in the Kingdom of Saudi Arabia?

.4Are there differences in mental alertness among football juniors in light of the following demographic variables (age of training - degree of severity of injury - number of times injury - playing positions)?

.5Are there differences in risk-taking behavior among football juniors in light of the following demographic variables (age of training - degree of injury severity - number of times injury - playing positions)?

.6To what extent does mental alertness and its relationship to risk-taking behavior contribute to predicting sports injuries among emerging football players in the Kingdom of Saudi Arabia?

Search terms:

Mental alertness:

It is “a state in which an individual is alert and aware of what is happening in the present moment and fosters interest and awareness of ongoing experience or reality” (Brown & Ryan, 2003).

Risk behavior:

It is “the possibility of bad consequences, loss, misfortune, the possibility of physical harm, loss, risk, and seizing opportunities as a result of choosing or performing a particular action” (Barkley, 1980).

Sports injury:

Al-Shatnawi (2016) defined it as “the exposure of various body tissues to external or internal influences during training or competition, which leads to anatomical and physiological changes at the site of injury, which disrupts the work or function of those tissues temporarily or permanently”.

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Previous studies:

Arabic Studies:

-Navigation Study (2021) The study aimed to reveal the relationship between future orientation, mental alertness, emotional intelligence, and locus of control among secondary school students, and the possibility of predicting future orientation as a dependent variable through the independent variables: mental alertness. Emotional intelligence and locus of control. The study used the descriptive approach, and the sample consisted of (314) male and female students. The study tools included the future orientation scale, the mental alertness scale prepared by the researcher, the emotional intelligence scale prepared by: (Othman, Rizk, 2001), and the control orientation scale prepared by: (Othman, Rizk, 2001). Suarez Alvarez et al., 2016) Translated by the researcher. The most important results were the presence of a positive, statistically significant correlation between the dimensions of orientation toward the future and the dimensions of: mental alertness, emotional intelligence, and the internal control perspective, while the correlation was negative between the dimensions of orientation. Towards the future. The future and orientation towards the future. External control. The results also indicated that the dimensions of orientation toward the future can be predicted through the independent variables of the research.

-Moawad study (2021) The study aimed to reveal the differences between low and high mental alertness in psychological flow and risk-taking behavior among students of the College of Education, and to determine the nature of the relationship between alertness, psychological flow, and psychological volatility. Psychological activity among them. Risk-taking behaviour. The descriptive approach was used on a sample of (450) male and female students. A student in the fourth year at the Faculty of Education, Mansoura University, including (228) male and (222) female students, through the application of three measures prepared by the researcher, which are the use of the t-test, two-way analysis of variance, and the Pearson correlation coefficient. The results showed that there are fundamental differences between high and low alertness. Mental alertness in psychological flow is in favor of high alertness, that is, mental alertness increases the level of flow among students, and there is a negative correlation between mental alertness and risk-taking behavior, meaning that a high level of mental alertness among students reduces their risks - risk-taking behavior and a low level of mental alertness. . Increases risk-taking behaviour.

–Moses Study (2021). The study aimed to identify the relationship between self-esteem and risk-taking behavior in sports injuries among youth through the degree of self-esteem and risk-taking behavior among youth according to the degree of injury and gender, and the relationship between self-esteem and risk-taking behavior among youth. Self-esteem and risk-taking behaviors among young people. Self-esteem and risk-taking behavior according to the degree of injury and gender, and the researcher used the descriptive approach to suit it. Due to the nature of the study questions, the sample was selected randomly and randomly and amounted to (260) junior sports players. The study tools used a risky behavior scale prepared by the researcher, a self-esteem scale, and a sports injury registration form. The results showed an increase in risk-taking behavior and self-esteem scores among young people. Of both genders, those with the highest degree of infection (third degree) were distinguished by high self-esteem and risk-taking behavior, and a statistically significant negative correlation was found between the axis (negative self-esteem - positive self-esteem in other individuals) and risk-taking. - Risk-taking behaviors in

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girls with second-degree injuries. There is a statistically significant positive correlation between the total score of self-esteem and risk-taking behavior among boys with second-degree injuries, and there is also a statistically significant positive correlation between the two axes. (Positive self-esteem - positive for others) among girls with third grade, and there is a statistically significant negative correlation between the axis (negative self-esteem - negative for others) and risk-taking behavior. In children whose infection is second degree. There is a positive, statistically significant correlation between the axis (positive self-esteem - positive towards others) and risk-taking behavior among boys with third-degree injury.

-Study by Ashour (2021). The study aimed to examine the relationships between mental alertness variables, academic self-efficacy, and professional future anxiety, and to determine the predictive power of both mental alertness and academic self-efficacy with professional future anxiety. The study also aimed to identify the level of mental alertness and academic self-efficacy. And professional future anxiety among graduate students in Palestinian universities, as well as revealing the effect of the interaction of gender, university, and college variables on the variables: mental alertness, academic self-efficacy, and professional future anxiety. The study used the descriptive, correlational approach, and the study sample consisted of (414) male and female students. The mental alertness scale of Baer and colleagues (Baer et al, 2006) was also used. The results of the study showed that the level of mental alertness was moderate, that the level of academic self-efficacy was high, and that the level of anxiety about the professional future was moderate, in addition to the existence of a direct, statistically significant relationship. relationship. There is a statistically significant relationship at the level of (0.01) between mental alertness and academic self-efficacy among students, and there is a statistically significant inverse relationship at the level of (0.01) between mental alertness and academic self-efficacy among first-year students. One hand, worrying about the future. Students' professionalism and mental alertness contribute to predicting future professional anxiety.

-Study by Al-Azmi (2020) The research aims to know the relationship between mental alertness and emotional regulation among players of first-class clubs in the State of Kuwait. The research community included players from first-class clubs in the State of Kuwait, and the research sample was selected from players from first-class clubs in the State of Kuwait, numbering (120) players. The researcher used the descriptive method as a research tool in accordance with the nature of the research. The measurement tools were the mental alertness and emotional regulation questionnaire. One of the most important results of the research is the high level of mental alertness among first-class players, and the existence of a statistically significant correlation between mental alertness and emotional regulation strategies among players. First Division players.

-Hassan’s study (2020) aimed to know the factorial structure of the risk behavior and decision-making scale for divers, and to identify the correlation between risk-taking behavior and its dimensions, and decision-making and its dimensions for divers, and to identify the correlation between risk-taking behavior and its dimensions, and decision-making and its dimensions for divers, and the possibility of predicting risk-taking behavior. And its dimensions in terms of decision-making and its dimensions among divers, and identifying the impact of the relationship between risk-taking behavior and decision-making. As for divers, the researcher used the descriptive approach, and the research sample included (38) divers from the College of Physical Education.

Al-Najjar's study (2020) The current study aimed to identify the level of both coping strategies and mental alertness and reveal the relationship between them, and the relative contribution of each of them in predicting the attitude towards life among people with motor disabilities. The study sample consisted of (430) people with motor disabilities, and the researcher used the descriptive, predictive, correlational approach. The most important results were the existence of a positive, statistically significant relationship between the degree of total mental alertness in all its dimensions on the one hand, and the total degree of orientation toward life, and that this orientation toward life can be predicted in light of the coping strategies and mental alertness of people with motor disabilities.

-Marsa Al-Shenwani's study (2019). The study aimed to build a measure of the mental alertness of athletes and determine the differences in the mental alertness of athletes depending on (nature of sporting activities - category or level - gender). The study used the descriptive approach, and the study population included players from first-class clubs. High school and middle school students in some individual and team sports activities. The sample was selected by a stratified random method and consisted of (246) players whose ages ranged between (13-20) years. The results led to the construction of a measure of mental alertness, and the presence of statistically significant differences in mental alertness among athletes depending on the nature of sporting activities in favor of individuality. There are also statistically significant differences in mental alertness. Among athletes by level, in favor of higher levels. There are also statistically significant differences in mental alertness among athletes by gender, in favor of female athletes.

-Bdeir study (2019). The current study aimed to identify the relationship between the level of mental alertness and the level of concentration of attention among referees of the Palestinian Football Association in Palestine, as well as to identify the differences in the level of the relationship between mental alertness and concentration of attention. attention. Depending on the variables of specialization in arbitration, arbitrators' classification, and experience. In the arbitration, the researcher used the descriptive survey method in accordance with the nature of the study questions. The study was conducted on a stratified random sample of (90) referees accredited to the Palestinian Football Association in Palestine. The researcher also used the questionnaire as a tool to collect information and data. Data were analyzed using the package software. Statistics for the social sciences. The results showed that the level of mental alertness among Palestinian Football Association referees was high. The results of the study also showed that the level of concentration of attention among Palestinian Football Association referees was high, and that the relationship between the level of mental alertness and the level of concentration of attention was positive. The results showed that there were statistically significant differences in the level of mental alertness and the level of concentration of attention among the referees due to the variable of the referees' classification and their experience in arbitration, while there were no differences due to the variable of specialization in arbitration. He controls. The researcher recommends the need to pay attention to arbitrators and hold training courses related to the psychological aspect on an ongoing basis, in addition to paying attention to financial incentives and rewards. The necessity of applying professionalism to referees to develop their level.

Abdel Fattah's study (2019) aimed to identify the components of the global structure of the risky behavior scale. The researcher used the descriptive approach, and the research sample was selected by a deliberate random method. Their number reached (250) male and female players who participated in group and individual sports activities, including (skydiving - weightlifting).

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(Cycling-diving) The results resulted in the acceptance of four factors (risk adoption, risk tolerance, risk acceptance, and risk motivation) sufficient to explain the correlational matrix. The percentage of correlational variance of the matrix was (63%), which is higher than the average and confirms that we are facing factors with a degree of importance.

Jamal's study (2018) aimed to determine the relationship between psychological stress and sports injuries in school sports activities among middle and high school students (14-18 years old). The researcher used the descriptive approach, and the sample number was (200) male and female students who were chosen intentionally. Using a psychological stress scale for emerging athletes. The most important results were the presence of a statistically significant correlation between psychological stress and sports injuries in school sports activities, and the presence of statistically significant differences between males and females in bruises, fractures, ruptures, and dislocations in favor of males, and in favor of females in sprain injuries.

-Chloe's study (2017) aimed to know the relationship between situational awareness and risky academic behavior, the level of decision-making, and the cognitive style (flexibility/rigidity) of student teachers, and to know the differences between male and female teachers in the variables of the study, and to know the relative contribution of situational awareness through behavior. . Academic risk tolerance, level of decision making, and cognitive style. The study used the descriptive approach on a sample of 300 male and female students from the colleges of education at Shaqra University, using the Situational Awareness and Risky Behavior Scale prepared by the researcher 2016, the Abdoun Decision Making Scale 2002, and the Mason Scale 2011. Size. Cognitive style scale. The results showed that there is an inverse relationship between situational awareness and academic risk-taking behavior, and the existence of a positive correlation between situational awareness and flexible cognitive style, and student teachers with a rigid cognitive style in academic risk-taking behavior, in favor of those with a rigid cognitive style, and the presence of differences between student teachers with a cognitive style. . Flexible teachers and students with a strict cognitive style. At the level of decision making, and for the benefit of those with a flexible cognitive style, and finally, situational awareness can be predicted in light of the variables of the study.

-Abdel Aziz and Ashraf (2017) study on building a risky behavior scale for athletes with the aim of determining the components of the global structure of the risky behavior scale. The researchers used the descriptive approach, and the research sample included (280) male and female skydivers. (100) male and female skydivers were randomly selected. - Calculating scientific standards to codify the proposed scale to become (180) male and female players as a basic application sample. The results resulted in constructing a scale consisting of (31) one-dimensional statements. The scale gives three scores (1, 2, 3) on a three-point rating scale, and the total score means the sum of the scale scores. Which expresses the risk-taking behavior of athletes, and the total scores for the statements are limited to (31-93) scores (minimum - maximum). A high score on the scale indicates that the individual has high-risk behavior, while a low score indicates that the individual has high-risk behavior. Little.

-Study by Ibrahim Al-Husseini (2013) The study aimed to test the relationship between risk-taking behavior and impulsivity among adolescents in secondary schools in different educational environments (such as general, technical, and religious education). The study also examined gender, type of education, and the relationship between them in both risk-taking and impulsive behavior. The sample included 225 male and female secondary school students. The risk

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behavior scale and the tower building task scale were used. The results showed that there is a positive relationship between risk-taking behavior and impulsivity and that impulsivity is a good indicator. With risk-taking behavior, males were more likely to have risk-taking behavior, while females were more likely to be impulsive. Risk-taking behavior differed depending on the type of education, as general education students were more inclined to take risks, and technical education students were more inclined to be impulsive. S

Foreign studies:

The study conducted by Mohebi et al. (2022) aimed to examine whether a Mindfulness, Acceptance, and Commitment (MAC) program could increase self-compassion and motivation among elite female athletes compared to an active control condition. To this end, a randomized trial was conducted among adult female players. . The sample included (40) female players who were randomly selected. The Mindfulness, Acceptance, and Commitment program was applied to the experimental group and consisted of (7) sessions, each lasting (60) minutes, for a period of (7) weeks, during which participants completed a series of self-evaluation questionnaires on mindfulness and commitment. sympathy. With self and motivation during and after the end of the program, the results showed an improvement in the dimensions of self-compassion and motivation over time, and it was greater in the experimental group compared to the control group, which indicates that the intervention leads to awareness, acceptance, and commitment to improving cognitive and emotional learning processes and motivation.

A study by Saul et al. (2021) study aimed to examine whether mindfulness reduces recovery time from injury. The descriptive approach was used, and the sample included (207) football players, and the (Johnson et al, 2016) scale was used in the tools.) for the Mindfulness Questionnaire and Injury Inventory, and a series of moderated regression analyzes that examined whether mindfulness interacts with age or injury severity in explaining length of recovery from injury. The main findings suggest that mindfulness is not related to the duration of recovery. In contrast, age and injury severity were associated with length of injury recovery, which was longer even for older players with more severe injuries. The present findings constitute a novelty in the study of soccer injuries and open new lines of research to determine whether mindfulness interventions are likely to contribute to shortening the duration of objective rehabilitation for a more sustainable approach to sports injuries.

-Emery et al.'s (2020) study aimed to determine the relationship between mental alertness and impulsivity in college student athletes in terms of the history of development of sports injuries. The study used the descriptive approach, as the study included 181 players (56 female players and 125 male players). Demographic information was collected for the athletes, and the impulsivity scale and mental alertness scale were used. The results concluded that athletes with a history of sports injuries to others had higher scores on the impulsivity scale. While there are no statistically significant differences in mental alertness depending on the history of infection with others. It was noted that athletes who suffered a severe injury had lower average scores in general impulsivity compared to athletes who suffered a moderate injury, while there was no significant difference in mental alertness scores depending on the severity of the injury. The most prominent results include the positive relationship between motor impulsivity and injury recurrence, and the negative relationship between mental alertness and impulsivity. With all its sub-dimensions.

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-Study by Naderi Ain Allah et al. (2020) The study aimed to determine the effectiveness of a mindfulness-based program and its relationship to attention, anxiety, and perceived stress in reducing sports injury rates among male soccer players. players. The experimental method was used, and the sample included (168) players who were selected intentionally. The training program was applied to the experimental group, using a scale of mental alertness, anxiety, and stress, and an injury inventory form. The results showed that there is a positive relationship between mindfulness and attention, meaning that increasing mindfulness increases attention, and an inverse relationship with anxiety and perceived stress, meaning that increasing mindfulness reduces anxiety and stress, which was associated with lower levels of stress. Sports injuries.

-Hosseinian, Nouripour (2019) The study aims to explore the effectiveness of mindfulness-based intervention on risky behaviors and distress tolerance among adolescents in a juvenile correction and rehabilitation center. The study used the quasi-experimental method, and the sample consisted of (30) people who were randomly selected. Using the Adolescent Risk Scale, the Distress Tolerance Scale, and the Connor Davidson Resilience Scale, results revealed that a mindfulness-based intervention program for adolescents has a significant effect in reducing risky behavior, resilience, and tolerance of distress.

The study conducted by Soleimani et al. (2018) aimed to find out the psychological factors that increase sports injury and psychological intervention programs that reduce sports injury through a systematic review of previous studies and concluded that the following psychological factors (personal (such as excessive anxiety and negative pressure) increase sports injury rates in players, It has also been shown that the following psychological intervention programs (mindfulness, visualization, positive self-talk, and relaxation) reduce infection rates.

-Study by Jecock et al. (2017), this study aimed to examine the effectiveness of a mindfulness-based intervention among athletes. In a randomized controlled trial including 22 trial participants and 24 control participants, the effectiveness of Mindfulness-Based Berlin Athletes Training (BATL) was tested and compared to a classical sports psychological intervention. Results of analysis of variance with repeated measures indicate that the intervention group significantly improved trait mindfulness compared to the control group. It can be concluded that BATL is an effective strategy to increase mental alertness in athletes. However, more studies are needed to evaluate the effectiveness of this intervention in improving performance and to be able to study the mechanisms of its effect.

-Study by Bajaj and Panda (2015). The study aimed to identify the relationship between mental alertness and life satisfaction among samples of adolescents and young people. It also aimed to identify the possibility of mental alertness contributing to predicting life satisfaction. The study used the descriptive approach, and the study sample consisted of (327) university students from India, whose ages ranged between (18-23). The mental alertness scale prepared by Brown and Ryan 2003, and the life satisfaction scale were applied to them. Scale developed by Diener & Emmons 1985. Results indicated that the resilience variable is a partially mediating variable in the relationship between mindfulness and life satisfaction. Mental alertness also contributed to predicting life satisfaction among sample members.

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-Kasper Study (2011) The main purpose of this study is to identify psychological factors that predict increased susceptibility to injury among professional football players in Denmark. Based on the stress injury model prepared by Anderson and Williams (1998), which assumes that low coping resources, high competitive trait anxiety, and a history of previous injuries will be positively associated with increased injury risk and severity, the study used a descriptive approach and included a sample of 87 soccer players. Foot. foot and were asked to report a history of previous injuries in the past 12 months. Furthermore, two questionnaires were used; Competitive Trait Anxiety Test and Athletic Adaptive Skills Inventory. The injuries were recorded prospectively over a period of approximately 3 months by the team's medical staff. The study results clearly indicated that previous injury history and coping with challenge were the most important predictors of injury that coaches should take into consideration. and medical teams to limit exposure to infection.

-Study by Christ and Keegan (2010) The study aimed to study the relationship between mental toughness and the tendency toward risk-taking behavior among a sample of male and female university student-athletes. The descriptive approach was used, and the sample was (105) (69 males - 36 females), with an average age of (22). 2), and a standard deviation of (7.67). The mental toughness scale and the risk attitude questionnaire were used. The results showed a positive, statistically significant correlation between mental toughness and the tendency toward risk. The challenge component was the most predictive of the tendency toward physical risks, while the personal confidence component was the most predictive of the tendency toward psychological risks. Mental toughness was stronger among males than males. In females, there is also a tendency toward physical and psychological risk.

-Ivarsson's study (2008). The main goal of this study is to obtain psychological indicators that can predict sports injuries in football players. The descriptive approach was used, and the study sample included (152) football players, and criteria were relied upon. They were as follows (life stress, physical anxiety trait, confidence, adaptation) with the injury inventory form. The results showed that there are four predictive indicators of

sports injuries: life stress, physical anxiety, lack of confidence, and negative adaptation.

Kontos (2004) study: The study aimed to determine the predictive validity of perceived risk, risk-taking, ability estimation, excess effectiveness, and previous injuries to actual injuries among adolescents in sports, and to study gender differences. The study used a descriptive approach, and the sample consisted of (260) divided into (148 football players and 112 women) between the ages of 11 and 14 years in a study of the probability of injury for a period of 3 months. Tools included measures of self-perceived risk, capacity rating, and prior injury inventory. The results concluded that low levels of perceived risk and estimated ability significantly increased the risk of injury. Male players reported higher levels of perceived risk than female players, while there were no gender differences in levels of ability estimation. A positive relationship was found between incidence and both ability underestimation and overestimation. Estimation of ability was also positively associated. Across risk taking, the most notable findings are that perceived risk and estimates of ability are psychological factors that increase sports injuries among youth.

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Comment on previous studies and their benefits:

From the previous presentation of previous studies, the following can be concluded:

 Regarding the variable of mental alertness: a study (Sol, et al., 2021), (Tingaz, et al., 2020), (Nader, Ainola, et al., 2020), (Jikauk, et al., 2017).), and (Ivarsson et al., 2015) examined this variable through its reflection on sports injury rates, and they all agreed to varying degrees on the effectiveness of mental alertness in reducing injury rates in players, while the study (Navigation, 2021), (Ashour, 2021), Bajaj and Panda, 2015, and Al-Najjar, 2020, mental alertness and its relationship to satisfaction and orientation towards life and the future, and they all agreed on its existence. There is a significant relationship, whether directly or indirectly, and the study (Moawad, 2021) and (Hosseinian, Nouripour, 2019) addressed mental alertness and its relationship to risk-taking behavior, and it was agreed that there is a negative relationship. A high level of mental alertness reduces risk-taking behaviour. A study (Al-Azmi, 2020) addressed the relationship between mental alertness and emotional regulation among players and indicated the existence of a statistically significant correlation. In a study (Al-Morsi, 2019), a measure of mental alertness was built, and it was identified that there were differences depending on (the nature of the activity, level, and gender). It was found that there were statistically significant differences in mental alertness depending on (the nature of the activity, level, and gender). On the nature of the activity in favor of individualism, there were differences in favor of higher levels, and there were also statistically significant differences depending on (nature of activity, level, gender). There were differences in favor of female athletes, as a study conducted by (Badir, 2019) addressed the relationship between mental alertness and focus of attention, and the relationship was statistically significant and positive, and a study conducted by (Mohebi et al., 2022). He noted that mindfulness-based intervention improves self-compassion and motivation. Therefore, the majority of studies agreed, to varying degrees, on the positive role of mental alertness with all previous variables.

 Regarding the risk-taking behavior variable: The study (Moussi, 2021), (Kontos, 2013), and (Husseinin, Nouripour) addressed the relationship between risk-taking behavior and sports injuries and agreed on the existence of a direct relationship, a statistically significant relationship. As for the study of (Abdel Fattah, (2019), (Abdel Aziz, Ashraf, 2017), (Hassan, Ali, 2020), it determined the factorial structure of the risky behavior scale, and Abdel Fattah's study concluded that the risky behavior scale consists of the same four dimensions. With (13) statements, while the study of (Abdel Fattah Al-Aziz, Ashraf) reached a one-dimensional measure of risk behavior with (31) statements, while the study of (Hassan, Ali) with two facts - the dimensional dimension of measuring risk behavior consists of (25) statements. The study (Ibrahim, Al-Hussein, 2013) indicated that impulsivity in adolescents is a good indicator of risk-taking behavior.

 Regarding the variable of sports injury: The study of (Hajaj, 2010), (Jamal, 2018), (Soleimani, et al., 2018), and (Casper, 2011) indicated psychological factors (excessive anxiety, negative pressures, overestimation). of ability). that predict sports injury, and psychological interventions (mindfulness, positive talk, and relaxation) that reduce sports injury.

 Previous studies in terms of methodology:

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All previous studies used the descriptive approach except for the study of (Mohebi, et al., 2022), (Naderi, Ain Allah, et al., 2020), (Hosseinian, Nouripour, 2019), (Jikauk, et al., 2020). 2017), and (Ivarsson, et al, 2015) and they used the experimental approach to include training programs. The researcher benefited from previous studies in his understanding of the depth of the study problem, formulating questions, determining the method, selecting the study sample, as well as determining the appropriate tools. The researcher also benefited from previous studies in the theoretical framework and discussion of the results.

Search procedures:

Study Approach:

The researchers used the descriptive, correlational approach, which means the type of research methods through which it is possible to find out whether there is a relationship between two or more variables, and then know the degree of that relationship.

Second: The research community:

The research community consists of players from the U-17 Premier League clubs in the Kingdom of Saudi Arabia, numbering (18) clubs.

Third: Research sample:

The research sample was selected by a simple random method from the clubs in each region according to geographical distribution: (the central region, the western region, the eastern region, the southern region, and the northern region). Their number reached (12) clubs, and the sample number reached (300) young people.

The most important characteristics of the study sample members are:

1-Training age (the period since joining the first club)

(TABLE 1)

IT SHOWS THE DISTRIBUTION OF STUDY INDIVIDUALS ACCORDING TO TRAINING AGE (THE PERIOD SINCE THEY JOINED THE FIRST CLUB)

Training age (the period since joining the first club)	repetition	percentage
From 1 to 3 years	86	28.7
From 4 to 6 years	108	36.0
From 7 to 93 years	38	12.7
years and more 10	68	22.7
the total	300	%100

The previous table (1) shows the characteristics of the sample of study individuals according to the variable of training age (the period since they joined the first club). It was found

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that (36.0%) of the total study individuals were of training age (from 4 to 6 years), while it was found that (28.7%) of the total study individuals were of training age (1 to 3 years)) while it was found that (22.7% of the total study population was of training age (10 years and above), while it was found that (12.7%) of the total study population was of training age (10 years and above). Or more).) of the total study population, their training age (from 7 to 9 years).

2- Playing centers

(TABLE 2

IT SHOWS THE DISTRIBUTION OF STUDY INDIVIDUALS ACCORDING TO PLAYING CENTERS

Play centers	repetition	percentage
Defender	117	39.0
middle	130	43.3
attacker	53	17.7
the total	300	%100

The previous table No. (2) shows the characteristics of the study sample members according to the playing centers variable. It was found that (43.3%) of the total study individuals were placed in the middle of the field, while it was found that (39.0%) of the total study individuals were placed in the field. In defense, while it was found that (17.7%) of the total study population were on the field in attack.

3- Number of injuries last season

(TABLE 3)

IT SHOWS THE DISTRIBUTION OF THE STUDY POPULATION ACCORDING TO THE NUMBER OF TIMES THEY WERE INJURED IN THE LAST SEASON

Number of injuries last season	repetition	percentage
From 1 to 3 years	205	68.3
From 4 to 6 years	65	21.7
From 7 to 93 years	25	8.3
years and more 10	5	1.7
the total	300	%100

The previous table (3) shows the characteristics of the sample of study individuals according to the variable of the number of times they were injured last season. It was found that (68.3%) of the total study population were injured in the last season (1 to 3 times), while it was found that (21.7% of the total study population was injured) in the last season (4 to 6 times), while it was found that (8.3%) Of the total study population, the number of times they were

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injured last season was (7 to 9 times), while it was found that (1.7%) of the total study population, the number of times they were injured last season was (10 times or more), which is the lowest category. between study categories.

4- Number of injuries in the current season

(4) TABLE
IT SHOWS THE DISTRIBUTION OF THE STUDY POPULATION ACCORDING TO THE NUMBER OF INFECTIONS IN THE CURRENT SEASON

Number of injuries in the current season	repetition	percentage
From 1 to 3 years	211	70.3
From 4 to 6 years	71	23.7
From 7 to 93 years	14	4.7
years and more 10	4	1.3
the total	300	%100

The previous table (4) shows the characteristics of the sample of study individuals according to the variable of the number of times they were injured in the current season. It was found that (70.3%) of the total study individuals were injured the number of times they were injured in the current season is (1 to 3 times), while it was found that (23.7% of the total study individuals were injured a number of times) The number of times they were injured in the current season is (4 to 6 times).), while it was found that (4.7%) of the total study population had the number of times they were injured in the current season (7 to 9 times), while it was found that (1.3%) of the total study population had the number of times they were injured in the current season (10 times or more). They are the lowest category among the study categories.

5-The degree of seriousness of the injury

TABLE(5)
IT SHOWS THE DISTRIBUTION OF STUDY INDIVIDUALS ACCORDING TO THE SEVERITY OF THE INFECTION

Degree of injury severity	repetition	percentage
1 to 3 days	180	60.0
4 to 20 days	100	33.3
More than 21 days	20	6.7
The total	300	%100

The previous table No. (5) shows the characteristics of the sample of study individuals according to the variable of the degree of injury severity. It was found that (60%) of the total study population was (1 to 3 days), while it was found that (33.3%) of the total study population was (4 to 20 days), while it was found that (6.7% of the total study population had an infection severity score of (21 days or more).

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Study tools:

To achieve the objectives of the study, the researcher applied the following two measures**:**

The first scale: mental alertness scale**:**

This scale was prepared by (Johnson, Burke, Brinkman, and Wade, 2016) entitled**:**

Comprehensive Inventory of Mindfulness Experiences – Adolescents (CHIME-A)

-Psychometric properties of the scale**:**

To verify the psychometric properties (validity and reliability) of the mental alertness scale in the current study, the following was done**:**

Validity of the mental alertness scale:

The researchers estimated the validity of the mental alertness scale in their current study using the internal consistency validity or internal construct validity of the scale:

A- Calculating the values of the correlation coefficients between the score of each statement of the mental alertness scale and the total score of the dimension to which it belongs. The results were as shown in the following table:

Table No**(7) .**

Evaluating the correlational coefficients between the score of each statement of the mental alertness scale and the total score of the dimension to which the statement belongs

The first dimension		The second dimension		third dimension		The fourth dimension	
Awareness of inner experience		Awareness of external experience		Act consciously		Irrational acceptance and direction	
Text number	Correlation coefficient	Text number	Correlation coefficient	Text number	Correlation coefficient	Text number	Correlation coefficient
1	**0.510	2	**0.593	3	**0.495	4	**0.475
9	**0.629	10	**0.496	11	**0.570	12	**0.423
17	**0.519	8	**0.577	19	**0.609	20	**0.566
25	**0.675	26	**0.673	27	**0.560	28	**0.468
35	**0.559			34	**0.507	35	**0.456
The fifth dimension		Sixth dimension		The seventh dimension		The eighth dimension	
Loss of concentration and lack of interaction		Openness to experiences		Relativity of ideas		Conscious understanding (insight)	
Text number	Correlation coefficient	Text number	Correlation coefficient	Text number	Correlation coefficient	Text number	Correlation coefficient
5	**0.535	6	**0.692	7	**0.554	8	**0.483
13	**0.579	14	**0.527	15	**0.600	16	**0.474

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The first dimension		The second dimension		third dimension		The fourth dimension	
Awareness of inner experience		Awareness of external experience		Act consciously		Irrational acceptance and direction	
21	**0.509	22	**0.600	23	**0.511	24	**0.520
29	**0.477	30	**0.424	31	**0.586	32	**0.608
36	**0.464					37	**0.550

**Significant at a significance level of 0.01 or less

It is clear from the previous table (7) that all correlation coefficients between the score of each statement of the mental alertness scale and the total score of the dimension to which the statement belongs are all statistically significant at the significance level (0.01).) where the correlation coefficients ranged between (0.423) and (0.675). ; This reflects a high degree of construct validity for the dimensions of the mental alertness scale, and this result indicates the possibility of using the mental alertness scale in the current study and its validity for field application.

B- Calculate the correlation coefficients between the total scores of each of the main dimensions and the total scores of the mental alertness scale, as shown in Table No**(8) .**

Table No(8) .

Correlation coefficients of the scores of each dimension with the total score of the mental alertness scale

Dimensions	Correlation coefficient with the total score of the mental alertness scale
Awareness of inner experience	**0.667
Awareness of external experience	**0.595
Act consciously	**0.551
Irrational acceptance and direction	**0.650
Loss of concentration and lack of interaction	**0.538
Openness to experiences	**0.543
Relativity of ideas	**0.684
Conscious understanding (insight)	**0.558

** Significant at a significance level of 0.01 or less.

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It is clear from the previous table No. (8) that the values of the correlation coefficients between the score of each dimension of the mental alertness scale and the total score of the scale range between (0.538) and (0.684), and all of them were positive and statistically significant at the significance level (0.01); This reflects a high degree of construct validity for the dimensions of the mental alertness scale, and this result indicates the possibility of using the mental alertness scale in the current study and its validity for field application.

2- The stability of the mental alertness scale

To verify the stability of the mental alertness scale, it was calculated using the Cronbach alpha method and the split-half method. Below are the statistical results that indicate this:

Table No(9)

Reliability coefficients were evaluated using the split-half method for the mental alertness scale

Alpha Crew Napash Method	Half split	
	Values of correlation coefficients	
0.787	First half stability coefficient	0.732
	Second half stability coefficient	0.697
	Spearman-Brown	0.747

It was shown from the results shown in Table No. (9) above that through the split-half method, the reliability coefficient for the first half of the scale was (0.732), and the value of the reliability coefficient for half of the scale was (0.732). The second half of the scale was (0.697), and the Spearman-Brown equation was used to obtain the corrected value of the reliability coefficient. After correction, the reliability coefficient reached (0.747), and all of them are high reliability coefficients. This indicates that the mental alertness scale has a high degree of reliability, and therefore it can be relied upon in the field application of the study, and that the value of the reliability coefficient using the Cronbach Alpha method for the mental alertness scale reached (0.787). This indicates that the mental alertness scale has a high degree of stability and can therefore be relied upon in the field application of the study.

The second scale: Risk-taking behavior scale among young people, prepared by (Abdel Fattah, Mahmoud. 2019).

A- Psychometric properties of the scale:

To verify the psychometric properties (validity and reliability) of the risky behavior scale in the current study, the following was done:

1- Validity of the risk behavior scale:

The researchers estimated the validity of the risky behavior scale in their current study using the internal consistency validity or internal construct validity of the scale:

A- Calculating the values of the correlation coefficients between the score of each statement of the risk behavior scale and the total score of the dimension to which it belongs. The results were

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as shown in the following table:

Table No(11)
Evaluating the correlation coefficients between the score of each statement from the risk behavior scale and the total score of the dimension to which the statement belongs

The first dimension		The second dimension		third dimension		The fourth dimension	
Embrace risks		Risk potential		Acceptance of risks		Risk motives	
phrase number	Correlation coefficient	Text number	Correlation coefficient	Text number	Correlation coefficient	Text number	Correlation coefficient
1	**0.513	2	**0.544	3	**0.573	4	**0.711
5	**0.401	6	**0.512	7	**0.609	8	**0.567
9	**0.525	10	**0.496	11	**0.630	13	**0.651
12	**0.467						

**Significant at a significance level of 0.01 or less

It is clear from the previous table (11) that all correlation coefficients between the score of each statement of the risk behavior scale and the total score of the dimension to which the statement belongs are all statistically significant at the significance level (0.01). The correlation coefficients ranged between (0.401) and (0.711). ; This reflects a high degree of construct validity for the dimensions of the risk behavior scale, and this result indicates the possibility of using the risk behavior scale in the current study and its validity for field application.

B- Calculate the correlation coefficients between the total scores for each of the main dimensions and the total score for the risky behavior scale, as shown in Table No**(12) .**

Table No(12)
Correlation coefficients of the scores of each dimension with the total score of the risky behavior scale

Dimensions	Correlation coefficient with the total score of the risk behavior scale
Embrace risks	**0.678
Risk potential	**0.636
Acceptance of risks	**0.668
Risk motives	**0.652

** Significant at the significance level of 0.01 or less.

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It is clear from the previous table No. (12) that the values of the correlation coefficients between the score of each dimension of the risk behavior scale and the total score of the scale range between (0.636) and (0.678), and all of them were positive and statistically significant at the significance level (0.01); This reflects a high degree of construct validity for the dimensions of the risk behavior scale, and this result indicates the possibility of using the risk behavior scale in the current study and its validity for field application.

2–The stability of the risk behavior scale

To verify the stability of the risk behavior scale, it was calculated using the Cronbach alpha method and the split-half method, and the following are the statistical results indicating this:

Table No(13)
Evaluating reliability coefficients using the split-half method for the risk behavior scale

Cronbach's alpha method	Split half	
	Values of correlation coefficients	
0.767	First half stability coefficient	0.719
	Second half stability coefficient	0.734
	Spearman Brown	0.750

It is clear from the results shown in Table No. (13) above that through the split-half method, the reliability coefficient for the first half of the scale reached (0.719), and the value of the reliability coefficient for the half scale reached (0.719). The second half of the scale was (0.734), and the Spearman-Brown equation was used to obtain the corrected value of the reliability coefficient. After correction, the reliability coefficient reached (0.750), and all of them are high reliability coefficients. This indicates that the risk behavior scale has a high degree of reliability, and therefore can be relied upon in the field application of the study, and that the value of the reliability coefficient using the Cronbach Alpha method for the risk behavior scale reached (0.767). . . ; This indicates that the risk behavior scale has a high degree of stability, and therefore can be relied upon in the field application of the study.

The third tool: the player's raw data

It includes the player's demographic variables, which are (name, club, training age, playing position, number of times injured in the last season, number of times injured in the current season, degree of injury severity)

The seriousness of the injury was indicated through the following division:

1-Healing time is one to three days (minor injury)

2-Healing period from 4 days to 20 days (moderate injury)

3-Healing time is 21 days or more (severe infection). (Osama, Riyad, 1999), (Qasim, Abdel Fattah, 2015).

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- Presentation and discussion of the study results:

Analyze and discuss the results related to the first question, which states the following:

- What is the level of mental alertness among emerging football players in the Kingdom of Saudi Arabia?

To answer this question, the arithmetic means, standard deviations, relative weights, and "t" value for each dimension of the mental alertness scale and the total score for the mental alertness scale were calculated, as shown in the following table:

Table No(14)

Arithmetic means, standard deviations, relative weights, and "t" value for each dimension of the mental alertness scale, and the total score of the mental alertness scale and its ranking.

m	Dimensions of the mental alertness scale	Number of phrases	Total points for the dimension	Default arithmetic mean	mean	std	Relative *weight	t	Sig	Ranking
1	Awareness of inner experience	5	25	15	16.05	3.72	64.20	4.88	0.01	4
2	Awareness of external experience	4	20	12	12.79	3.22	63.95	4.23	0.01	6
3	Act consciously	5	25	15	14.85	3.06	59.4	0.83	0.41	8
4	Irrational acceptance and direction	5	25	15	16.02	2.75	64.08	6.43	0.01	5
5	Loss of concentration and lack of interaction	5	25	15	16.57	3.18	66.28	8.54	0.01	2
6	Openness to experiences	4	20	12	14.14	2.93	70.7	12.65	0.01	1
7	Relativity of ideas	4	20	12	13.23	2.71	66.15	7.84	0.01	3
8	Conscious understanding (insight)	5	25	15	15.05	3.17	60.20	0.29	0.77	7
The total score of the mental alertness scale		37	185	111	118.70	14.80	64.20	9.0	0.01	

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*The relative weight is calculated by dividing the arithmetic mean for each dimension by the total score for the dimension and then multiplying the result by 100

It is clear from Table No. (14) that there are statistically significant differences at the level of (0.01) or less between the true averages of the total score of the mental alertness scale in its dimensions (awareness of internal experience, awareness of external factors). Factors). Experience, acceptance, irrational orientation, loss of concentration, lack of interaction, and openness to experiences). (Relativity of ideas) on the one hand, and hypothetical averages on the other hand. These differences were in favor of the real averages of the study sample in these dimensions, which were higher than the hypothetical averages. What shows a high level of mental alertness in its dimensions (awareness of internal experience, awareness of external experience, lack of acceptance and irrational orientation, loss of concentration and lack of interaction, openness to experiences, relativity of ideas) among the research sample of emerging football players in the Kingdom of Saudi Arabia.

While it was found that there are no statistically significant differences at the level of (0.05) or less between the real averages of the dimensions of mental alertness (conscious action, conscious understanding (insight)) on the one hand, and the hypothetical averages of the dimensions of mental alertness (conscious action, conscious understanding (insight)) on the one hand. On the one hand, and the hypothetical averages of the dimensions of mental alertness (conscious action, conscious understanding (insight)) on the one hand. On the one hand, and the hypothetical averages at the dimensional level (conscious action, conscious understanding (insight)) on the one hand. On the other hand, this indicates that the level of (conscious action, conscious understanding (insight) is present to a moderate degree in the research sample of emerging football players in the Kingdom of Saudi Arabia).

It is clear from the results presented in the previous table that the average score for the level of mental alertness is equal to (118.70 out of 185) with a relative weight of (64.20%). Since according to the previously mentioned standard, if the percentage of mental alertness reaches from 60% to 80%, this percentage is considered high. . . Therefore, the level of mental alertness among the research sample of emerging football players in the Kingdom of Saudi Arabia is high. Since the mental alertness scale contains eight dimensions, it was noted that the dimension of openness to experiences came in first place with a mean equal to (14.14 out of 20) and a relative weight of (70.07%), followed in second place by loss of concentration and lack of interaction with a mean equal to (16.75 out of 25) with a relative weight of (66.28%), followed in third place by the relative dimension of ideas with an arithmetic average equal to (66.28%). . (13.23 out of 20) with a relative weight of (66.15%), followed in fourth place after awareness of the inner experience with an arithmetic mean equal to (16.05 out of 25) and a relative weight of (64.20%).) followed in fifth place after acceptance and irrational guidance with a mean of (16.02 out of 25) and a relative weight of (64.08%), followed in sixth place after awareness of external experience with a relative weight of (64.08%). With an arithmetic mean (12.79 out of 20) and a relative weight (63.95%). It is followed in seventh place after conscious understanding (insight) with an average equal to (15.05 out of 25) and with a relative weight of (60.20%), followed in last place and in eighth place after the dimension. Conscious action with a mean (14.85 out of 25) and relative weight (59.4%). It is clear from the above that the level of mental alertness among the

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study sample was high, and the researchers attribute this to the habits that the players grew up with since childhood, which increased their mental alertness, and this was confirmed by the study (Park et al., 2014) and Mahmoud's study (2017).

These results agreed with the results of the study of Ahlam Abdullah (2012), Al-Shalawi (2018), the study of Moawad (2021), the study of Badir (2019), the study of (Birbe and Langer, 2005), and the study of (Cole, et al., 2015), all of which revealed A high degree of mental alertness. The results differed with the study of Rawhiya Hamad (2016) and the study of (Al-Walidi, 2017), which showed that the level of mental alertness was average, the study of Al-Marsa (2019), and the study of Al-Sayed (2018), which indicated a low level of mental alertness among emerging players.

Analyze and discuss the results related to the second question, which states the following:
- What is the level of risk-taking behavior among emerging football players in the Kingdom of Saudi Arabia?

To answer this question, the arithmetic means, standard deviations, relative weights, and "t" value for each dimension of the Risky Behavior Scale and the total score for the Risky Behavior Scale were calculated, as shown in the following table:

Table No(15)

Arithmetic means, standard deviations, relative weights, and "t" value for each dimension of the Risk Behavior Scale, and the total score of the Risk Behavior Scale, as well as their ranking.

Ranking	Sig	t	Relative *weight	std	mean	Default arithmetic mean	Total points for the dimension	Number of phrases	Dimensions of risk behavior scale	م
1	0.01	-41.66	47.42	0.96	5.69	8	12	4	Embrace risks	1
2	0.01	-37.56	46.33	0.85	4.17	6	9	3	Risk potential	2
3	0.01	-42.16	43.44	0.86	3.91	6	9	3	Acceptance of risks	3
4	0.01	-42.44	42.78	0.88	3.85	6	9	3	Risk motives	4
0.01		-	45.15	2.3	17.61	26	39	13	Total risky	

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Ranking	Sig	t	Relative *weight	std	mean	Default arithmetic mean	Total points for the dimension	Number of phrases	Dimensions of risk behavior scale	م
		62.19		4					behavior scale scores	

*The relative weight is calculated by dividing the arithmetic mean for each dimension by the total score for the dimension and then multiplying the result by 100

It is clear from Table No. (15) that there are statistically significant differences at the level of (0.01) or less between the real averages of the total scores of the risk behavior scale and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motives) on the one hand and the hypothetical averages on the other hand, and these were The differences are in favor of the hypothetical averages that were higher than the real averages of the study sample in these dimensions; This demonstrates the low level of risk-taking behavior in its dimensions (risk adoption, risk tolerance, risk acceptance, risk motives) among the research sample of football juniors in the Kingdom of Saudi Arabia.

It is clear from the results shown in the previous table that the average score for the level of risky behavior is (17.61 out of 39), with a relative weight of (45.15%). According to the previously mentioned criterion, if the level of risky behavior reaches 40% to 60%, this is considered a moderate level. Therefore, the level of risk-taking behavior among the research sample of emerging football players in the Kingdom of Saudi Arabia is average. Since the risk behavior scale contains four dimensions, it was noted that the risk adoption dimension came in first place with an arithmetic mean equal to (5.69 out of 12) and a relative weight of (47.42%), followed in second place after risk taking. After tolerance, the arithmetic mean equals (4.17 out of 9).) and relative weight. Relative (46.33%), followed in third place after the probability of danger with a mean equal to (3.91 out of 9) and with a relative weight of (43.44%), followed in fourth place after the probability of danger with a mean equal to (3.85 out of 9) and with a relative weight (42.78%.(

It is clear from the above that the level of the degree of risk-taking behavior was average among the study sample, and the results agreed with the study of Masoud (2021) and the study of Hosseinian Nouripour (2019), which showed that the level of the degree of risk-taking behavior was moderate.

While the results differed with the study of Al-Qatrawi (2012), the study of Delsad, Ahmed, and others (2014), and the study of Ali Ajiloun (2017), as their results showed that the degree of risk-taking and receptive behavior was high.

Analyze and discuss the results related to the third question, which states the following:

-Is there a statistically significant relationship between mental alertness and risk-taking behavior among emerging football players in the Kingdom of Saudi Arabia?

To answer this question and determine the relationship between mental alertness and risk-taking behavior among young football players in the Kingdom of Saudi Arabia, Pearson correlation coefficients were used to test the relationship, and the results were as shown in the following

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table:

Table (16)

Pearson correlation coefficients were shown to test the relationship between mental alertness and risk-taking behavior among emerging football players in the Kingdom of Saudi Arabia

Dimensions of mental alertness	Dimensions of risk behavior				Risk-taking behavior as a whole
	Embrace risks	Risk potential	Acceptance of risks	Risk motives	
Awareness of inner experience	**0.411-	**0.349-	**0.507-	**0.401-	**0.633-
Awareness of external experience	**0.408-	**0.432-	**0.305-	**0.401-	**0.587-
Act consciously	**0.311-	**0.412-	**0.372-	**0.319-	**0.533-
Irrational acceptance and direction	**0.372-	**0.364-	**0.394-	**0.359-	**0.565-
Loss of concentration and lack of interaction	**0.427-	**0.329-	**0.259-	**0.330-	**0.482-
Openness to experiences	**0.345-	**0.277-	**0.283-	**0.358-	**0.481-
Relativity of ideas	**0.342-	**0.408-	**0.518-	**0.435-	**0.642-
Conscious understanding (insight)	**0.405-	**0.340-	**0.360-	**0.362-	**0.558-
The mind as a whole	**0.635-	**0.588-	**0.627-	**0.620-	**0.938-

It is clear from Table No. (16) that:

–The relationship between mental alertness as a whole and risk-taking behavior (risk adoption, risk tolerance, risk acceptance, risk motives) among young football players in the Kingdom of Saudi Arabia**.**

-There is a statistically significant inverse (negative) correlation at the level of (0.05) between the total score of mental alertness and the total score of risk-taking behavior among emerging football players in the Kingdom of Saudi Arabia, where the correlation coefficient reached (-0.938). - It was found that there is a statistically significant (negative) inverse relationship between the total degree of mental alertness and the dimensions of risk-taking behavior (risk adoption, risk tolerance, risk acceptance, risk motives) among young football players in the Kingdom of Saudi Arabia, where the relationship values reached (-0.635). , -0.588, -0.627, -

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0.620) respectively, and this indicates that the higher the mental alertness scores among junior football players in the Kingdom of Saudi Arabia, the more this leads to a decrease in risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motives).) among them. Youth football in the Kingdom of Saudi Arabia.

B- The relationship of awareness to internal experience within the dimensions of mental alertness and risk-taking behavior (risk adoption, risk tolerance, risk acceptance, risk motives) among young football players in the Kingdom of Saudi Arabia

-There is a statistically significant inverse relationship (negative) at the level (0.05) between the dimension of awareness of internal experience within the dimensions of mental alertness and the total degree of risk-taking behavior among young football players in the Kingdom of Saudi Arabia. . Arabic, where the correlation coefficient reached.(0.633-)

- It was found that there is an inverse (negative) relationship with statistical significance between the dimension of awareness of internal experience within the dimensions of mental alertness and the dimensions of risk-taking behavior (risk adoption, risk tolerance, risk acceptance, risk motives).). Among budding football players in the Kingdom of Saudi Arabia, the relationship values reached (-0.635, -0.588, -0.627, -0.620), respectively. This indicates that increased awareness of the internal experience among football youth in the Kingdom of Saudi Arabia led to a decrease in risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance). Risk-taking motivations among young soccer players. Players in Saudi Arabia.

C- The relationship of awareness to external experience within the dimensions of mental alertness and risk-taking behavior (risk-taking, risk-taking) among young football players in the Kingdom of Saudi Arabia

-There is a statistically significant inverse relationship (negative) at the level (0.05) between the dimension of awareness of external experience within the dimensions of mental alertness and the total degree of risk-taking behavior among young football players in the Kingdom of Saudi Arabia. . Arabic, where the correlation coefficient reached**.(0.587-)**

- It was found that there is a statistically significant inverse (negative) relationship between the dimension of awareness of external experience within the dimensions of mental alertness and the dimensions of risk-taking behavior (risk adoption, risk tolerance, risk acceptance, risk motivation). . Among budding football players in the Kingdom of Saudi Arabia, the relationship values reached (-0.408, -0.432, -0.305, -0.401), respectively. This indicates that increased awareness of external experience among young football players in the Kingdom of Saudi Arabia led to a decrease in risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance). Risk-taking motivations among emerging soccer players. in KSA**.**

D- The relationship of conscious behavior within the dimensions of mental alertness and risk-taking behavior (risk-taking, risk-taking) among young football players in the Kingdom of Saudi Arabia

-There is a statistically significant inverse (negative) correlation at the level of (0.05) between the dimension of conscious behavior within the dimensions of mental alertness and the total degree of risk-taking behavior among young football players in the Kingdom of Saudi Arabia, where the correlation coefficient reached**.(0.533-)**

- It was found that there is an inverse (negative) relationship with statistical significance between the dimension of conscious action within the dimensions of mental alertness and the dimensions of risk-taking behavior (risk adoption, risk tolerance, risk acceptance, risk motives).

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Among emerging football players in the Kingdom of Saudi Arabia, where the relationship values reached (-0.311, -0.412, -0.372, -0.319) respectively, and this indicates that the most conscious behavior among young football players in the Kingdom of Saudi Arabia, which leads to Decrease in risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motives among football youth in the Kingdom of Saudi Arabia)**.**

E- The relationship between irrational acceptance and orientation within the dimensions of mindfulness and risk-taking behavior (risk-taking, risk-taking) among young football players in the Kingdom of Saudi Arabia

-There is a statistically significant inverse (negative) correlation at the level (0.05) between the dimension of acceptance and irrational guidance within the dimensions of mental alertness and the total degree of risk-taking behavior among young football players in the Kingdom of Saudi Arabia. . Arabic, where the correlation coefficient reached**.(0.565-)**

- It was found that there is a statistically significant inverse (negative) relationship between the dimension of acceptance and irrational orientation within the dimensions of mental alertness and the dimensions of risk-taking behavior (risk adoption, risk tolerance, risk acceptance, risk tolerance). Risks). Motivation) among budding football players in the Kingdom of Saudi Arabia, where the relationship values reached (-0.372, -0.364, -0.394, -0.359), respectively. This indicates that the greater the acceptance and irrational guidance among budding football players in the Kingdom of Saudi Arabia. Saudi Arabia, Saudi Arabia This leads to a decrease in risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motivation) among emerging football players in the Kingdom of Saudi Arabia**.**

F- The relationship between loss of concentration and lack of interaction within the dimensions of mental alertness and risk-taking behavior (risk-taking, risk-taking) among young football players in the Kingdom of Saudi Arabia

-There is a statistically significant (negative) inverse relationship at the level (0.05) between the dimension of loss of concentration and lack of interaction within the dimensions of mental alertness and the total degree of risk-taking behavior among young football players in the middle stage. Intermediate stage. The Kingdom of Saudi Arabia, where the correlation coefficient reached**.(0.482-)**

- It was found that there is a statistically significant inverse relationship (negative) between the dimension of loss of concentration and lack of interaction within the dimensions of mental alertness and the dimensions of risk-taking behavior (adopting risks, taking risks, accepting risks). , risk motivation) among young football players in the Kingdom of Saudi Arabia, where the relationship values reached (-0.427, -0.329, -0.259, -0.330) respectively, and this indicates that the greater the loss of concentration and lack of interaction among young football players in... The Kingdom of Saudi Arabia leads to a decrease in risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance, risk-taking motives among emerging football players in the Kingdom of Saudi Arabia).

G- The relationship of openness to experiences within the dimensions of mental alertness and risk-taking behavior (risk-taking, risk-taking) among young football players in the Kingdom of Saudi Arabia

-There is a statistically significant inverse (negative) correlation at the level of (0.05) between the dimension of openness to experiences within the dimensions of mental alertness and the total degree of risk-taking behavior among young football players in the Kingdom of Saudi Arabia. .

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The correlation coefficient was**.(0.481-)**

- It was found that there is an inverse (negative) relationship with statistical significance between the dimension of openness to experiences within the dimensions of mental alertness and the dimensions of risk-taking behavior (adopting risks, taking risks, accepting risks, taking risks).). Motivation) among emerging football players in the Kingdom of Saudi Arabia, where the relationship values reached (-0.345, -0.277, -0.283, -0.358), respectively. This indicates that the greater the openness to experiences among young football players in the Kingdom of Saudi Arabia, this led to a decrease in risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance) and risk-taking motivations among young football players. in KSA. Kingdom of Saudi Arabia**.**

H- The relative relationship of thoughts within the dimensions of mental alertness and risk-taking behavior (risk adoption, risk tolerance) among young football players in the Kingdom of Saudi Arabia

-There is a statistically significant inverse (negative) correlation at the level of (0.05) between the dimension of relativity of thoughts within the dimensions of mental alertness and the total degree of risk-taking behavior among young football players in the Kingdom of Saudi Arabia. . The correlation coefficient was**.(0.642-)**

- It was found that there is an inverse (negative) relationship with statistical significance between the dimension of relativity of thoughts within the dimensions of mental alertness and the dimensions of risk-taking behavior (risk adoption, risk tolerance, risk acceptance, risk motivation). Among the study sample. Youth football in the Kingdom of Saudi Arabia, where the relationship values reached (-0.342, -0.408, -0.518, -0.435), respectively. This indicates that the more relative ideas among young football players in the Kingdom of Saudi Arabia, this led to a decrease in risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance, risk-taking motives among young football players in the Kingdom of Saudi Arabia). kingdom). Kingdom of Saudi Arabia**.**

I- The relationship of conscious understanding (insight) within the dimensions of mental alertness and risk-taking behavior (taking risks, taking risks) among young football players in the Kingdom of Saudi Arabia

-There is a statistically significant (negative) inverse correlation at the level of (0.05) between the dimension of conscious understanding (insight) within the dimensions of mental alertness and the total degree of risk-taking behavior among junior football players in the Kingdom. The Kingdom of Saudi Arabia, where the correlation coefficient reached**.(0.558-)**

-It was found that there is a statistically significant inverse (negative) relationship between the dimension of conscious understanding (insight) within the dimensions of mental alertness and the dimensions of risk-taking behavior (risk adoption, risk tolerance, risk acceptance, risk motivation).) among junior football players in the Kingdom of Saudi Arabia, where the relationship values reached (-0.405, -0.340, -0.360, -0.362) respectively, and this indicates that the greater the conscious understanding (insight) among junior football players in the Kingdom of Saudi Arabia, This leads to a decrease in risk behavior and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motivation) among emerging football players in the Kingdom of Saudi Arabia**.**

These results agreed with Moawad's study (2021), and this can be interpreted in light of what (Marrison & Jha, 2015. Bercovitz, et al, 2017) pointed out about the connection of mental

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alertness to self-regulation of behavior, as it directs the player's attention to the current moment and what Roles and goals are associated with him, and his behavior is directed towards focusing and eliminating distractions, allowing information to be integrated and updated, which is reflected in expanding the player's scope of vision**.**

Analyze and discuss the results related to the fourth question, which states the following:

Are there differences in mental alertness among football juniors in light of the following demographic variables (training age - playing positions - number of times injured in the last season - number of times injured in the current season - degree of injury severity)?

Before answering this question, it is necessary to check how evenly the data is distributed. Because most laboratory tests require that the distribution of data be normal, a normal distribution test (Kolmogorov-Smirnov test) was performed to determine whether the mental alertness scale data followed a normal distribution or not, and the results were as in the table. the next:

Table No(17)
Normal distribution test (Kolmogorov-Smirnov test) related to the data of the mental alertness scale and its dimensions

Dimensions of the mental alertness scale	Kolmogorov-Smirnov test		
	statistics	df	Sig.
Awareness of inner experience	0.11	300	0.01
Awareness of external experience	0.11	300	0.01
Act consciously	0.10	300	0.01
Irrational acceptance and direction	0.12	300	0.01
Loss of concentration and lack of interaction	0.12	300	0.01
Openness to experiences	0.09	300	0.01
Relativity of ideas	0.11	300	0.01
Conscious understanding (insight)	0.09	300	0.01
The total score of the mental alertness scale	0.14	300	0.01

The previous table No. (17) shows the results of the Kolmogorov-Smirnov test, where the significance level values were less than 0.05 (sig. < 0.05), and this indicates that the data is related to the mental intelligence data. The alertness scale and its dimensions do not follow a normal distribution. Therefore, the results showed that the appropriate tests for conducting the statistical difference test are non-parametric tests according to the condition of normal distribution. Therefore, statistically significant differences were identified in the level of mental alertness among the players under study according to (training age - playing positions - number of times injured in the last season - number of times injured in the current season - degree of injury). Injury severity), the Kruskal-Wallis test was used. Wallis) because the condition of moderation is not met, and the following tables explain this:

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First: Differences according to training age

Table(18)

Results of the Kruskal-Wallis test to determine statistically significant differences in the level of mental alertness among the players under study according to training age.

Dimensions of the mental alertness scale	Training age	n	Average rank	The value of the square of Ka^2	Sig.
Awareness of inner experience	From 1 to 3 years	86	140.78	3.75	0.29
	From 4 to 6 years	108	162.52		
	From 7 to 9 years	38	140.03		
	More than 10 years	68	149.56		
Awareness of external experience	From 1 to 3 years	86	122.22	20.11	0.01
	From 4 to 6 years	108	171.96		
	From 7 to 9 years	38	128.61		
	More than 10 years	68	164.41		
Act consciously	From 1 to 3 years	86	133.43	32.81	0.01
	From 4 to 6 years	108	181.39		
	From 7 to 9 years	38	95.50		
	More than 10 years	68	163.76		
Irrational acceptance and direction	From 1 to 3 years	86	143.06	11.13	0.01
	From 4 to 6 years	108	161.43		
	From 7 to 9 years	38	115.82		
	More than 10 years	68	167.88		
Loss of concentration and lack of interaction	From 1 to 3 years	86	134.59	7.28	0.06
	From 4 to 6 years	108	146.48		
	From 7 to 9 years	38	167.71		
	More than 10 years	68	167.38		
Openness to experiences	From 1 to 3 years	86	155.92	1.0	0.80
	From 4 to 6 years	108	144.20		
	From 7 to 9 years	38	150.76		
	More than 10 years	68	153.50		
Relativity of ideas	From 1 to 3 years	86	153.08	3.96	0.27
	From 4 to 6 years	108	158.09		
	From 7 to 9 years	38	126.24		
	More than 10 years	68	148.74		
Conscious understanding (insight)	From 1 to 3 years	86	147.31	1.47	0.69
	From 4 to 6 years	108	153.44		
	From 7 to 9 years	38	137.66		
	More than 10 years	68	157.03		
The total score of the mental alertness scale	From 1 to 3 years	86	135.50	14.85	0.01
	From 4 to 6 years	108	166.57		
	From 7 to 9 years	38	113.82		
	More than 10 years	68	164.44		

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The results of the study, as shown in the previous table, showed that the value of Ka2 reached (14.85), and that the significance level for the mental alertness scale reached (0.01), which is less than (0.05), and therefore it is statistically significant at the significance level ($\alpha<0.05$), and therefore There are statistically significant differences. Regarding the level of mental alertness according to the training age, it was shown through the averages of the ranks that these differences are in favor of the study members of the players whose training ages range (from 4 to 6 years, 10 years and above).

Regarding the dimensions of mental alertness, it was found that there were statistically significant differences in the average scores of the dimensions of mental alertness (awareness of external experience, conscious action, acceptance and irrational direction) according to training. Age, where the significance levels reached (0.01), which is less than the significance level (0.05). It is statistically significant at the level of significance (0.05), and therefore there are statistically significant differences between the members of the study sample of emerging football players in the level of the dimensions of mental alertness (awareness of external experience, conscious behavior, and irrational behavior). It was shown through the average ranks that these differences were in favor of the study players whose training ages were (from 4 to 6 years, 10 years and above).

It was found that there were no statistically significant differences in the average scores of the dimensions of mental alertness (awareness of internal experience, loss of concentration and lack of interaction, openness to experiences, relativity of ideas, conscious understanding (insight)) according to the age of training, where the significance levels reached (0.29, 0.06). , 0.80, 0.27, 0.69) respectively, which is greater than the significance level (0.05), and is not statistically significant at the significance level (0.05), and therefore there are no statistically significant differences between the study individuals. A sample of players at the level of the dimensions of mental alertness (awareness of internal experience, loss of concentration and lack of interaction, openness to experiences, relativity of thoughts, conscious understanding (insight) according to the training age of the players).

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Second: Differences according to playing positions

Table(19)

Results of the Kruskal-Wallis test to identify statistically significant differences in the level of mental alertness among the players under study according to different playing positions.

Dimensions of the mental alertness scale	Play centers	n	Average rank	K^2	Sig
Awareness of inner experience	Defender	117	147.90	0.25	0.88
	middle	130	153.28		
	attacker	53	149.41		
Awareness of external experience	Defender	117	159.69	2.93	0.23
	middle	130	148.17		
	attacker	53	135.93		
Act consciously	Defender	117	149.04	0.29	0.86
	middle	130	149.45		
	attacker	53	156.31		
Irrational acceptance and direction	Defender	117	150.59	0.20	0.90
	middle	130	148.62		
	attacker	53	154.92		
Loss of concentration and lack of interaction	Defender	117	146.91	0.34	0.84
	middle	130	153.23		
	attacker	53	151.73		
Openness to experiences	Defender	117	145.38	1.07	0.58
	middle	130	151.21		
	attacker	53	160.07		
Relativity of ideas	Defender	117	143.39	1.44	0.49
	middle	130	156.54		
	attacker	53	151.39		
Conscious understanding (insight)	Defender	117	142.70	1.86	0.39
	middle	130	157.70		
	attacker	53	150.07		
The total score of the mental alertness scale	Defender	117	147.54	0.28	0.87
	middle	130	153.38		
	attacker	53	149.97		

The results of the study, as shown in the previous table, showed that the value of Ka2 reached (0.28), and that the significance level for the mental alertness scale reached (0.87), which is greater than (0.05), and therefore it is not statistically significant at the significance level ($\alpha<0.05$), and therefore There are no differences. There is a statistical significance in the level of mental alertness depending on the playing situations.

Regarding the dimensions of mental alertness, it was found that there were no statistically significant differences in the average scores of the dimensions of mental alertness (awareness of

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the internal experience, awareness of the external experience, acting consciously, and receiving and irrational direction). Loss of focus, lack of interaction, openness to experiences, relativity of ideas, and conscious understanding (insight) according to gaming centers, where significance levels reached (0.88, 0.23, 0.86, 0.90, 0.84, 0.58, 0.49, 0.39). respectively, which is greater than the level of significance (0.05), and is not statistically significant at the level of significance (0.05), and therefore there are no statistically significant differences between the members of the study sample of players on the level of dimensions of mental alertness (awareness of internal experience, loss of concentration, Lack of interaction, openness to experiences, relativity of ideas, and conscious understanding (insight)) according to the playing positions of the players.

Third: Differences according to the number of injuries last season

Table(20)

Results of the Kruskal-Wallis test to determine statistically significant differences in the level of mental alertness among the players under study depending on the number of times they were injured last season.

Dimensions of the mental alertness scale	Number of injuries last season	n	Average rank	The value of the square of Ka^2	Sig.
Awareness of inner experience	From 1 to 3 years	205	157.60	23.60	0.01
	From 4 to 6 years	65	159.08		
	From 7 to 9 years	25	96.50		
	More than 10 years	5	17.90		
Awareness of external experience	From 1 to 3 years	205	159.52	22.18	0.01
	From 4 to 6 years	65	150.92		
	From 7 to 9 years	25	102.42		
	More than 10 years	5	15.70		
Act consciously	From 1 to 3 years	205	159.80	19.59	0.01
	From 4 to 6 years	65	145.18		
	From 7 to 9 years	25	115.74		
	More than 10 years	5	12.10		
Irrational acceptance and direction	From 1 to 3 years	205	160.31	33.83	0.01
	From 4 to 6 years	65	159.16		
	From 7 to 9 years	25	70.74		
	More than 10 years	5	34.50		
Loss of concentration and lack of interaction	From 1 to 3 years	205	163.96	30.68	0.01
	From 4 to 6 years	65	144.64		
	From 7 to 9 years	25	69.78		
	More than 10 years	5	78.50		
Openness to experiences	From 1 to 3 years	205	166.07	31.49	0.01
	From 4 to 6 years	65	136.27		
	From 7 to 9 years	25	75.02		

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	More than 10 years	5	74.50		
Relativity of ideas	From 1 to 3 years	205	172.00	48.53	0.01
	From 4 to 6 years	65	120.81		
	From 7 to 9 years	25	72.70		
	More than 10 years	5	44.10		
Conscious understanding (insight)	From 1 to 3 years	205	166.00	33.73	0.01
	From 4 to 6 years	65	137.79		
	From 7 to 9 years	25	78.86		
	More than 10 years	5	38.30		
The total score of the mental alertness scale	From 1 to 3 years	205	170.33	55.75	0.01
	From 4 to 6 years	65	135.19		
	From 7 to 9 years	25	55.74		
	More than 10 years	5	10.10		

The results of the study, as shown in the previous table, showed that the value of Ka2 reached (55.75), and that the levels of importance for the mental alertness scale and its dimensions (awareness of internal experience, awareness of external experience, acting) were conscious, lack of acceptance and irrational orientation, loss of focus and lack of interaction, openness to... Experiences, relativity of thoughts, conscious understanding (insight) reached (0.01), which is less than (0.05), and therefore they are statistically significant at the significance level ($\alpha<0.05$). Therefore, there are statistically significant differences in the level of mental alertness and its dimensions depending on the number of times The incidence of injury in the last season, and it was shown through the averages of the ranks that these differences were in favor of the study members who were players who were injured in the number of times of injury in the last season (from 1 to 3 times), which indicates that the study members are players who were injured in the season. the past. season. The number of times he was injured last season (from 1 to 3 times). The scale of mental alertness and its dimensions (awareness of internal experience, awareness of external experience, acting consciously, irrational reception and direction, loss of focus and lack of interaction, openness to experiences, relativity of thoughts, understanding awareness (insight)) were determined to be higher than the study participants who obtained Number of hits. Last season (4 to 6 times, 7 to 9 times, 10 or more times).

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Fourth: Differences according to the number of injuries in the current season

Table(21)

Results of the Kruskal-Wallis test to determine statistically significant differences in the level of mental alertness among the players under study depending on the number of times they were injured in the current season.

Dimensions of the mental alertness scale	Number of injuries last season	n	Average rank	The value of the square of Ka^2	Sig.
Awareness of inner experience	From 1 to 3 years	211	164.12	25.17	0.01
	From 4 to 6 years	71	130.81		
	From 7 to 9 years	14	67.00		
	More than 10 years	4	74.00		
Awareness of external experience	From 1 to 3 years	211	158.23	13.29	0.01
	From 4 to 6 years	71	144.60		
	From 7 to 9 years	14	89.29		
	More than 10 years	4	61.75		
Act consciously	From 1 to 3 years	211	157.62	12.38	0.01
	From 4 to 6 years	71	145.80		
	From 7 to 9 years	14	93.29		
	More than 10 years	4	58.50		
Irrational acceptance and direction	From 1 to 3 years	211	169.19	42.17	0.01
	From 4 to 6 years	71	118.77		
	From 7 to 9 years	14	68.29		
	More than 10 years	4	15.50		
Loss of concentration and lack of interaction	From 1 to 3 years	211	166.48	29.51	0.01
	From 4 to 6 years	71	120.80		
	From 7 to 9 years	14	95.43		
	More than 10 years	4	27.50		
Openness to experiences	From 1 to 3 years	211	167.51	35.99	0.01
	From 4 to 6 years	71	122.30		
	From 7 to 9 years	14	75.07		
	More than 10 years	4	17.75		
Relativity of ideas	From 1 to 3 years	211	167.17	36.58	0.01
	From 4 to 6 years	71	124.88		
	From 7 to 9 years	14	65.64		
	More than 10 years	4	22.75		
Conscious understanding (insight)	From 1 to 3 years	211	160.80	23.24	0.01
	From 4 to 6 years	71	142.39		
	From 7 to 9 years	14	70.00		
	More than 10 years	4	33.00		

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The total score of the mental alertness scale	From 1 to 3 years	211	169.95	47.68	0.01
	From 4 to 6 years	71	119.77		
	From 7 to 9 years	14	53.36		
	More than 10 years	4	9.75		

The results of the study, as shown in the previous table, showed that the value of Ka2 reached (47.68), and that the levels of importance for the mental alertness scale and its dimensions (awareness of internal experience, awareness of external experience, acting) were conscious, acceptance and irrational direction, loss of focus and lack of interaction, and openness to experiences. The relativity of thoughts and conscious understanding (insight) reached (0.01), which is less than (0.05), and therefore it is statistically significant. Significance level ($\alpha<0.05$), and therefore there are statistically significant differences in the level of mental alertness and its dimensions depending on the number of times the injury occurs, and in the current season it was shown through the averages that these differences are in favor of the study individuals, who are the players who were injured in the current season (from 1 to 3 times), which indicates that the study subjects are players who were injured in the current season (from 1 to 3 times). A measure of mental alertness and its dimensions (awareness of internal experience, awareness of external experience, acting consciously, irrational reception and direction, loss of focus and lack of interaction, openness to experiences, relativity of ideas, conscious understanding (insight)) were determined, and the study determined that it was higher than the study members of the players. Who were infected and the number of times they were infected. In the current season (4 to 6 times, 7 to 9 times, 10 times or more).

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Fifth: Differences according to the severity of the injury

Table(22)

Results of the Kruskal-Wallis test to determine statistically significant differences in the level of mental alertness among the players under study depending on the severity of the injury.

Dimensions of the mental alertness scale	Number of injuries last season	n	Average rank	Ka^2	Sig.
Awareness of inner experience	1 to 3 days	180	160.34	22.57	0.01
	4 to 20 days	100	150.16		
	More than 21 days	20	63.65		
Awareness of external experience	1 to 3 days	180	166.71	29.95	0.01
	4 to 20 days	100	139.41		
	More than 21 days	20	60.05		
Act consciously	1 to 3 days	180	157.43	14.46	0.01
	4 to 20 days	100	152.07		
	More than 21 days	20	80.30		
Irrational acceptance and direction	1 to 3 days	180	169.90	28.28	0.01
	4 to 20 days	100	129.60		
	More than 21 days	20	80.40		
Loss of concentration and lack of interaction	1 to 3 days	180	177.54	47.72	0.01
	4 to 20 days	100	116.49		
	More than 21 days	20	77.15		
Openness to experiences	1 to 3 days	180	179.39	56.00	0.01
	4 to 20 days	100	115.42		
	More than 21 days	20	65.90		
Relativity of ideas	1 to 3 days	180	173.59	43.09	0.01
	4 to 20 days	100	127.38		
	More than 21 days	20	58.25		
Conscious understanding (insight)	1 to 3 days	180	171.04	30.29	0.01
	4 to 20 days	100	127.40		
	More than 21 days	20	81.15		
The total score of the mental alertness scale	1 to 3 days	180	183.92	81.48	0.01
	4 to 20 days	100	113.88		
	More than 21 days	20	32.80		

The results of the study, as shown in the previous table, showed that the value of Ka2 reached (81.48), and that the levels of importance for the scale of mental alertness and its dimensions (awareness of internal experience, awareness of external experience, acting) were conscious, acceptance and irrational direction, loss of focus and lack of interaction, and openness to experiences. The relativity of thoughts and conscious understanding (insight) reached (0.01), which is less than (0.05), and therefore it is statistically significant, at a level of significance ($\alpha<0.05$), and therefore there are statistically significant differences in the level of mental

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alertness and its dimensions depending on the severity Incidence, and it appears through the averages of the ranks that these differences are in favor of the study. The members of the study are the players whose severity of injury or duration of their injury is (from 1 to 3 days), and this indicates that the members of the study are the players whose severity of injury or duration of their injury is (from 1 to 3 days). Measuring mental alertness and its dimensions (awareness), in terms of internal experience, awareness of external experience, acting consciously, irrational reception and direction, loss of focus and lack of interaction, openness to experiences, relativity of ideas, and conscious understanding (insight), they obtained higher scores than players. In studying the severity of their injury or the duration of their injury (4 to 20). day, 21 days or more.(

The association of mental alertness with a decrease in infection rates based on (the number of infection cases in the past and current season) can be explained by the fact that practicing mental alertness leads to functional changes in the various attention systems in the brain. (Fox et al., 2006). The results of this study and the known neural correlates of mindfulness are consistent with the stress model, which proposed that stress responses take the form of cognitive disturbances (e.g., distraction and interoception), sensory changes (e.g., narrowing of peripheral vision), and sensory changes (e.g., narrowing of peripheral vision). peripheral). Physiological reactions (increased stress). muscles) leading to sports injury. (Williams and Anderson, 1998.(

The results of differences in mental alertness according to (the number of sports injuries in the past and current season) are consistent with studies (Ivarson, et al, 2015), (Sole, et al, 2021), (Tingaz, et al., 2020), and (Nader). (Ain Allah, et al., 2020) and (Jikauk, et al., 2017), which indicated low infection rates in the study samples.

While the results of differences in mental alertness varied depending on the severity of the injury, the study (Tingaz, et al, 2020) concluded that there are no differences in mental alertness according to the severity of the injury.

Analyze and discuss the results related to the fifth question, which states the following:
-Are there differences in risk-taking behavior among football juniors in light of the following demographic variables (training age - playing positions - number of times injured in the last season - number of times injured in the current season - degree of injury severity)?
Before answering this question, it is necessary to check how evenly the data is distributed. Because most laboratory tests require that the distribution of data be normal, a normal distribution test (Kolmogorov-Smirnov test) was performed to determine whether the data for the risk behavior scale followed a normal distribution or not, and the results were as in the table. the next:

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Table No(23)
Normal distribution test (Kolmogorov-Smirnov test) related to the risk behavior scale data and its dimensions

Dimensions of risk behavior scale	Kolmogorov-Smirnov		
	Statistics	df	Sig.
Embrace risks	0.24	300	0.01
Risk potential	0.26	300	0.01
Acceptance of risks	0.25	300	0.01
Risk motives	0.25	300	0.01
Total risky behavior scale scores	0.20	300	0.01

The previous table No. (23) shows the results of the Kolmogorov-Smirnov test, where the significance level values were less than 0.05 (sig. < 0.05). This indicates that the data relates to the data of the risk behavior scale and its dimensions do not follow a normal distribution. Accordingly, the results showed that The appropriate tests for performing a statistical difference test are non-parametric tests, depending on the condition of the normal distribution. Therefore, statistically significant differences were identified in the level of risk-taking behavior among the players under study according to (training age - playing positions - number of times of injury in the last season - number of times of injury in the current season - degree of injury). due to the severity of the injury). The Kruskal-Wallis test was used. Wallis) because the condition of moderation is not met, and the following tables explain this:

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First: Differences according to training age

Table(24)

Results of the Kruskal-Wallis test to determine the presence of statistically significant differences in the level of risk-taking behavior among the players under study according to training age.

Dimensions of risk behavior scale	Training age	n	Average rank	Ka^2	Sig.
Embrace risks	From 1 to 3 years	86	159.97	8.21	0.04
	From 4 to 6 years	108	151.48		
	From 7 to 9 years	38	167.13		
	More than 10 years	68	127.68		
Risk potential	From 1 to 3 years	86	167.78	32.97	0.01
	From 4 to 6 years	108	117.89		
	From 7 to 9 years	38	192.34		
	More than 10 years	68	157.06		
Acceptance of risks	From 1 to 3 years	86	155.69	2.70	0.44
	From 4 to 6 years	108	146.00		
	From 7 to 9 years	38	136.03		
	More than 10 years	68	159.18		
Risk motives	From 1 to 3 years	86	149.94	4.97	0.17
	From 4 to 6 years	108	152.17		
	From 7 to 9 years	38	172.55		
	More than 10 years	68	136.24		
Total risky behavior scale scores	From 1 to 3 years	86	164.08	13.44	0.01
	From 4 to 6 years	108	132.11		
	From 7 to 9 years	38	183.66		
	More than 10 years	68	144.00		

The results of the study, as shown in the previous table, showed that the value of Ka2 reached (13.44), and that the significance level for the risky behavior scale reached (0.01), which is less than (0.05), and therefore statistically significant at the significance level ($\alpha<0.05$), and therefore there are differences. Statistically significant. With regard to the level of risk-taking behavior according to the age of training, it was shown through the average ranks that these differences are in favor of the study members, the players whose training ages range (from 7 to 9 years), which indicates that the study members are the players whose training ages range (from 7 to 9 years). Years).) and have higher interpersonal risk behaviors compared to players at other training ages.

Regarding the dimensions of risk-taking behavior, it was found that there were statistically significant differences in the average scores of the dimensions of risk-taking behavior (risk tolerance, risk tolerance) according to the age of training, as the significance levels reached (0.04, 0.01). Respectively, it is less than the level of significance (0.05). . It is statistically significant at the significance level (0.05), and it is shown through the average ranks that these differences are in favor of the study members of players whose training ages range

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(from 7 to 9 years), which indicates that the study members are players whose training ages range (from 7 to 9 years old) had a higher level in the dimensions of risky behavior (risk adoption, risk tolerance) compared to the study members of players of other training ages.

It was found that there were no statistically significant differences in the average scores of the dimensions of risky behavior (risk acceptance, risk motivation) according to the age of training, as the significance levels reached (0.44, 0.17) respectively, which are greater. . The significance level reached (0.05), which is not statistically significant. At the significance level (0.05), there are no statistically significant differences between the study sample of players in the level of the dimensions of risky behavior (risk acceptance, risk motivation) depending on the training age of the players.

Second: Differences according to playing positions

Table(25)

Results of the Kruskal-Wallis test to identify the presence of statistically significant differences in the level of risk-taking behavior among the players under study according to playing positions.

Dimensions of risk behavior scale	Play centers	n	Average rank	K^2	Sig
Embrace risks	Defender	117	156.28	1.71	0.43
	middle	130	150.07		
	attacker	53	138.80		
Risk potential	Defender	117	144.88	2.97	0.23
	middle	130	148.74		
	attacker	53	167.22		
Acceptance of risks	Defender	117	155.15	0.94	0.62
	middle	130	149.63		
	attacker	53	142.37		
Risk motives	Defender	117	152.06	1.48	0.48
	middle	130	154.03		
	attacker	53	138.39		
Total risky behavior scale scores	Defender	117	152.88	0.36	0.83
	middle	130	150.82		
	attacker	53	144.44		

The results of the study, as shown in the previous table, showed that the value of Ka2 reached (0.36), and that the significance level for the risky behavior scale reached (0.83), which is greater than (0.05), and therefore it is not statistically significant at the significance level ($\alpha<0.05$). Hence there are no differences. There is statistical significance in the level of risk-taking behavior according to playing positions.

Regarding the dimensions of risk behavior, it was found that there are no statistically significant differences in the average scores of the dimensions of risk behavior (risk adoption, risk tolerance, risk acceptance, risk motivation) according to different playing centers, and the average scores of the risk behavior dimensions. The significance levels reached (0.43, 0.23, 0.62, 0.48). Respectively, it is greater than the significance level (0.05), and is not statistically

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significant at the significance level (0.05), and therefore there are no statistically significant differences between the players in the study sample at the significance level (0.05). Dimensions of risk behavior (risk adoption, risk tolerance, risk acceptance, risk motivation) according to players' playing positions.

Third: Differences according to the number of injuries last season

Table(26)

Results of the Kruskal-Wallis test to identify statistically significant differences in the level of risk-taking behavior among the players under study depending on the number of times they were injured last season.

Dimensions of risk behavior scale	Number of injuries last season	n	Average rank	K^2	Sig
Embrace risks	From 1 to 3 years	205	135.64	31.94	0.01
	From 4 to 6 years	65	167.21		
	From 7 to 9 years	25	205.06		
	More than 10 years	5	269.90		
Risk potential	From 1 to 3 years	205	139.01	28.86	0.01
	From 4 to 6 years	65	155.82		
	From 7 to 9 years	25	205.90		
	More than 10 years	5	275.50		
Acceptance of risks	From 1 to 3 years	205	135.64	37.30	0.01
	From 4 to 6 years	65	161.05		
	From 7 to 9 years	25	223.66		
	More than 10 years	5	256.70		
Risk motives	From 1 to 3 years	205	139.65	34.14	0.01
	From 4 to 6 years	65	148.55		
	From 7 to 9 years	25	218.70		
	More than 10 years	5	279.70		
Total risky behavior scale scores	From 1 to 3 years	205	130.50	56.69	0.01
	From 4 to 6 years	65	167.58		
	From 7 to 9 years	25	242.06		
	More than 10 years	5	290.90		

The results of the study, as shown in the previous table, showed that the value of K2 reached (56.69), and that the significance levels of the risky behavior scale and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motivation) reached (0.01), which is less than (0.05), and therefore it is Moral. Statistically at the significance level ($\alpha<0.05$), and therefore there are statistically significant differences in the level of risk-taking behavior depending on the number of times of injury last season. It was found through the averages of the ranks that these differences are in favor of the study players who were injured the number of times they were injured last season (10). times and more), which indicates that the players in the study who were injured several times last season (10 times or more) have a higher level of risk behavior and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motives) than the players in the

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study who were injured a number of times. Last season (1 to 3 times, 4 to 6 times, 7 to 9 times.

Fourth: Differences according to the number of injuries in the current season

Table(27)

Results of the Kruskal-Wallis test to identify statistically significant differences in the level of risk-taking behavior among the players under study depending on the number of times they were injured in the current season.

Dimensions of risk behavior scale	Number of injuries last season	n	Average rank	K^2	Sig
Embrace risks	From 1 to 3 years	211	138.65	20.13	0.01
	From 4 to 6 years	71	170.06		
	From 7 to 9 years	14	202.14		
	More than 10 years	4	247.50		
Risk potential	From 1 to 3 years	211	139.92	23.57	0.01
	From 4 to 6 years	71	162.33		
	From 7 to 9 years	14	215.93		
	More than 10 years	4	269.50		
Acceptance of risks	From 1 to 3 years	211	137.97	30.38	0.01
	From 4 to 6 years	71	165.43		
	From 7 to 9 years	14	226.36		
	More than 10 years	4	281.00		
Risk motives	From 1 to 3 years	211	138.38	40.83	0.01
	From 4 to 6 years	71	157.70		
	From 7 to 9 years	14	260.64		
	More than 10 years	4	276.50		
Total risky behavior scale scores	From 1 to 3 years	211	133.61	43.51	0.01
	From 4 to 6 years	71	173.15		
	From 7 to 9 years	14	250.36		
	More than 10 years	4	290.00		

The results of the study, as shown in the previous table, showed that the value of K2 reached (43.51), and that the significance levels of the risky behavior scale and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motivation) reached (0.01), which is less than (0.05), and therefore it is significant. Statistically at the significance level ($\alpha<0.05$), and therefore there are statistically significant differences in the level of risk-taking behavior depending on the number of times of injury in the current season. It was shown through the averages of the ranks that these differences are in favor of the study players, whose number of times they were injured in the current season for the players was (10). times and more), which indicates that the study players who were injured a number of times in the current season (10 or more times) have a higher level of risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motives) than the study members who were injured a number of times Injury to players during the current season (1 to 3 times, 4 to 6 times, 7 to 9 times.(

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Fifth: Differences according to the degree of severity of the injury

Table(28)

Results of the Kruskal-Wallis test to determine the presence of statistically significant differences in the level of risk-taking behavior among the players under study depending on the degree of injury severity

Dimensions of risk behavior scale	Degree of injury severity	n	Average rank	K^2	Sig.
Embrace risks	1 to 3 days	180	135.38	19.29	0.01
	4 to 20 days	100	166.94		
	More than 21 days	20	204.40		
Risk potential	1 to 3 days	180	122.64	59.40	0.01
	4 to 20 days	100	185.34		
	More than 21 days	20	227.05		
Acceptance of risks	1 to 3 days	180	133.16	28.15	0.01
	4 to 20 days	100	167.58		
	More than 21 days	20	221.15		
Risk motives	1 to 3 days	180	141.44	39.15	0.01
	4 to 20 days	100	144.94		
	More than 21 days	20	259.85		
Total risky behavior scale scores	1 to 3 days	180	120.26	74.20	0.01
	4 to 20 days	100	181.48		
	More than 21 days	20	267.75		

The results of the study, as shown in the previous table, showed that the value of K2 reached (74.20), and that the significance levels of the risk behavior scale and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motives) reached (0.01), which is less than (0.05), and therefore it is significant. . . Statistically at the significance level ($\alpha<0.05$), and therefore there are statistically significant differences in the level of risk-taking behavior depending on the degree of severity of the injury (duration). It was evident from the classification averages that these differences were in favor of the study players who were exposed to severe injuries or whose duration of injury was (21 days or more). Which indicates that the players in the study who were exposed to severe injuries or whose injury duration was (21 days or more) had a higher level of risk-taking behavior and its dimensions (risk adoption, risk tolerance, risk acceptance, risk motives). Of the players in the study whose injuries were severe. Or the duration of their injury. (4 to 20 days, 1 to 3 days).

Analyze and discuss the results related to the sixth question: which states the following:

–To what extent does mental alertness contribute to predicting risk-taking behaviors among young football players in the Kingdom of Saudi Arabia?

To answer this question and identify the extent to which mental alertness contributes to predicting risk-taking behaviors among young football players in the Kingdom of Saudi Arabia, a regression analysis method was used, and the following tables illustrate this:

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Table No(29)
Shows the results of regression analysis of variance

variance	Sum of squares	df	mean squares	f	Sig.
Regression	1444.61	8	180.58	281.70	0.01
Residual	186.54	291	0.64		
the total	1631.15	299			
Multiple correlation coefficient (R)(0.94-) = Coefficient of determination(0.89) = ((R^2))					

It is clear from Table:(29)

1-It was found that sports risk-taking behavior among young football players in the Kingdom of Saudi Arabia can be predicted through their scores on the mental alertness scale, as the F value reached (281.70) at a significance level of (0.01), which is considered a large value. This means that the dimensions of the mental alertness scale can be relied upon together in predicting sports risk-taking behavior among the research sample of football juniors in the Kingdom of Saudi Arabia.

2- It is clear from this table that the value of the multiple correlation coefficient (R) reached (-0.94), meaning that all dimensions of the mental alertness scale combined are inversely and strongly related to risk-taking behavior among the research sample of football juniors in the Kingdom of Saudi Arabia, which means that this The result is that mental alertness works to reduce risk-taking behaviors among the research sample of emerging football players in the Kingdom of Saudi Arabia.

3-Through the value of the coefficient of determination ( ) it was shown that the independent variable (mental alertness scale) has the ability to predict the value of the dependent variable (dangerous behavior among the research sample of football juniors in the Kingdom of Saudi Arabia). Arabic). Arab). Arabic) where the value of ( ) is (0.86) and this indicates the degrees (the dimensions of the mental alertness scale explain and contribute about 86%) to the changes or variance in behavior among the research sample of football juniors in the Kingdom. Kingdom of Saudi Arabia. Determine the coefficients of the variables that entered the regression equation to predict the value of the dependent variable (risk behavior among the research sample of emerging football players in the Kingdom of Saudi Arabia); To find out which of these independent variables has the greatest impact on the dependent variable, this is done through the following table of coefficients:

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Table No(30)
Coefficients of the independent variables included in the regression equation

Independent variables	Regression coefficient	Sd.Er	Beta coefficient (b)	value (t)	Sig
constant (regression equation)	35.03	0.39		90.49	0.01
Awareness of inner experience	0.15-	0.02	0.25-	10.17-	0.01
Awareness of external experience	0.17-	0.02	0.23-	10.27-	0.01
Act consciously	0.15-	0.02	0.20-	8.51-	0.01
Irrational acceptance and direction	0.10-	0.02	0.11-	4.79-	0.01
Loss of concentration and lack of interaction	0.15-	0.02	0.20-	8.34-	0.01
Openness to experiences	0.13-	0.02	0.17-	6.72-	0.01
Relativity of ideas	0.14-	0.02	0.17-	6.15-	0.01
Conscious understanding (insight)	0.18-	0.02	0.26-	10.79-	0.01

It is clear from the statistical results presented in the previous table and from the follow-up of the beta coefficients and the t-test that the constant is statistically significant, and from here it is clear that the mental alertness measure had a significant contribution in predicting risk-taking behavior among the research sample of junior football players in the Kingdom of Saudi Arabia, as is evident from the table. Previously, the dimension of conscious understanding (insight) was statistically significant, and had the greatest impact in the multiple regression model, as the value of the beta coefficient for the dimension of conscious understanding (insight) reached (0.26) at a significance level of (0.01), followed by the dimension of awareness of inner experience, as It was statistically significant, and the value of the beta coefficient for the dimension of awareness of internal experience was (0.25) with a significance level of (0.01), followed by the dimension of awareness of external experience as it was statistically significant, and the value of the beta coefficient for the dimension of awareness of external experience was (0.23) with a significance level of (0.01). It is followed by the dimension of awareness of external experience, after acting consciously, because it is statistically significant. The value of the beta coefficient for the dimension of conscious action was (0.20) with a level of significance (0.01), followed by the dimension of loss of concentration and lack of interaction, where it was statistically significant. The value of the beta coefficient for the dimension of loss of concentration and lack of interaction was The interaction (0.20) had a significance level of (0.01), followed by the dimension of openness to experiences, which was statistically significant. The value of the beta coefficient for the dimension of openness to experiences was (0.17) with a level of significance (0.01), followed by the dimension of relativity of ideas with statistical significance. The value of the beta coefficient for the dimension of relativity of ideas was (0.17) with a level of significance (0.01), followed by the dimension of acceptance and irrational tendency, as It was statistically

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significant, and the value of the beta coefficient for the dimension of acceptance and irrational tendency (0.11) was a significance level.(0.01)

The results of this study indicated that mental alertness reduces risk-taking behaviors among players and thus reduces sports injuries. To compare this result, the researcher did not find previous studies that dealt with the previous variables together to show the position of his current study among them, whether they were in agreement or conflict.

This result can be linked to an indirect relationship, as risk-taking behavior is linked to sports injuries, as indicated by it. (Reynolds et al., 2013). There is a positive relationship between impulsivity and risk-taking behavior, and it is a good indicator of risk-taking behavior, as indicated by (Ibrahim, Al-Husseini, 2013) in his study, and mental alertness has a negative effect and an inverse relationship with impulsivity, as indicated by (Tangaz et al. in his study). There is a negative relationship with risk-taking behavior, as Moawad (2021) indicated in his study.

-Conclusions:

Through the study's objectives, questions, procedures, results and discussions, the following conclusions were reached:

1- The level of mental alertness among emerging football players in the Kingdom of Saudi Arabia was high.

2-Low level of risk-taking behavior among emerging football players in the Kingdom of Saudi Arabia.

3-There is a statistically significant negative correlation between the scores of emerging football players in the Kingdom of Saudi Arabia on the total score of the mental alertness scale and the total score of the risk behavior scale. The higher the mental alertness scale in young people, the lower the level of risk-taking behavior.

4-There are no differences in mental alertness and risk-taking behavior according to (playing position).

5-There are statistically significant differences in mental alertness and risk-taking behavior according to (training age - number of times injured in the last season - number of times injured in the current - degree of injury severity), as it was found that young people have high levels of mental alertness in favor of training age from (4-6). (10 years and older) The number of times they were injured was (1-3) times in the last and current season, and the degree of severity of the injury was slight. Young people have high levels of risk-taking behaviors. The number of times they were injured (10 times or more) in the past and current season, and the degree of severity of their injuries was high. The training age was (7-9) years.

- Recommendations:

1. Clubs should be drawn to the importance of mental alertness and its positive role in reducing the level of risk-taking behaviors that reduce sports injuries.
2. Design training programs that include theoretical applications of mental alertness to contribute to reducing the degree of risk-taking behavior among players.
3. Conduct similar studies on mental alertness and risk-taking behavior, taking into account differences in the previous variables according to the geographical distribution of regions.

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Social Impacts of Hosting the 2022 FIFA World Cup on Citizens and Residents in Qatar

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ABSTRACT

This study aimed to identify the social impacts of hosting the 2022 FIFA World Cup in Qatar on its citizens and residents. Also, it aimed to reveal the differences in these impacts across various demographic variables, including identity, age group, and gender. The researcher adopted a descriptive methodology to achieve these objectives, collecting data mainly through a questionnaire administered to a diverse sample of 411 individuals who willingly participated in the study. The study's findings unveiled a range of significant social effects from this momentous event hosted in Qatar. Notably, these effects manifested in improving the country's image, fostering an incomparable sense of community pride, developing a heightened feeling of belonging, and arousing an overwhelming enthusiasm within the populace in Qatar towards hosting such grand-scale sporting events. Moreover, the World Cup fostered stronger feelings of security and social cohesion. Based on these results, the study advocates recommendations for future investigative endeavors. Despite its significant results, the study recommends future research to encompass a more diverse and inclusive representation from various regions. This is crucial to understand better the social outcomes of large-scale sporting events among the population.
Keywords: social impacts, FIFA World Cup, residents, Qatar.

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Introduction:

Many countries compete to host mega sporting events for the sake of international attendance and the social, cultural and economic returns to the host countries and cities. in this context; Many studies have been conducted on the impacts on the community and the area hosting events in general and major sporting events in particular Thomson et al., 2019; Königstorfer et al., 2019; Malkrewicz-Mosko, Buczta et al., 2018.(

The FIFA World Cup and the Summer Olympics are considered two huge sporting events (Al-Daroushi, 2020). These two events are considered huge because they mostly happen once and are distinguished by their large size, large audience attendance, and enormous level of financial investment in them, in addition to the large media coverage of them. and impacting the infrastructure of the host community through urban transformation and economic growth (Lord et al., 2011). These events have a significant impact on stakeholders from government agencies and the private sector and provide opportunities to catalyze these changes (O'Brien, 2006 & Tournois, 2018), which begin well before the start of the event and continue through the planning, bidding and event-time stages, and their impact extends beyond A long period of time after the event (Gibson et al., 2014).

After the event ends, a set of impacts remain on society resulting from hosting these events, which is called legacy. Preuss (2007) notes that legacy is "all the planned and unplanned, positive and negative, tangible and intangible structures that are created for a sporting event and by those responsible for the event itself", and the intangible impacts of events on the host community are important to a sporting event, to the degree that Compare it with tangible effects (Christian, 2020).

The importance of intangible effects, namely social influences and the level of participation in sporting activity, becomes clear when evaluating the sporting event in the host region. Social impacts are defined as "any impacts that are likely to have an impact on the quality of life of local residents" Friedlin et al., 2003, p. 5)). The social impacts are education and skills, social cohesion, environmental sustainability, sport development, and host destination branding (Mayer et al., 2021). Social influences can be divided into positive influences such as increased pride and honour, increased community support, feelings of happiness and social inclusion and increased feelings of security and cohesion. in contrast; Negative impacts include traffic congestion, high crime rate, public indiscipline, high costs of living, and noise pollution (Elahi et al., 2021).

It is important for any host country to have a classification, understanding and evaluation of the social impacts associated with major sporting events. Djaballah et al. (2015) point out the lack of literature conducted on the social impacts of sporting events, as it is considered an ambiguous issue and can give contradictory results. Chalip (2006) stressed the need to benefit from sporting events to obtain positive results for the longest period, and the social impact of sporting events should not be left to luck and chance.

Subsequently; This study aims to identify the social impacts on one of the major sporting events held in the region, which is the 2022 FIFA World Cup in Qatar. The population of the State of Qatar, including citizens and residents, Arabs and non-Arabs, was chosen to be a sample for this study, in addition to its focus on age groups and gender. And other independent variables.

Method and tools:

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This study relied on the descriptive analytical approach due to its suitability to the variables and nature of the study, as this approach depends on studying reality or the phenomenon as it is, and is interested in describing it accurately, and expressing it quantitatively or descriptively, and then obtaining results that help in describing reality and developing it (Saadah, 2020). The researchers selected the study sample using the sample method available from citizens and residents of the State of Qatar, which are all individuals who accessed the questionnaire link and were able to answer it. The number of people who responded to the study tool was (411) individuals. The study population included all Qatari citizens and residents of Arab and foreign countries. Based on the statistics provided by the Planning and Statistics Authority, the last population census in Qatar was held on October 31, 2022 AD, which included individuals of all ages within the borders of the State of Qatar on October 31, 2022 AD. The population within the State of Qatar reached (3,001,781) people.

Table (1): Distribution of study sample members according to study variables

Identity	Age group				Sex	percentage
	30−18	45−31	60−46	bigger 60 than	male	
Qataris	30	47	12	4	93	%22.6
Arab resident	35	111	38	2	186	%45.2
Non-Arab resident	13	13	3	0	29	%7.1

Identity	Age group				Sex	percentage
	30−18	45−31	60−46	bigger 60 than	female	
Qataris	17	16	4	0	37	%9
Arab resident	13	26	8	0	47	%11.4
Non-Arab resident	5	13	0	1	19	%4.6

After obtaining a complete idea of the nature of the topic and the sample, the researchers built a questionnaire that was formulated in two axes after referring to the literature related to the social influences on major sporting events, and in its final form it consisted of 28 items. The first axis: “Social impacts of Qatar’s hosting of the 2022 FIFA World Cup” consists of 17 items, and the second axis: “Enhancing participation in tournaments such as the FIFA World Cup” consists of 11 items. In order to ensure the validity of the items (face validity) in measuring what they were designed to measure (the variable) in its apparent form; The researchers presented the scale items to a group of 10 experts and specialists in the field of sports management, sports psychology, and sports sociology. Regarding the first axis (social influence axis); The significance of the Chi-square test was adopted as a criterion for accepting the item, and thus (3) statistically insignificant items (9, 10, 11) were deleted, and the scale became composed of (17) items, as shown in Table No. (2), which shows face validity. . Using chi square.

Table (2): Measurement of the apparent validity of the study tool

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Phrase numbers	Number of experts	Agree	dis agree	K^2		Sig.
				Calculated	Scheduled degree	
1،2،3،4،5،6،7،8،14،17،18،19	10	10	–	10	3.84	Statistically significant
12،13،15،16،20	10	9	1	6.40	3.84	Statistically significant
10,11	10	8	2	3.60	3.84	Not statistically significant
9	10	7	3	1.60	3.84	Not statistically significant

(1) The tabular chi-square value was (3.84) at a significance level of (0.05) and a degree of freedom

Phrase numbers	Number of experts	Agree	dis agree	K^2		Sig
				Calculated	Calculated	
2،3،4،5،6،10،14،15	10	10	-	10	3.84	Statistically significant
11،12،13	10	9	1	6.40	3.84	Statistically significant
1،8،9	10	8	2	3.60	3.84	Not statistically significant
7	10	7	3	1.60	3.84	Not statistically significant

As for the second axis (the axis of enhancing participation in tournaments such as the FIFA World Cup); The significance of the Chi-square test was adopted as a criterion for accepting the item, and (4) non-statistically significant items (1, 7, 8, 9) were deleted, and thus the scale became composed of (11) items, as shown in Table (3), which shows the validity. Facet using chi-square.

Table 3: Face validity by chi-square

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The researchers also reformulated some paragraphs of the questionnaire at the request of the arbitrators. The questionnaire in its final form consisted of 28 items. The researchers also used the test-retest reliability method, where the questionnaire was then applied twice with an interval of three weeks between them on the exploratory sample, which consisted of (20) individuals who were excluded from the main sample. The correlation coefficient was calculated between the application and re-application scores, and Table 4 shows values for the correlation coefficient between the first and second applications.

Table (4): Application results and re-application method

the axis	ICC	Sig	KAPPA	Sig	
The first axis	0.99	0.98 – 0.99	0.74	0.00	
The second axis	0.99	0.96 – 0.99	0.73	0.00	

The Cronbach's alpha reliability coefficient is used to ensure that the questionnaire repeated for the study has the stability or stability of the scale and does not conflict with itself, meaning that the scale gives the same results with a probability equal to the value of the coefficient if it is re-applied to the same sample.

Table (5): Calculating the reliability coefficient using Cronbach's alpha

the axis	Number of phrases	alpha Cronbach's reliability coefficient
The first axis	17	0.91
The second axis	11	0.89
Overall reliability of the questionnaire	27	0.87

The overall reliability coefficient for the study's axes was high, reaching (0.87) for the total of the twenty-six questionnaire items, while the reliability of the axes ranged between (0.89) as a minimum and (0.91) as a maximum. This indicates that the questionnaire has a high degree of reliability and can be relied upon. In the field application of the study, the Nunnly scale was adopted, with 0.70 as the minimum reliability (Nunnly & Bemstein, 1994: 264-265).

The researchers verified the internal consistency of the questionnaire by calculating the Pearson correlation coefficient between the scores of each paragraph of the axis and the total score of the axis to which the paragraph belongs, using the statistical program (SPSS) version 0.23. The following table shows the correlation coefficients between each paragraph of the axis. . The first score and the total score for the axis.

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Table No. (6): Correlation coefficients between the score of each item and the score of the first axis

The axis	R	Sig
1	1	0.00
2	0.67	0.01
3	0.25	0.28
4	0.67	0.01
5	0.79	0.00
6	0.44	0.50
7	0.67	0.01
8	0.79	0.00
9	0.67	0.01
10	0.67	0.01
11	0.67	0.01
12	1	0.00
13	0.67	0.01
14	0.79	0.00
15	1	0.00
16	0.67	0.01
17	0.32	0.16

Correlation is significant at the 0.01 level (2-tailed).**
Correlation is significant at the 0.05 level (2-tailed).

It is clear from the results of the previous table that all Spearman correlation coefficients between the items of the first axis and the total score of the first axis are statistically significant at the significance level of 0.05, where the lowest correlation coefficients were (0.25), while the upper limit was (1). Accordingly, all paragraphs of the first axis are internally consistent with the axis to which they belong, which proves the validity of the internal consistency of the paragraphs of the first axis.

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The internal consistency of the questionnaire was also verified by calculating the Pearson correlation coefficient between the scores of each axis item and the total score of the axis to which the item belongs, using the statistical program (SPSS) version 0.23. The following table shows the correlation coefficients between each item of the second axis and the total score. For the axis.

Table No. (7): Correlation coefficients between the score of each item and the score of the second axis

The axis	R	Sig
1	0.67	0.01
2	0.58	0.01
3	0.54	0.15
4	1	0.00
5	0.17−	0.48
6	0.68	0.01
7	0.79	0.00
8	0.32	0.16
9	0.81	0.00
10	0.81	0.00
11	0.67	0.01

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

It is clear from the results of the previous table that all Spearman correlation coefficients between the items of the second axis and the total score of the second axis are statistically significant at the significance level of 0.05, where the lowest correlation coefficients were (0.17) while the highest limit was (1). Accordingly, all paragraphs of the second axis are internally consistent with the axis to which they belong, which proves the validity of the internal consistency of the paragraphs of the second axis. Therefore, based on the results of reliability and internal consistency in the previous tables, the stability of the study tool (the questionnaire) is high to a high degree, and the validity of its internal consistency is correct, which makes us apply it to the entire sample.

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Results and discussion:

The results of the overall chi-square in the first axis were very significant at the p<0.001 level, which indicates that the sample members agreed with the items in the social influences axis. The highest percentage of those who agreed was 98.54%, and it came in the ninth paragraph of the axis, which states that Qatar "obtained recognition of its status by hosting the tournament".

Table (8): Results of the comprehensive chi-square test for the social influences axis:

m	Phrase numbers	agree	indifferent	do not agree	df	K^2	Sig.
The first axis: social influences							
1	The World Cup provided entertainment for the community	397 %96.59	10 %2.43	4 %0.97	2	740.23	p<0.001
2	The tournament sparked enthusiasm in the community	395 %96.11	15 %3.65	1 %0.24	2	729.52	p<0.001
3	The tournament strengthened my friendships and social relationships with community members	310 %75.43	86 %20.92	15 %3.65	2	346.01	p<0.001
4	The tournament increased my feelings of belonging towards different sectors of society	335 %81.51	61 %14.84	15 %3.65	2	436.96	p<0.001
5	The tournament increased my interaction and communication with my community	330 %80.29	68 %16.55	13 %3.16	2	418.88	p<0.001
6	The World Cup strengthened the cohesion of Qatari society	352 %85.64	51 %12.41	8 %1.95	2	512.86	p<0.001
7	The tournament promoted cultural diversity in Qatar	394 %95.85	15 %3.65	2 %0.47	2	723.78	p<0.001
8	The tournament contributed to meeting new people	349 %84.91	54 %13.14	8 %1.95	2	499.81	p<0.001
9	Qatar gained recognition and status by hosting the tournament	405 %98.54	6 %1.46	0 %0	2	387.35	p<0.001

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10	The World Cup gave Qatar the opportunity to be a model that was able to achieve its potential and capabilities through hosting	401 %97.57	9 %2.19	1 %0.24	2	763.33	p<0.001
11	Non-resident visitors learned more about Qatar through the World Cup	398 %96.84	11 %2.68	2 %0.47	2	764.15	p<0.001
12	The World Cup made Qatar a model of a societal state and strengthened fraternal ties between citizens and fans	375 %91.24	32 %7.76	4 %0.97	2	623.05	p<0.001
13	The World Cup enhanced Qatar's international recognition in organizing world sports tournaments	401 %97.57	10 %2.43	0 %0	2	371.97	p<0.001
14	The World Cup enhanced the sense of pride among the people of Qatar	397 %96.59	13 %3.16	1 %0.24	2	740.67	p<0.001
15	The tournament strengthened the sense of belonging to Qatari society	379 %92.21	28 %6.81	4 0.975	2	643.31	p<0.001
16	The tournament provided an incentive to preserve local culture	370 %90.02	31 %7.54	10 %2.43	2	596.02	p<0.001
17	The World Cup strengthened the community spirit among the people of Qatar	361 %87.83	45 %10.95	5 %1.22	2	555.21	p<0.001

**Significant at the level of 0.01 or less

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The answers of the study sample members in paragraphs (7, 9, 10, 13, 14) also indicated achieving the city's image and enhancing community pride. This was demonstrated by individuals' positive reactions to these paragraphs. The answers of the sample members in paragraphs (2, 4, 15) indicated that the FIFA World Cup in Qatar increased the affiliation of various segments of society and aroused enthusiasm in them.

As for the second axis, the results of the comprehensive chi-square were very significant at the p<0.001 level, which indicates that the sample members agreed with the paragraphs of the enhancing participation axis, as the highest percentage of agreeers reached 94.65% in the eleventh paragraph of the axis, which stated: "The World Cup gave to society "The Qatari will provide more opportunities and expose him to the world." The results of this study are consistent with the study of Jaballah et al. (2015) were conducted with officials from 25 French cities aiming to host sporting events under the category of major (generally non-major) sporting events. Its results showed that the formation of social identities is one of the social effects of sporting events. Results of the comprehensive chi-square test for the enhancing participation axis.

Table (9): Results of the comprehensive chi-square test for the enhancing participation axis

m	Phrase numbers	agree	indifferent	do not agree	df	K^2	Sig.
The second axis: enhancing participation							
1	The World Cup played a role in my life and my desires	272 %66.12	106 %25.79	33 %8.03	2	218.99	p<0.001
2	My sporting identity was achieved when I participated as a fan of the World Cup	276 %67.15	98 %23.84	37 %9.00	2	225.12	p<0.001
3	I find that the tournament is obligated to use its profits to support the State of Qatar	300 %72.99	91 %22.15	19 %4.62	2	311.78	p<0.001
4	Hosting the World Cup contributed to raising the economic level of the State of Qatar	283 %68.86	96 %23.36	32 %7.79	2	248.35	p<0.001
5	I see that Qatar benefited from the companies sponsoring the tournament	282 %68.61	108 %26.28	21 %5.11	2	257.83	p<0.001
6	My attendance at the World Cup enabled me to attend the next tournament	300 %72.99	78 %18.98	33 8.03	2	298.29	p<0.001

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7	I advise everyone to attend the upcoming World Cup tournaments	306 %74.45	92 %22.38	13 %3.16	2	335.49	p<0.001
8	I usually share my positive impressions of the tournament with others	344 %83.70	46 %11.19	21 %5.11	2	471.43	p<0.001
9	The World Cup has increased understanding of the cultures and communities to which visitors to the tournament belong	361 %87.83	43 %10.46	7 %1.70	2	554.10	p<0.001
10	The World Cup increased my interest in international sporting events	323 %78.59	65 %15.82	23 %5.60	2	385.25	p<0.001
11	The World Cup gave Qatari society more opportunities and exposed it to the world	389 %94.65	20 %4.87	2 %0.87	2	696.48	p<0.001

The results of the Chi analysis test to study the effect of identity on the responses of sample members in the two axes of the study showed that the differences were statistically significant in paragraphs No. (4) of the first axis and (2) of the first axis. The second axis is for the benefit of the corresponding sample members who belong to the identities of “Arab Resident” and “Arab Resident.” “Qatari citizen” respectively, with an influence rate ranging between (11% - 13%), based on the vertical ratios in the previous table, which show the differences between the responses of the sample members between the two categories of the variable. This change can be attributed to the fact that Arab residents have the same language and culture that is close to the culture of society in the State of Qatar, which directly affects their attitudes (Ammara, 2022).

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4	The tournament increased my feelings of belonging towards different sectors of society	Qatari Arab resident Non-Arab resident	**104 %31.0** **196 %58.5** **35 %10.4**	**21 %34.4** **29 %47.5** **11 %18.0**	**5 %33.3** **5 %33.3** **5 %33.3**	4	10.62	0.03	%11
2	My sporting identity was achieved when I participated as a World Cup fan	Qatari Arab resident Non-Arab resident	**87 %31.5** **161 %58.3** **28 %10.1**	**26 %26.5** **58 %59.2** **14 %14.3**	**17 %45.9** **11 %29.7** **9 %24.3**	4	13.87	0.01	%13

The results of the Chi-square analytical test to study the effect of age group on the responses of the sample members in the two axes of the study showed that the differences were statistically significant in paragraphs (3,5) in the first axis in favor of the sample members from the age group (31-45) with an effect size of (14%).).) This is based on the vertical ratios in the previous table, which show the differences in individuals' responses between the categories of the variable.

3	The tournament strengthened my friendships and social relationships with community members	30-18 45-31 60-46 biggest than 61	**92 %29.7** **167 %53.9** **46 %14.8** **5 %1.6**	**18 %20.9** **54 %62.8** **12 %14.0** **2 %2.3**	**4 %26.7** **4 %26.7** **7 %46.7** **0 %0.0**	6	14.95	0.02	%14
5	The tournament increased my interaction and communication with my community	30-18 45-31 60-46	**93 %28.2** **180 %54.5** **51**	**18 %26.5** **42 %61.8** **7**	**3 %23.1** **3 %23.1** **7**	6	16.66	0.01	%14

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		Biggest than 61	**%12.46 %15.5**	**%1.71 %10.3**	**%1.70 %53.8**				

It appears in these paragraphs that the percentages in favor of the accepted group (31-45) amounted to 53.9% and 54.5%, respectively, compared to those who did not agree in the same age group, at 26.7% and 23.1%, respectively. . These results contradict the study of Hautbois et al., 2020, which demonstrated that the social impact of sporting events does not depend on demographic factors such as age, gender, and length of stay. The reason for the difference may be due to the spatial or geographical dimension, which led to a cultural and intellectual difference, and thus the results differed between the two studies.

The results of the Chi analysis test to study the effect of gender on the responses of sample members in the study axes showed that the differences were statistically significant in paragraph (3) of the first axis in favor of the corresponding sample members with a percentage. The size of the effect was (14%), based on the vertical ratios in the table. Which clarifies the differences between the responses of the sample members between the two categories of the variable. We also found that the percentages in favor of the sample members who did not agree from the male category amounted to 66.7% compared to the non-agreeing female sample members at 33.3%.

The tournament strengthened my friendships and social relationships with community members	male female	**242 %78.1 68 %21.9**	**55 %64.0 31 %36.0**	**10 %66.7 5 %33.3**	2	7.62	0.02	%14

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As for paragraph (5), the differences were statistically significant in favor of the corresponding sample members, with an effect size of (13%), through the vertical ratios that show the differences between the sample responses between the two categories of the variable. These results are consistent with the study of Al-Atrash (2014), which showed that the level of social relations among males is better than among females. This is due to the fact that males are more mixed and harmonious than females, and they also practice sports activities more, in addition to the influence of customs and traditions that limit women's participation in social relations, and thus social relations are limited to women. Males compared to females. To be sure; The results contradict a study (Hautbois et al., 2020), which confirmed that social influence does not depend on demographic factors such as age, gender, and length of residence.

The tournament increased my interaction and communication with my community	male female	**255** **%77.3** **75** **%22.7**	**42** **%61.8** **26** **%38.2**	**10** **%76.9** **3** **%23.1**	2	7.21	0.03	%13

Conclusions:

Hosting the 2022 FIFA World Cup in Qatar has proven to have multiple positive social impacts on the State of Qatar and Qatari society (and Arab residents as well). Hosting the World Cup in Qatar had a direct impact on the city's image and enhanced community pride in it. In addition, This hosting contributed to the belonging of all segments of society, especially Arab residents, and strengthened the interaction and cohesion of Qatari society. On the other side; The results of the study confirmed an increase in the level of sports participation among citizens and residents of the State of Qatar after the World Cup.

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Appendices

First: The final social impact measure

m	Phrase
1	The World Cup (WC) provided entertainment to the community
2	أنا The WC brought excitement to the community
3	The WC strengthen my friendship in my community
4	The WC increased my sense of my belonging in various community group
5	The WC increased my social interactions with my community
6	The WC reinforced cohesion of Qatar community
7	The WC promoted the culture diversity of Qatar
8	The WC residents with the chance to meet new people
9	Qatar gained positioning recognition by hosting the WC
10	The WC gave opportunities to show case Qatar
11	Outsiders knew more about Qatar by attending the WC
12	The WC made Qatar a model for the societal state and strengthened fraternal bonds between citizens and fans
13	The WC enhanced the recognition of Qatar internationally
14	The WC enhanced pride of Qatar residents
15	The WC enhanced the sense of being part of Qatar community
16	The WC provided an incentive for the preservation of the local culture
17	The WC reinforced community spirit

Second: A measure to enhance participation in the FIFA World Cup tournaments in a final format

m	Phrase
1	The WC has played a role in my life and desires
2	My sporting identity was realized when I participated as a World Cup fan
3	I believe that the WC is committed to using its profits to support Qatar
4	Hosting the WC contributed to raising the level of the economy of Qatar
5	I think that Qatar benefited from sponsorship of the World Cup
6	My attendance at the WC enhanced the possibility of attendance at the upcoming WC
7	I would recommend others to attend the upcoming WC
8	I usually share my positive impressions of the tournament with others
9	The WC increased the understanding of the other culture and societies of visitors
10	The WC increased my interest in international sport events
11	The WC increased opportunity to inform hosting community in the world

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Quality of Life for the Jordanian National Team Female Players

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Abstract:

The aim of the research was to determine the quality of life experienced by female players for the national team and to pinpoint variations in this regard based on age, economic status, number of years played, severity of injuries, and style of game. In order to do this, a purposeful sample of 73 national team players in collective games (football, basketball, handball, and volleyball) was studied using the technique. Gentner et al., 2011 applied the five-axis quality of life measure to this sample (Gentner et al., 2011). The study found that the overall quality of life of the study sample members was slightly satisfied, with the calculated average response being 29. (5) The results also showed that there were no statistically significant differences in the quality of life of Jordanian national players attributable to the age variable. In terms of economic status, years of experience, number of injuries sustained, and type of game, there have been statistically significant differences favoring football and handball players over basketball players. Based on the results, the researchers suggested that in an effort to improve the national elected players' quality of life, which may help with performance development, their needs be monitored and that the psychological and social aspects of the game be attended to.

Keywords: Team games, Positive Psychology, The Athlete Life Quality Scale.

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Introduction:

The life of the individual has been the subject of several scientific studies and research projects for many years. Because of its significant contribution to the advancement and prosperity of civilizations, psychology has made the individual one of its most studied subjects. In the last two centuries, research has concentrated on examining the negative elements of humans in order to help people adapt to their surroundings and the community in which they live. This is because we are living in a time of rapid intellectual and civilizational progress as well as social change.

By adopting Freud's strategy and emphasizing the study of personality, conflicts, and therapy techniques, those studies had overemphasized the negative characteristics of the individual, according to American Society of Psychology President Martin Slegman, who made this observation toward the close of the previous century. Through a review of the databases he had compiled from 1971 to 2005, it was also evident that there was an imbalance between the quantity of studies on positive psychology and the traditional and clinical studies. most of which were studying the negative side. Hence, he began to study and investigate the positive concept of psychology by looking for the individual ' s positive abilities to achieve satisfaction and happiness and improve the quality of his life (Junes, 2021).

Thus, in the context of what is known as quality of life, psychologists have started to examine positive experiences and personal traits. Fernández-Ballesteros (1998) reveals that the phrase "quality of life" is fundamental to various scientific fields, such as ecology, health, psychology, economics, politics, geography, sociology, and management.

Within the framework of positive psychology, positive personality traits have emerged as one of the most significant topics covered in psychology courses. As a result, ideas of optimism, life happiness, self-esteem, and courage have gained more attention than ideas of mental illness and its causes.Additional affirmative ideas that improve prospects for quality of life—they're not limited to being disease-free. Regarding Seligman and Csikszentmihalyi (2001).

According to some research on the idea of the quality of psychological life, a good life is reflected in a person's place in society through subjective indicators of that person, such as emotional balance, happiness, satisfaction, positive social relationships, awareness of others' feelings of social and personal responsibility, loyalty, belonging, and optimism. Hajiran (2006) and Picher (2006).

Additionally, he noted a number of elements (Dijkers, 1999) that were present in the majority of definitions of quality of life, such as good emotions, social consent, consent to life, and physical, mental, emotional, and spiritual health. In non-sports literature, the term "quality of life" (QOL) refers to a state that includes attributes like physical comfort, leisure time, and excellent health. (Singer, 1996; Farquhar, 1995). The conclusion (Fernandez-Ballesteros, 1998) was that personal circumstances (age and sex) and lifestyle (at home or in institutions) determine one's quality of life.

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Additionally, he mentioned (Bachyet, 2012) that everyone had the capacity and ability to use them to change their behavior into one that satisfies in order to adapt to the rapid advancement of technology and society. Al-Minasi and Kazem (2006) claim that because quality of life is influenced by subjective elements like consent to life, it differs from person to person. occupation and social standing. The quality of psychological life, he explains (Halawa, 2010), is balancing the physical, psychological, and social components.

The notion of quality of life was introduced into the realm of sports by Whittal & Orlick (1978), who were the first to investigate the elements of sports experience that affect athletes' life satisfaction, including aspects of sport (match, training, coach, teammates, output).

In order to maintain play and prevent retreat, he clarifies (Retire, 2005) how important it is to delight the young athlete during the game. Both (Khalifa et al., 2009) shown that complete integration into performance, pleasure, excitement, self-confidence, and emotion management without self-skin are the best psychological qualities. He concurred (Ratba, 2005) that sports practice should be an opportunity to enjoy skills that would ignite his ability, without constant instruction and with an emphasis on fostering a sense of camaraderie and cooperation among the players.

Researchers believe that while there is a good interest in players' physical and skillful preparation, there is also evidence of instability and volatility in sports performance during competitions and championships. This leads them to believe that psychological factors are to blame for this vibration, and that it is therefore the responsibility of trainers to identify and develop players' positive potential and capabilities in order for them to perform to the best of their abilities during competitions.

The problem of studying:

There is no doubt that human existential concerns are numerous and complex, and that the concept of quality of life is one of them. The quality of life and consent to it is a fundamental objective of everyone. Hence, the positive attitude of psychology has evolved, addressing aspects that bring happiness, satisfaction and love, as well as primary attention. Attention has begun to be paid to concepts related to the positiveness of the human personality. In the past, the interest in psychology has evolved in subjects that emphasize positive aspects such as the concept of quality of life, which has been linked to a large number of concepts and terms relating to health, satisfaction with life, optimism, psychological happiness, welfare, social responsibility, cooperation, belonging, control of emotions, etc., and its various uses and research in various sciences and other fields, including the sports field, so as to study the impact of quality of life on the performance of athletes and other related subjects.

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The efforts of individuals involved in Jordan's collective national player training are not comparable with their accomplishments on the Arab and international stages, as they have observed via the work of sports researchers and their academic experience. Researchers believe that ignoring the psychological component—which is the relationship between elite players' motor, physical, and planning skills—may be the root of the issue. Given that psychological well-being and life satisfaction are positively associated, performance is positively impacted. On the other hand, demands from psychology, training, society, and competition could negatively impact their quality of life and have an impact on the consistency, erratic nature, and quality of their performance relative to their skill set.

Hence the idea of the study, which aims to reveal the importance of the psychological quality of the life of the players through the use of a measure for athletes (Gentner, Wrisberg & Lounsbury, 2011) so that the attention of the trainers can be drawn to this important psychological aspect, which prompts them to pay more attention to the psychological aspect, contributing to the integration of psychological training programmes into the general training programme, such as focusing on the positive aspects of female players in intellectual abilities (mental perception and concentration), social abilities such as (a spirit of belonging and cooperation) and emotional abilities such as emotional balance and positive conversation with oneself.

The aim of the study

The study intends to ascertain the quality of life of female football, basketball, and volleyball players for the national team, as well as disparities in quality of life based on age, economic status, number of playing years, degree of injury, and type of game.

Study-related queries

1. How happy are the women who play babyball, handball, and volleyball for the national team?
2. Is there a statistical difference in the quality of life between women who play basketball, football, and volleyball on the national team based on factors such age, economic status, number of years on the team, severity of injuries, and type of game?

Previous studies

Cosma et al., 2021 conducted a study aimed at analysing the quality of life of athletes during the Coved 19 pandemic, which included 249 athletes aged 15 to 35 years, medalists at the Olympic Games. Using measurement tools: COVID-19, a measure of the quality of life of athletes. The results indicated statistically significant differences in concern according to the type of sport that is practised, with football and basketball being the least affected. Individual sports have been most affected, specifically the ground tennis sport, the negative impact of the Coved-19 epidemic on the relationship between the concern and quality of life of athletes. The indirect impact of the Coved 19 epidemic has been on the concern that has affected the low quality of life. There are no differences due to sex and age in the relationship between the negative impact of Coved 19 and the quality of life of athletes. The results of the study highlighted the impact of social isolation and quarantine on the emotional well-being of athletes.

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The purpose of the study (Creats 2020) was to identify the exercise of sports activities and their relationship to the quality of life of university students, and to identify differences in the exercise of sports activities according to the variables in the study. The level of quality-of-life dimensions of female university students, as well as what are the most important factors affecting the quality of life of research samplers using the analytical descriptive approach, are also known on a sample of 250 female university students. The researcher identified a measure of the extent of sports activities and the quality of life components, and the results showed that 42.8% of the research samplers sometimes practice sports. It also found that the higher the exercise of sports activities, the higher the quality of public health, the quality of family and social life, the quality of education and study, the quality of "moral" emotions, the higher the quality of mental health, as well as the higher the quality of time spent and managed. The study also found that age was one of the most influential factors in the conduct of sports activities, and finally the study found that the quality of family and social life was a priority for research sample members. In the light of the findings, the researcher recommended that the importance of sports activities for female university students should be emphasized through lectures and educational publications, as well as the promotion of the participation of female students in cultural, recreational and sports activities, which contribute to improving the quality of life.

The purpose of the study was to determine the quality of life of karate players and collective games in social and cultural variables, gender and social status. The study included 110 Polish collective game players and 90 highly accomplished karate practitioners. The results of the study showed that healthy eating habits, positive mental behaviour and the sex of athletes were statistically significant. It also turns out that males have achieved a higher degree on the scale than females. His study recommended that the activities that constitute the educational framework for athletes, including those of specialists in health behaviours such as nutrition and psychological counselling, should be intensified in order to improve the quality of life of athletes in general.

The Nemcek study, 2020, aimed at analysing the quality of self-life through the satisfaction of indicators of quality of life and quality of life among the elite players and comparing the quality of self-life between males and females. The data from his study indicate that there are no statistically significant differences in the quality of life by sex, that there is satisfaction between male and female elites and that there is significantly higher equality in social relations, physical health and a lower level of mental health.

Filbay et al., 2019 assessed the quality and satisfaction of former athletes and university professionals about life, and identified the factors associated with quality and satisfaction with life, through both physical and mental components. They came to the conclusion that there are clear differences between the two groups in the physical component and in the interest of university professionals. While former athletes scored better in the mental component. This highlights the need to use a measurement tool that distinguishes the physical and mental spheres of quality of life.

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Snedden et al., 2018 conducted a study aimed at examining and comparing the role of participation in sports and physical activity in health-related quality of life between university students and non-sports by using the descriptive curriculum to identify differences in physical and mental health through self-assessment of sport and the level of physical activity. The sample study was made up of undergraduate athletes and non-athletes, using the VR-12 as a measure of health-related quality of life. The self-assessmented level of sport and physical activity was also measured as a sportsman from the first section, a sportsman from the club, a group player, a regular sports student, or a physically inactive student, to compare students from the first section with athletes and non-sporters. The results showed statistically significant differences in the quality of life between levels of sport and physical activity for advanced athletes, A positive relationship exists between increasing the level of sport and physical activity and increasing the quality of life. A study (Noble 2017) aimed to identify the quality of life of students at the University of Balqa applied, as well as to determine differences in quality of life according to a variable (sex, specialization, physical activity), the sample of the study was made up of 119 first-year students from the University, with 54 students, 65 students on whom the quality of life measure, containing 40 paragraphs, measured the following dimensions, physical dimension, mental health, relationships with others, and time management, was applied. The results of the study indicated that students of the University of Balqa applied in scientific faculties, both sexes and practitioners of physical activity enjoy a high quality of life in the following dimensions: physical dimension, mental health, social relations, time management, values. Students engaged in physical activity enjoy a quality of life at the university level, recommending the importance of highlighting the importance of quality of life for non-sporters to encourage them to engage in activities.

Unver et al., 2015 studied the purpose of comparing quality of life, depression and loneliness between students of the College of Sports Sciences, national-elected gladiators and non-national-elected gladiators in terms of some demographic variables. Data were collected through the "Demographic Information Model" developed by researchers, the WBQLS, the BDS and the unit scale. Quality of life, unity and depression levels have been examined between different subjects, between sex and persons under 20 years of age. The results showed that gladiators representing the national election had higher levels of unity, depression and lower degrees in the social sphere than national gladiators and students of the Faculty of Sports Sciences, and female participants had higher levels of loneliness and lower degrees in the social sphere than male participants. All participants under the age of 20 have been found to have lower degrees in the social sphere and higher levels of isolation than those over the age of 20. National gladiators have also suffered from a greater sense of unity than gladiators who were not in the national election. This finding points to the importance of having a successful mathematical identity in terms of loneliness. The study noted that it would be useful for trainers to give importance to activities and training courses that would contribute to the formation of a successful identity.

A study was carried out (Comati and Nayrat, 2014) aimed at identifying the level of satisfaction with the quality of life of collective sports team players in Palestinian universities, as well as at

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identifying differences in satisfaction with quality of life depending on the variables of the game and the experience of play and interaction between them, to which the measure of satisfaction with quality of life was applied. The study found that the overall level of satisfaction with the quality of life of the study sample members was high, reaching 79.44 per cent. The results showed that there were no statistically significant differences in the quality of life of collective sports team players in Palestinian universities due to the variable of experience in play, while the differences were statistically significant depending on the variable of the game. In the light of the results of the study, the researchers recommended that sports activities should be given attention to their positive role in the quality of their lives and their adaptation to the university community.

A study carried out by Mazen Abdelhady et al., 2012 to identify indicators of quality of life (family life, socialization, emotional life, mental health) among practitioners and non-exercise students of the University of Karbala College. Using the descriptive method and a random sample of 100 students. The results of their study have resulted in significant differences in quality of life differences among students and for the benefit of practising students.
A study (Gentner et al., 2011) aimed at developing a comprehensive measurement tool that would help researchers assess the quality of life of athletes. The study sample consisted of 159 sports students from a large university in the United States. The results of the study indicated that a quality-of-life measure could be valid and reliable for the quality of life of athletes and indicated that further studies must also be undertaken to verify its validity and usefulness.

It carried out a study (Bakhshash, 2006) entitled Quality of Life and its Relationship to the Concept of Self in the Visually and Normally Impaired Persons of the Kingdom of Saudi Arabia. To learn about the relationship of quality of life, the concept of self and the differences between disabled and healthy persons between the ages of 15 and 18. Using the descriptive approach and the measurement of the concept of self and quality of life. The results indicated that there were statistically significant differences in the quality of life for ordinary people and a positive function between the concept of self and the quality of life in the samples.
A study (Fox, 2003) entitled The impact of treatment and health care on the quality of human life for those attending health-care centres. Applying a two-axis measure of self-satisfaction and an objective dimension focusing on health status. Using the descriptive approach, the results of its study have resulted in a rise in psychometric indicators for the measurement of quality of life.

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Study procedures

Curriculum:

Researchers used the descriptive approach to identify the quality of life of national players in women's collective games in Jordan.

Study community:

The study community is made up of all the players of the National Women's Collective Games (football, basketball, handball, volleyball). And how many are there? (78). According to the records of national federations 2021 per game.

Study sample:

A voluntary sample of all female players registered in national federations was selected at 73. Sports federations have been contacted and provided with information on the study and its purpose. After approval by unions and linear players, the resolution was distributed electronically to the players, and the data was then collected electronically. Table 1 describes the sample.

Variables	Categories	Number	Percentage
age	Less than 18 years old	15	20.5
	18-23 years	22	30.1
	23- 30 years	24	32.9
	More than 30 years	12	16.4
	total	73	100.0
Monthly income (economic level)	500dinars or less	19	26.0
	501-1000 dinars	13	17.8
	1001-1500 dinars	10	13.7
	2001dinars or more	11	15.1
	No answer.	20	27.4
	the total	73	100.0
Number of years of play in the election	Less than 5 years	25	34.2
	10-5 years	19	26.0
	10years and more	22	30.1
	total	73	100.0
Degree of injury	Simple	16	21.9
	Medium	35	47.9
	Dangerous.	10	13.7
	I didn't get hurt.	12	16.4
	Total	73	100.0

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Variables	Categories	Number	Percentage
Game	Football	27	37.0
	The volleyball.	11	15.1
	Basketball.	15	20.5
	Handball.	20	27.4
	total	73	100.0

Study tools and scientific transactions:

Use the ALQS (Gentner et al., 2011) 15 paragraphs divided into five axes (life satisfaction measured in paragraphs 15, 13, 12, 11, physical satisfaction measured in paragraphs 8.1, satisfaction with the team sports measured in paragraphs 10, 9, 7, 6, social satisfaction measured in paragraphs 4.3, free time and social life measured in paragraphs 14.5, 2.

The measure's trueness factor.

First, prima facie truth: to verify the authenticity of the scale after its translation, the clarity of the translation and the occasion of the vocabulary used was presented to a group of experts on the subject of the measure. The experts referred to the integrity and clarity of the translation texts. Therefore, the paragraphs approved by the experts, to which reference should be made, were retained. The translations were submitted to an Arabic-language auditor to ensure that they were properly drafted and linguistically corrected.

Secondly, constructive honesty: researchers have established the correlation between each of the paragraphs of each axis and the total degree represented by the sum of the paragraphs of the axis. This type of sincerity reflects the degree to which the paragraph relates to the dimension it represents, so that there is a lower limit to the value of the link that can be accepted because the paragraph is considered to belong to a level acceptable to the dimension. The value (0.40) is a lower limit for the correlation between the paragraph and the total degree of the distance. The researchers have also identified the degree to which each axis relates to the overall degree of the scale and tables (2.3) that follow show the results of the sincerity.

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Axis	paragraphs that highlight the primary	Level of engagement
Satisfaction with life	11	0.671
	12	0.813
	13	0.654
	15	0.747
Physical satisfaction	1	0.821
	8	0.826
Team satisfaction/sports	6	0.711
	7	0.734
	9	0.697
	10	0.727
Social satisfaction	3	0.933
	4	0.941
Free time and social life	2	0.789
	5	0.607
	14	0.792

Table 2 refers to the consequences of the relationship of each paragraph of each of the axes to the overall quality of life of this axes to what is known as constructive honesty. The result reflects the degree to which the paragraph is linked to the axis that it is supposed to be part of. It is understood that the greater the degree of correlation, the greater the degree of representation of the paragraph as a part of this axis, and thus its credibility in the representation of this axis. A review of the levels of correlation shown in the table shows that the lowest degree of correlation was reached between paragraph (5) and the total degree of free time, and that the lowest degree of correlation reached between the coefficients was acceptable (" greater than or equal to ") and that the remainder of the correlations were greater than (0.607) indicates an acceptable degree of correlation (link) between each paragraph and the overall degree of the axis and thus the conclusion that the structural sincerity of the axes is achieved.

Table 3 refers to the results of the relationship of each of the life-quality measure axes to the overall level of the measure in what is known as constructive friendship. The result reflects the degree of

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correlation of the axis, which is assumed to be a representative part of the scale. It is understood that the greater the value of the link, the stronger the representation of the axis of the scale.

Axis	Association value
Satisfaction with life	0.775
Physical satisfaction	0.718
Satisfaction with the Sports Team	0.584
Social satisfaction	0.715
Free time and social life	0.884

A review of the correlation values shown in the table shows that the lowest correlation value was reached (0.584) between the GQA axis and the overall degree represented by all the axes of the measure and the overall degree represented by all the axes of the scale. Since the lowest correlation between the correlation factors (0.584) was acceptable and is greater than the minimum acceptable limit between most studies (0.40 or more), this indicates an acceptable degree of sincerity between each ax and the overall degree of the scale. This helps to conclude that the structural credibility of the parameters and the ability of these dimensions to represent the scale are achieved.

Scale persistence factor

The statistical measure is confirmed to be consistent with the Kronbach Alpha method as shown in the table. (4).

Axis	Number of paragraphs	كرونباخ (α)
Satisfaction with life	4	0.658
Physical satisfaction	2	0.626
Satisfaction with the Sports Team	4	0.678
Social satisfaction	2	0.861
Free time and social life	3	0.671
Total quality-of-life measure	15	0.851

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Table 4 shows an assessment of the persistence of life-quality measurement paragraphs with high internal consistency values, with the minimum value of Kronbach (Alpha) constant values (0.626) in the physical consent axis.

It also shows that, since these values were greater than the minimum value, which is usually used as a reference in exploratory research (0.600), they are considered appropriate and sufficient for the purposes of such research and indicate appropriate persistence values.

Presentation and discussion of results

"How do women's national team players see the quality of life"

To answer this question, the mathematical averages and the standard deviations and relative importance of the computational average were used and a seven-level classification scale was used to describe the values of the computational averages reached as follows:

So upset.	1.00 – less than 1.86
upset	1.86 - less than 2.72
So upset.	2.72 – less than 3.58
Medium displeasure.	3.58 - less than 4.44
A little satisfied.	4.44 – less than 5.30
Very satisfied	5.30 - less than 6.16
Very satisfied	6.16Bigger than 7.00 -

The following equation has been used by researchers in extracting the description range and table (5) illustrates the results of this question.

Highest weight of response... The lowest weight of response...

Category length = _____

(Number of classification categories)

(7– 1)

Category length = _ = 0.86

7

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Table 5 Statistical averages and standard deviations of the life-quality gauges from the point of view of collective game players

number	Axis	Calculating average	Standard deviation	Relative importance	Level	Level
1	Satisfaction with life	5.93	0.94	84.7	Satisfied	3
2	Physical satisfaction	5.99	1.01	85.6	Satisfied	2
3	Satisfaction with the Sports Team	2.51	0.31	35.9	Upset	5
4	Social satisfaction	6.42	1.15	91.7	Very satisfied	1
5	Free time and social life	5.61	1.20	80.1	Satisfied	4
6	Total quality-of-life measure	5.29	0.71	75.6	A little satisfied	

Table 5 notes that the level of the quality of life measure has been "lightly satisfactory," with the calculation average value of the total score of the scale (5.29) being relatively significant (75.6%), and the axle level has varied between "disgrace" and "very satisfactory," with the calculation averages ranging from (6.42 – 2.51).

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Table 6 shows the calculation averages and standard deviation values for the scale paragraphs.
Table 6 Statistical averages and standard deviations of quality-of-life paragraphs

Paragraph	Calculating average	Standard deviation	Paragraph	Calculating average	Standard deviation
1	6.15	22.1	9	6.10	11.1
2	5.41	70.1	10	6.21	21.1
3	6.52	19.1	11	5.14	77.1
4	6.33	27.1	12	6.00	26.1
5	6.27	28.1	13	6.48	93.0
6	6.33	09.1	14	5.15	88.1
7	6.42	94.0	15	6.10	28.1
8	5.84	24.1	-	-	-

First, differences according to age change
Table (7) Calculus and standard deviations of life quality measure vectors by age variable

Axis	age	Number	Calculating average	Standard deviation
Satisfaction with life	under 18 years old	15	6.33	0.49
	18-23 years	22	5.67	1.04
	23-30 years	24	5.95	1.04
	Older than 30 years	12	5.85	0.92
Physical satisfaction	under 18 years old	15	6.27	0.73
	18-23 years	22	5.80	1.15
	23-30 years	24	5.94	1.19
	Older than 30 years	12	6.13	0.57
Team satisfaction/sports	under 18 years old	15	2.57	0.24
	18-23 years	22	2.37	0.36
	23-30 years	24	2.60	0.25
	Older than 30 years	12	2.49	0.35
Social satisfaction	under 18 years old	15	6.77	0.53

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	18-23 years	22	6.57	0.70
	23-30 years	24	6.13	1.66
	Older than 30 years	12	6.33	1.11
Free time and social life	under 18 years old	15	5.93	0.98
	18-23 years	22	5.53	1.29
	23-30 years	24	5.46	1.41
	Older than 30 years	12	5.67	0.84
Total quality-of-life measure	under 18 years old	15	5.57	0.39
	18-23 years	22	5.19	0.73
	23-30 years	24	5.21	0.88
	Older than 30 years	12	5.29	0.55

Table 7 shows that there is a difference between the average values of the collectively elected players of the life-quality parameters according to their age differences and to determine whether these differences between the averages are significant or statistically significant at the significance level. (This single variation analysis (one-way ANOVA) was used, and table 8 shows this.

Table 8 Results of the analysis of the single variation of the average life-quality axes by age variable

Axis	Source of discrepancy	Sum of squares	df	mean squares	Value F	Sig
Satisfaction with life	Among groups	3.999	3	1.333	1.531	0.214
	Within groups	60.061	69	0.870		
	Total	64.060	72			
Physical satisfaction	Among groups	2.265	3	0.755	0.729	0.538
	Within groups	71.482	69	1.036		
	Total	73.747	72			
Satisfaction with the Sports Team	Among groups	0.682	3	0.227	2.476	0.069
	Within groups	6.336	69	0.092		
	Total	7.018	72			
Social satisfaction	Among groups	4.463	3	1.488	1.123	0.346
	Within groups	91.373	69	1.324		
	Total	95.836	72			
Free time and social life	Among groups	2.298	3	0.766	0.520	0.670
	Within groups	101.705	69	1.474		
	Total	104.003	72			
Total quality-of-life measure	Among groups	1.593	3	0.531	1.071	0.367
	Within groups	34.218	69	0.496		
	Total	35.812	72			

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The results of table 8 refer to the results of the analysis of the single variance in the examination of the differences between the average life-quality axes of collective toy players at the significance level (" 0.05) depending on the age variable and depending on the value of the weight of the F test for the quality-of-life index, which is shown to be (0.214), the significance level of physical satisfaction (0.538) was (0.069) for the team ' s satisfaction point and the social satisfaction point was (0.346) and was (0.670) for the free-time and social life test. For the total score of the quality-of-life measure, the significance level was (0.367).

When comparing the values of the level of significance referred to by the value (0.05), all of these values are the greatest indication that the average differences among the collective elected players do not differ statistically significantly or materially from their age and therefore the differences in the averages indicated are not significant.

II. Variances by economic level variable (monthly income)

Table 9 Calculating averages and standard deviations of the life-quality parameters according to the variable level of the economy

Axis	Economic level	number	Calculating average	Standard deviation
Satisfaction with life	500dinars or less	19	6.00	1.04
	501-1000 dinars	13	5.92	0.81
	1001-1500 dinars	10	6.15	1.05
	2001dinars or more	11	5.89	0.83
	Without an answer	20	5.78	1.00
Physical satisfaction	500dinars or less	19	5.97	1.01
	501-1000 dinars	13	5.81	1.28
	1001-1500 dinars	10	6.05	0.96
	2001dinars or more	11	6.18	1.03
	Without an answer	20	6.00	0.92

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Team satisfaction/sports	500dinars or less	19	2.60	0.32
	501-1000 dinars	13	2.47	0.26
	1001-1500 dinars	10	2.50	0.30
	2001dinars or more	11	2.43	0.32
	Without an answer	20	2.49	0.34
Social satisfaction	500dinars or less	19	6.79	0.42
	501-1000 dinars	13	6.46	1.13
	1001-1500 dinars	10	6.25	1.57
	2001dinars or more	11	6.00	1.83
	Without an answer	20	6.38	0.94
Free time and social life	500dinars or less	19	6.07	0.90
	501-1000 dinars	13	5.79	1.17
	1001-1500 dinars	10	5.17	1.46
	2001dinars or more	11	5.39	1.58
	Without an answer	20	5.40	1.06
Total quality-of-life measure	500dinars or less	19	5.49	0.60
	501-1000 dinars	13	5.29	0.76
	1001-1500 dinars	10	5.22	0.79
	2001dinars or more	11	5.18	0.91
	Without an answer	20	5.21	0.63

Table 9 shows that there is a difference between the average values of the collectively elected players of the life-quality parameters according to their age differences and to determine whether

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these differences between the averages are significant or statistically significant at the significance level. (This single variation analysis (one-way ANOVA) was used, and table 10 shows this.

Table 10 Results of the analysis of the single variation between the average life-quality axes according to the variable economic level

Axis	Source of discrepancy	Total squares	Degrees of freedom	Average squares	Value F	Significance level
Satisfaction with life	Among groups	1.079	4	0.270	0.291	0.883
	Within groups	62.981	68	0.926		
	Total	64.060	72			
Physical satisfaction	Among groups	0.879	4	0.220	0.205	0.935
	Within groups	72.867	68	1.072		
	Total	73.747	72			
Satisfaction with the Sports Team	Among groups	0.623	4	0.066	0.661	0.621
	Within groups	6.755	68	0.099		
	Total	7.018	72			
Social satisfaction	Among groups	4.884	4	1.221	0.913	0.462
	Within groups	90.951	68	1.338		
	Total	95.836	72			
Free time and social life	Among groups	7.828	4	1.957	1.384	0.249
	Within groups	96.175	68	1.414		
	Total	104.003	72			
Total quality-of-life measure	Among groups	1.055	4	0.264	0.516	0.724
	Within groups	34.757	68	0.511		
	Total	35.812	72			

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The results of table 10 refer to the results of the analysis of the single variance in the examination of differences between the average life-quality measure axes of collective toy players at the significance level (in terms of the variable level of the economy) and the return to the column showing the values of the level of significance indicated as being (0.883). The significance level of the physical satisfaction point was (0.935) and was (0.621) the satisfaction point of the team and was (0.462) the social satisfaction point and (0.249) the free time and social life index. (0.724).

When comparing the values of the level of significance referred to with the value (0.05), all of these values are the greatest indication that the average differences between the collective elected players do not differ significantly or substantially statistically according to their economic level (income per month) and therefore the differences in the averages indicated are not significant.

III. Variances by severity of injury variable

Table 11 Calculus and standard deviations of the life-quality meter vectors according to the severity of the injury

Axis	The severity of the injury.	number	Calculating average	Standard deviation
Satisfaction with life	Simple.	16	5.63	1.05
	Medium	35	5.96	0.96
	Dangerous.	10	5.83	0.87
	I didn't get hurt.	12	6.33	0.73
Physical satisfaction	Simple.	16	6.19	0.77
	Medium	35	5.69	1.22
	Dangerous.	10	6.05	0.55
	I didn't get hurt.	12	6.58	0.56
Satisfaction with the Sports Team	Simple.	16	2.56	0.21
	Medium	35	2.48	0.36
	Dangerous.	10	2.42	0.33
	I didn't get hurt.	12	2.59	0.26
Social satisfaction	Simple.	16	6.28	1.34
	Medium	35	6.23	1.35
	Dangerous.	10	6.75	0.35
	I didn't get hurt.	12	6.92	0.19
Free time and social life	Simple.	16	5.67	1.05
	Medium	35	5.35	1.36

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	Dangerous.	10	5.47	1.04
	I didn't get hurt.	12	6.42	0.65
Total quality-of-life measure	Simple.	16	5.26	0.67
	Medium	35	5.14	0.79
	Dangerous.	10	5.30	0.53
	I didn't get hurt.	12	5.77	0.38

Table 11 shows that there is a difference between the average values of the collectively elected players of the quality-of-life parameters according to the difference between them in terms of the severity of the injury and to determine whether these differences between the averages are significant or statistically significant at the level of significance. (This single-way analysis of the difference (ANOVA) was used, and table 12 shows this.

Table 12 Results of the analysis of the single variation between the mean life-quality axes depending on the severity of the injury

Axis	Source of discrepancy	Total squares	Degrees of freedom	Average squares	Value F	Significance level
Satisfaction with life	Among groups	3.576	3	1.192	1.360	0.262
	Within groups	60.484	69	0.877		
	Total	64.060	72			
Physical satisfaction	Among groups	8.125	3	2.708	2.848	0.044
	Within groups	65.622	69	0.951		
	Total	73.747	72			
Satisfaction with the Sports Team	Among groups	0.232	3	0.077	0.785	0.506
	Within groups	6.786	69	.0.098		
	Total	7.018	72			
Social satisfaction	Among groups	5.638	3	1.879	1.438	0.239
	Within groups	90.197	69	1.307		
	Total	95.836	72			
	Among groups	10.388	3	3.463	2.552	0.063

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Free time and social life	Within groups	93.615	69	1.357		
	Total	104.003	72			
Total quality-of-life measure	Among groups	3.544	3	1.181	2.526	0.065
	Within groups	32.268	69	0.468		
	Total	35.812	72			

The results of table 12 indicate the results of the analysis of the single variance in the examination of the differences between the average life-quality measure axes of collective toys at the significance level (* 0.05) depending on the variation of the severity of the injury and the return to the significance level values indicated at (0.262), the significance level of the physical satisfaction point (0.044) was 0.006 and the satisfaction point at the team level was (0.239) and the social satisfaction index was 0.063 for free time and social life. For the total degree of the measure of quality of life, the significance level (0.065) was 0.065.

When comparing the values of the level of significance referred to by the value (0.05), four of these values were the largest indicating that the average differences between the players in the collective elections did not differ significantly or materially statistically according to the severity of the injury to which they were exposed in these four axes referred to in the table, while only one value was less than 0.05, i.e., the value (0.044) associated with the physical satisfaction axis, and therefore the average differences in this axle were significant.

To determine which degree of injury the difference was statistically significant, the LSD test was used and the following table shows the results of this question.

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Table 13. Less moral differential test (LSD) to determine the severity of the injury, the average of which is statistically different

On the subject of physical satisfaction.

axis	Accounting averages	Incidence of injury	Medium	Dangerous.	I didn't get hurt.
Physical satisfaction	6.19	simple	0.093	0.728	0.292
	5.69	Medium	-	0.301	*0.008
	06.05	Dangerous.		-	0.206
	6.58	I didn't get hurt.			-

* indicates that the index level of the mean difference of two games D is statistically at 0.05.

The table shows that the results of the lower moral difference test showed that differences in the focus of physical satisfaction were determined between mid- and non-moderate players, so that the mean difference was in favour of non-infected and higher-satisfaction players (6.58) compared to those who were infected at an average level (5.69) and as shown in the table.

IV. Variance according to variable number of years of play for the elected

Table 14. Calculating averages and standard deviations of the life-quality meter vectors according To change the number of years of play for the elected one.

Axis	Number of years to play for the elected	number	Calculating average	Standard deviation
Satisfaction with life	Less than 5 years	32	6.01	0.93
	10-5 years	19	6.01	0.68
	10years and more	22	5.74	1.15
Physical satisfaction	Less than 5 years	32	6.06	0.97
	10-5 years	19	6.18	0.79
	10years and more	22	5.73	1.21
Satisfaction with the Sports Team	Less than 5 years	32	2.52	0.33
	10-5 years	19	2.46	0.31
	10years and more	22	2.52	0.29
Social satisfaction	Less than 5 years	32	6.50	1.17
	10-5 years	19	6.13	1.33
	10years and more	22	6.57	0.95
Free time and social life	Less than 5 years	32	5.58	1.31
	10-5 years	19	5.86	0.94

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Axis	Number of years to play for the elected	number	Calculating average	Standard deviation
	10years and more	22	5.44	1.25
Total quality-of-life measure	Less than 5 years	32	5.33	0.72
	10-5 years	19	5.33	0.57
	10years and more	22	5.20	0.80

Table 14 shows that there is a difference between the average values of the collective-elected players of the quality-of-life parameters, depending on the difference between them in terms of the number of years of play for the elector and in determining whether these differences between the averages are significant or statistically significant at the level of the signage. (This single-way analysis (ANOVA) was used, and table 15 shows this.

Table 15 Results of the analysis of the single variation between the average life-quality axes by To change the number of years of play for the elected one.

Axis	Source of discrepancy	Total squares	Degrees of freedom	Average squares	Value F	Significance level
Satisfaction with life	Among groups	1.131	2	0.565	0.629	0.536
	Within groups	62.929	70	0.899		
	Total	64.060	72			
Physical satisfaction	Among groups	2.403	2	1.201	1.179	0.314
	Within groups	71.344	70	1.019		
	Total	73.747	72			
Satisfaction with the Sports Team	Among groups	0.046	2	0.023	0.232	0.794
	Within groups	6.972	70	0.100		
	Total	7.018	72			
Social satisfaction	Among groups	2.267	2	1.133	0.848	0.433
	Within groups	93.569	70	1.137		
	Total	95.836	72			
Free time and social life	Among groups	1.847	2	0.924	0.633	0.534
	Within groups	102.156	70	1.459		

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	Total	104.003	72			
Total quality-of-life measure	Among groups	0.275	2	0.137	0.271	0.764
	Within groups	35.537	70	0.508		
	Total	35.817	72			

The results of table 15 refer to the results of the analysis of the single variance in the examination of the differences between the average life-quality axes of the collective toy players at the significance level (" 0.05) according to the variable number of years of play for the elected person and based on the value of the index level of the quality-of-life ratio, which is shown to be (0.536). The significance of the point of physical satisfaction (0.314) was (0.794) and the level of satisfaction of the team was (0.433) of social satisfaction and (0.534) of free-time and social life index (0.534). For the total degree of the measure of quality of life, the value of the sign level was (0.764). When comparing the level of significance referred to at (0.05), all these values were the largest indicating that the average differences between the collective toy players did not differ significantly or materially according to the number of years of play and therefore the average differences were not significant.

V: Variances according to game type variable

Table 16. Calculating averages and standard deviations of the life-quality parameters according to the game type variable

Axis	Types of game	number	Calculating average	Standard deviation
Satisfaction with life	Football.	27	6.14	0.69
	The volleyball.	11	6.34	0.77
	Basketball.	15	5.67	1.24
	Handball.	20	5.61	0.98
Physical satisfaction	Football.	27	6.20	0.92
	The volleyball.	11	6.14	0.84
	Basketball.	15	5.67	1.13
	Handball.	20	5.88	1.11
Satisfaction with the Sports Team	Football.	27	2.54	0.26
	The volleyball.	11	2.63	0.18
	Basketball.	15	2.39	0.41
	Handball.	20	2.48	0.34
Social satisfaction	Football.	27	6.63	0.78
	The volleyball.	11	6.95	0.15
	Basketball.	15	5.57	1.94
	Handball.	20	6.50	0.78

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Axis	Types of game	number	Calculating average	Standard deviation
Free time and social life	Football.	27	5.98	1.06
	The volleyball.	11	6.03	0.89
	Basketball.	15	4.96	1.41
	Handball.	20	5.38	1.18
Total quality-of-life measure	Football.	27	5.50	0.54
	The volleyball.	11	5.62	0.31
	Basketball.	15	4.85	0.97
	Handball.	20	5.17	0.68

Table 16 shows that there is a difference between the average values of the collectively elected players of the quality-of-life parameters according to the difference between them in terms of the type of game and to determine whether these differences between the averages are significant or statistically significant at the level of the signage. (This single-way analysis of the difference (ANOVA) was used, and table 17 shows this.

Table 17 Results of analysis of the single variation between the average life-quality axes according to the game type variable

Axis	Source of discrepancy	Total squares	Degrees of freedom	Average squares	Value F	Significance level
Satisfaction with life	Among groups	6.091	3	2.030	2.417	0.074
	Within groups	57.968	69	0.840		
	Total	64.060	72			
Physical satisfaction	Among groups	3.301	3	1.100	1.078	0.364
	Within groups	70.446	69	1.021		
	Total	73.747	72			
Satisfaction with the Sports Team	Among groups	0.421	3	0.140	1.470	0.230
	Within groups	6.596	69	0.096		
	Total	7.018	72			
Social satisfaction	Among groups	15.379	3	5.126	4.396	0.007

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	Within groups	80.457	69	1.166		
	Total	95.836	72			
Free time and social life	Among groups	12.998	3	4.333	3.285	0.026
	Within groups	91.005	69	1.319		
	Total	104.003	72			
Total quality-of-life measure	Among groups	5.558	3	1.853	4.225	0.008
	Within groups	30.254	69	0.438		
	Total	35.812	72			

The results of table 17 refer to the results of the analysis of the single variation in the examination of differences between the average life-quality axes of collective toy players at the significance level (When comparing the values of the level of significance referred to by the value (0.05), it appears that these values were the greatest indication that the average differences between the players in the collective elections do not differ significantly or substantially statistically according to the type of game to which they are exposed in these axes. The value of the indicator of satisfaction for social life was 0.007 and 0.026 for free time and social life. The total quality of life measure was 0.008. When comparing the values of the indicator level referred to with 0.005, these values are the least likely to indicate that there are average differences between collective elected players according to the type of game in these axes and the following table shows this.

Table 18. Less moral differential test (LSD) to determine a game with different statistical averages In some quality of life axes.

Axis	Accounting averages	Type of game	The volleyball.	Basketball.	Handball.
Satisfaction with life	Football.	6.63	0.403	*0.003	0.685
	The volleyball.	6.95		*0.002	0.266
	Basketball.	5.57			*0.014
	Football.	6.50			-
Satisfaction with free time and social life	Football.	5.98	0.894	*0.007	0.085
	The volleyball.	6.03		*0.021	0.138
	Basketball.	4.96			0.279
	Handball.	5.38			
Total quality-of-life measure	Football.	5.50	0.613	*0.003	0.098
	The volleyball.	5.62		*0.005	0.076
	Basketball.	4.85			0.159
	Handball.	5.17			

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* indicates that the index level of the mean difference of two games D is statistically at 0.05.

Table 18 shows that the differences between average life satisfaction and free time and social satisfaction as well as the overall quality of life measure are as follows:

• Between football players and basketball players, the difference was better for football players whose average ratings were higher than for basketball players.

• Between volleyball players and basketball players, the differences were marked by a preference for volleyball players whose average ratings on these axes were higher than for basketball players.
• In the area of satisfaction with life, another difference has been made between handball players and basketball players, so that the difference was better pointed by handball players with average ratings. On this axis is worth more than basketball players.

Discussion of the outcome

To discuss the results of the first question, which are reflected in table 5, which shows that the samplers have expressed satisfaction with the quality of life at a low level of satisfaction (one level of satisfaction). This supports the fact that participation in sports activities plays an important role in the quality of life, in line with the results of the Cosma et al., 2021; Nemcek, 2020; Traci et al., 2018, Aqrah, 2020; Rare, 2017; and Comeme and Nayrat, 2014). These studies indicate that participation in sports activities improves the level of satisfaction with quality of life and that people participating in sports teams have better emotional and psychological balance than non-participants, while they differ with a study (Unver et al., 2015) where they show that high-level athletes are under stronger pressures that negatively affect their quality of life. Researchers consider that quality of life can be as efficient and quality in sports performance and surrounding circumstances as relationships with the team, available recreational times and the level of stress and stress associated with official participation or preparation, as well as a sense of satisfaction and happiness as a result of belonging to the team, expressed by individuals having a good degree of quality of life, personal and social responsibility, self-control and effective self-control of their lives and their ability to solve their problems, with good levels of self-appreciation and self-esteem, which is exactly what is represented by joining national amate elections, given the absence of a women's clubs in Jordan, which may cause some form of psychological pressure on the players and their current samplers, and thus view of their presence in the quality of national life as a result of a result. Researchers also attribute a low level of satisfaction with the quality of life as a result of the current conditions of the Coved-19 pandemic, which negatively affect the quality of life, according to a study (Cosam et al., 2021) that showed the negative impact of the Coved-19 epidemic on the quality of life of athletes.

With regard to the second question and by reference to tables 7-18, the absence of statistically significant differences attributable to the age variable, economic level, the number of years of play with the elected one and the degree of injury were also found. This is consistent with most of the studies carried out on athletes, where the result is consistent with a study (Cosam et al., 2021)

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which indicated that there were no differences due to the age variable or training experience. While statistically significant differences have emerged due to the type of game they play, the differences in favour of football and basketball players have come at the expense of basketball players. This is consistent with Cosam et al., 2021 which indicated that the least affected sport is football and its highest at the level of group sports is basketball. Researchers attribute to the fact that during the period of response to the current study tool, NBA players were prepared to take a decisive tournament where they were under strong psychological and physical pressure. They were also strictly controlled during the period of final preparation for the championship, which led to a kind of social isolation. This affected the quality of life for them.

The current results run counter to the findings of the study (Comi and Nayrat, 2015), which indicated that there were no differences due to the type of sport practised by the sample. This conflict may be due to the nature of the difference between the sample of the two studies, since the current sample of nationally elected players and the study sample (Comi and Nayrat, 2015) was the lowest level of the university, and a study (Unver et al., 2015) indicated that higher levels of sports are under greater pressure affecting their quality of life.

Conclusions

Through the results of the study, researchers were able to draw the following points within the limits of the present study:

1. Jordanian national women ' s players enjoy a good quality of life.

2. There are no differences due to age variables, economic level, number of years of play with the elected, as well as the degree of infection in the quality of life of the study samplers.
3. The nature of sport exercised by athletes plays an important role in their quality of life.

Recommendations

Based on the results of the study, researchers recommend the following:

1. The need to follow up on the needs of female national officers and to take care of their psychological and social aspects in an effort to raise their level of satisfaction with the quality of life, which may contribute to the development of performance.

2. Attention to the social aspect and recreation during periods of preparation for critical championships, as it has an impact on the quality of life of athletes.

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A Field Study to Assess Physical Activity Levels During Weekdays Among Students in the First Cycle and its Relationship with Lower Limb Muscle Strength

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Abstract:

This study aimed to assess physical activity levels during 3 school days among first cycle students and its relationship with lower limb muscle strength. Twenty-eight students from the Governor of Muscat were participated in this study, (age: 11.8±0.3 years, height: 9.0±148 cm, mass Body: 14.5±34.8 kg, BMI: 5.3±19.2 $kg.m^{-2}$ To assess physical activity levels, the ActiGraph GT3X device was used for 3 school days during the week (from 8:00 am to 12:00 pm, daily). All participating performed two tests of lower limb muscle strength (CMJ - FCM). Study results showed that the average physical activity levels of students during 3 school days were (455.9± 56.7minutes) and (26.3±6.6 minutes) for both sedentary physical behavior (SPA) and high-intensity physical activity (VPA), respectively. The results also revealed that the level of moderate and vigorous physical activity level (MVPA) during 3 days of school reached (67.9 ±17.01minutes), which is approximately (22.6 minutes per day), meaning that there was a noticeable decrease in the levels of physical activity practiced during school days (3 days). per week for first cycle students. The results also showed that there was no relationship between all physical activity levels (SPA, LPA, MPA, VPA, MVPA) and lower limb muscle strength tests (CMJ - FCM) among the students (0.05<p).

Keywords: Moderate and vigorous physical activity, accelerometer, Muscular power, children and adolescents.

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introduction:

Physical activity is an important part of a healthy lifestyle for all people, as it helps improve general health, physical and muscular fitness, as the world today is witnessing an increasing interest in physical activity and confronting the lack of physical activity and the phenomenon of inactive physical activity that leads to obesity. Obesity is one of the most prominent health challenges. Which confronts individuals in various parts of the world, and its danger is noticeably exacerbated in Gulf societies, especially Omani society. This is mainly due to the tremendous technological development witnessed by these societies, which has led to the spread of the phenomenon of physical inactivity, lifestyle changes, and unhealthy eating habits. Statistics from the Omani Ministry of Health reported that more than 50% of the population suffers from obesity, as a result of increasing reliance on modern technology and excessive consumption of fast food. Which contributed to the spread of the phenomena of lack of movement and physical inactivity, and thus low levels of physical activity (2020, Ministry of Health).

To confront this challenge, society requires urgent action to educate individuals about the importance of changing their lifestyle and motivate them to engage in sports activity regularly. Awareness about the health risks associated with lack of physical activity should also be promoted. Fitness programs must also be supported and environments that encourage physical activity must be provided, whether in schools or public places, as well as their availability near residential neighborhoods to encourage children and adults to practice sports activity.

Today, the world is also witnessing a growing interest in physical activity and its impact on health and fitness. Regular assessment of physical activity level is crucial, especially for students. Regular exercise helps maintain health-related physical fitness indicators, in addition to supporting healthy development in children. Physical activity also provides social, healthy, physical, emotional and mental interaction, which contributes to building an integrated personality. In addition, practicing physical activity regularly helps develop vital and motor capabilities and improve cardiovascular and respiratory functions, in addition to raising the functional capabilities of the body. It also contributes to increasing motor performance and coordinating the normal basic movements that the individual performs during his day (Al-Sharif, 2013).

Many international and national health organizations, including the World Health Organization, have reported that the quality of life and overall health of children and adolescents can be improved by engaging in moderate physical activity on most days of the week. Physical activity maintains the functions of the body's organs, enhances social belonging and integration, and reduces feelings of anxiety and depression, especially among students pursuing their education. The World Health Organization (W.H.O.) has defined physical activity as: “any physical movement undertaken by skeletal muscles that requires the consumption of a certain amount of energy, including activities undertaken during work, play, household tasks, travel and recreational activities” (Paul F. C., et al. , 2020). (2014, Mamish et al.) point out that physical activity is a set of daily movements produced by skeletal muscles that lead to the expenditure of energy, including exercise. Regular physical activity is associated with a lower risk of cardiovascular disease, osteoporosis, obesity, diabetes, high blood pressure, anxiety, stress, and depression (Ibrahim: 2011).

The Ministry of Health (2008) in the Kingdom of Saudi Arabia also indicated the need to link the concept of public health and physical fitness. This is because there is a relationship between the various components of physical fitness and health, and practicing physical activity on a regular basis has a close relationship with reducing the risk of developing many cardiovascular and respiratory diseases and psychological disorders, and it also contributes to improving psychological aspects and overcoming the stresses of daily life (Imad et al. , 2019).

Therefore, the World Health Organization (2020) recommends that children and adolescents aged 5 to 17 years engage in at least 60 minutes per day of moderate to vigorous physical activity; Most of this activity should be aerobic exercise, in addition to focusing on and practicing high-intensity aerobic activities that strengthen muscles and bones at least 3 days a week.

Research problem:

The topic of physical activity and its positive impact on health and fitness is of increasing importance worldwide. Assessing children and young people's daily physical activity, especially students, is crucial due to its role in maintaining physical fitness and supporting healthy development. However, studies have indicated a widespread phenomenon of lack of movement among school students, which may lead to negative health effects. Therefore, there is a need to study the reality of daily and weekly physical activity levels among school students, and analyze the relationship with physical fitness components such as muscular ability, with the aim of developing programs and policies that encourage an active and healthy lifestyle. . (Ali et al., 2017)

Appreciating physical activity during weekdays is crucial, especially for students who are continuing their education. Regular physical activity is also necessary to maintain physical fitness, as it reduces risk factors for the emergence of cardiovascular diseases, diabetes, and obesity. A study (Patrick et al. 2012) indicated that lack of movement leads to a decrease in physical fitness components. Therefore, it is necessary to know the amount of physical activity practiced during school days. Measuring the amounts of physical activity practiced by students at an early age is an essential stage to detect this activity and take the necessary measures to increase it to maintain the individual’s general fitness (Mota et al., 2003). This is in addition to the necessity of studying the nature of the relationship between physical activity and the elements of physical fitness, which helps in choosing the appropriate activities to maintain and develop these elements. Achieving the right balance between physical activity and successful study requires a careful assessment of the extent to which physical activity affects the muscular capacity of the lower extremities.

It should be noted that many previous studies have dealt with measuring physical activity using tools and devices that have poor reliability and validity, especially with younger age groups, such as the polar device, observation, questionnaires, and self-interviews (Francis, 2003). . What distinguishes the current study is the use of an accelerometer, which is one of the most reliable field devices for measuring physical activity, as it occupies a large space in scientific research applications in children and adolescents. It measures body movements in terms of acceleration, which can later be used to determine the number of activities and thus estimate an individual's physical activity (Troiano, 2005).

research aims:

The current study aims to achieve the following:

1. Identify the level of physical activity of female students during the three school days.

2. Identify the nature of the relationship between physical activity and lower limb muscular ability testing (CMJ - FCM).

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research assumes:

1. There are no statistically significant differences in the activity and amount of physical activity estimated for female students during 3 school days

2. There is a relationship between physical activity and lower extremity muscular ability testing (CMJ - FCM).

Terminology of study:

Physical activity:

The World Health Organization (2020) defines physical activity as any physical movement performed by skeletal muscles that requires the consumption of a certain amount of energy, including activities undertaken during work, play, performing household tasks, traveling, and engaging in recreational activities.

First cycle: Primary stage/Foundation stage

This stage includes grades one to six, and aims to provide a rich educational environment that encourages students to learn and helps them at the beginning of their academic journey.

Study variables:

Independent variable: lower extremity muscular ability test (CMJ - FCM).

Dependent variable: The amount of physical activity practiced by female students during 5 days a week of official work.

Study Approach:

The researchers used the descriptive correlational approach, which is one of the types of descriptive methods that measures the relationship between variables (dependent and independent), determines the type of relationship (positive or negative), and then predicts the level of importance in a quantitative manner. Form.

Study population:

Study population: Female students of Sheikh Nasser Al Kharousi School in Al Mawaleh, Muscat Governorate, Sultanate of Oman for the academic year (2021-2022 AD).

The study sample:

The study was applied to a purposive sample of students from Sheikh Nasser Al Kharousi School in Al Mawaleh (Muscat Governorate - Sultanate of Oman), numbering (38) students. (10) of them were excluded for not completing the measurements, so that the final

size of the study sample was (28) students. Table No. (1) contains age and physical measurements.

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(Table 1)
Arithmetic means, standard deviations (mean ± standard deviation), and normal distribution for age, anthropometric measurements, and muscular ability of the lower limbs for the study sample (n = 28)

m	variable	n= 18	Normal distribution
1.	age	0.3± 11.8	0.469
2.	tall	9.0± 148*	0.893
3.	Length of lower limbs (cm)	8.0 ± 79*	0.786
4.	Body mass (kg)	13.5 ± 43.4	0.527
5.	Body mass index (kg/m2)	5.3 ± 19.2	0.982
6.	CMJ (cm)	4.0 ± 22.8*	0.192
7.	FCMJ (cm)	5.5 ± 27.6*	0.872

*: There are statistically significant differences (0.05≥p)

Table (1) shows a description of the study sample in terms of the variables of age, height, length of the lower limbs, body mass, body mass index, and muscular capacity of the lower limbs.

The results were presented in the form of means and standard deviations after the normal distribution of all variables in the sample was verified and confirmed using the Kolmogorov-Smirnov test as specified in the table. The test results showed a normal distribution for all variables.

Data collection tools and means:

First: - Forms: -

- Records of the educational institution for the sample under study.
- A data collection form to record data for female students.

Second: The devices and tools used.

- Cones.
- Stop Watch.
- Metric tape to measure distance traveled.
- A rectameter device for measuring length.
- Tanita device for measuring weight.
- Optojump device to measure the height of the vertical jump.
- ActiGraph GT3X accelerometer.

Third: The tests used.

- Counter movement jump test (CMJ)
- Free countermovement jump: FCM test. (2011, Argus et al)

Scientific coefficients for tests (CMJ CM - FCM CM)

A - Reliability: The researchers applied scientific parameters to the exploratory study sample by applying tests and then re-applying them again after a period of time of one week from the first application. Table (2) shows the reliability factor.

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Table (2)Reliability coefficients for tests (CMJ cm – FCM cm)

Variables	Application	Re–application	Sig.	Stability coefficient (ICC)	Confidence %95
CMJ (cm)	4.39±21.09	3.26±22.55	0.408	0.769	0.071–0.943
FCM (cm)	4.39±21.09	3.26±22.55	0.408	0.769	0.071–0.943

Study procedures:

First: Administrative procedures

- Obtaining a request to facilitate a secondment from Sultan Qaboos University to the General Administration of Private and Continuing Education and the Ministry of Education.

- Obtaining the approval of the school and obtaining the approval of the students and their parents to participate in the study.

- Preparing a form for recording measurements, test results, and lists of students' names.

Second: Executive procedures

After obtaining approvals, the researchers conducted a reconnaissance visit and field visits to collect data and provide the necessary facilities to implement the study.

a. Exploratory visit

During the exploratory visit, the researchers did the following:

- Coordinating with the school administration and teachers interested in the study by setting a date and mechanism for implementing the study.

- Identify the challenges that may occur during implementation.

The places where the study will be conducted (indoor gyms) have been identified.

- Talking to the students (sample members) and instilling familiarity in them so that they can wear the device with complete reassurance and comfort.

- Familiarize students with the tests that will be applied.

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B. Field tests

The researchers implemented the study during the period from 3/2/2022 to 4/13/2022 AD, where the procedures were divided into basic visits:

- First visit: Anthropometric measurements (height, lower limb length, body mass, body mass index) were performed for all students participating in the study.

- Second visit: Application of lower extremity ability tests (CMJ, FCMJ).

- Subsequent visits: The amount of physical activity was calculated by installing an accelerometer (ActiGraph GT3X) on the sample during (5) days a week during school hours. A triaxial accelerometer measuring three planes: vertical, medial, and anteroposterior was used to determine the amount of physical activity undertaken 5 days per week during school hours. The study sample (female students) was asked to place the accelerometer on the right side of the waist in the morning after the end of the school queue at 8:00 am and to take it off before the end of the school day at 12:00 noon.

It is a scale that measures the movement of a body in terms of acceleration. It is considered a safe and light tool, as the weight of the device reaches 27 grams and its dimensions are 1.8 x 3.7 x 3.8 cm. Therefore, it does not represent the burden or sensitivity caused by wearing clothes. It can detect acceleration in the range of 2.0-0.05 g with a frequency response between 2.5-0.25 Hz and has a storage capacity of 1 MB (Trost et al., 2011).

The engine acceleration was timed to record the number of movements for one second "Epoch". Raw physical activity data from ActiGraph GT3X kinematic accelerometers were downloaded to a computer via ActiGraph 3.2 software. The acceleration time was set to 15 seconds ("squeezing"). The data was then filtered and only 3 days of data were selected for each individual from the study sample out of 5 days due to the lack of all necessary data, as indicated by several studies Zimmo et al. (2017) found that 3 days of data is sufficient to determine the amount of physical activity.

ActiGraph Analysis Tool v3.00 software was used for statistical analysis at each level of physical activity using the cut-off points defined by (Romanzini et al. 2014):

Table 3 Cut-off points for physical activity in children and adolescents according to (Romanzini et al 2014)

m	level Physical activity	Cut off points	
		Grand	Minor
1.	**Sedentary (SPA)**	720	0

2.	**Light (LPA)**	3027	721
3.	**Moderate (MPA)**	4447	3028
4.	**Severely Vigorous (VPA)**	≥ 4448	

Statistical methods and treatments:
The researchers used the Statistical Package for the Social Sciences (IBM SPSS Statistics 21) program to process the study data:
- Verify the normal distribution of all measurements using the Kolmogorov-Smirnov test.
- Displaying the results in the form of the arithmetic mean and standard deviation (Mean ± Standard Deviation) for the characteristics of the sample and the dependent variables in the case of a normal distribution of the variables.
- Pearson correlation coefficient to study the nature of the relationship between the amount of physical activity practiced and the test of "muscular capacity of the lower extremities (CMJ - FCM)."
- ICC (Intraclass Correlation Coefficient) to study the reliability of the "Muscular Power of the Lower Limbs (CMJ - FCM)" test.
Show results:
Table (4) Arithmetic means, standard deviations, and normal distribution of physical activity levels for female students during 3 days a week of school hours (n = 28)

m	Activity (dq)	normal	Normal distribution
1.	**SPA(خمول)**	**56.7 ± 455.9**	**0.954**
2.	**LPA(خفيف)**	**49.5 ± 193.2**	**0.980**
3.	**MPA(معتدل)**	**13.3 ± 41.7**	**0.824**
4.	**VPA(شديد)**	**6.6 ± 26.3**	**0.922**
5.	**MVPA(معتدل وشديد)**	**17.01 ± 67.9**	**0.919**

It is clear from Table (4) that the arithmetic mean of the physical activity levels of female students during the 3 school days ranged between (455.9 and 26.3 minutes) for all levels, and the largest share was for the level of inactivity (SPA) (56.7 ± 455.9 minutes). In contrast, the level of intense physical activity was the lowest (6.6±26.3 minutes). The results also showed that the level of moderate and vigorous physical activity (MVPA) during 3 official working days reached (17.01±67.9 minutes), which is approximately (22.6 minutes) per day.

Table (5) The relationship between physical activity practiced during the 3 days of the week during school and the test Muscular ability of the lower limbs (n=28)

the test	SPA	LPA	MPA	VPA	MVPA
CMJ	r=-0.250 p=0.333	r= 0.224 p= 0.387	r= 0.087 p= 0.739	r= 0.271 p=0.293	r= 0.172 p=0.510
FCMJ	r= -0.175 p= 0.502	r= 0.226 p= 0.383	r= -0.121 p= 0.644	r= 0.059 p=0.824	r=-0.074 p=0.778

r: correlation coefficient
P: statistical significance
It is clear from Table (4) that there is no relationship between activity levels
Physical ability and lower extremity tests (CMJ, FCMJ) among female students (P < 0.05).
Discuss the results

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It is clear from Table (4) that the arithmetic averages of the physical activity levels of female students during the 3 school days ranged between (455.9 and 26.3 minutes) for all levels, and the largest share was for the level of inactivity (SPA) (56.7 ± 455.9 minutes). In contrast, the level of intense physical activity was the lowest (6.6±26.3 minutes). The results also showed that the level of moderate and vigorous physical activity (MVPA) during 3 official working days reached (17.01±67.9 minutes), which is approximately (22.6 minutes) per day.

The results indicate that the level of physical activity among female students was low in general, and that the average daily inactivity time (practicing almost any physical activity) for female students was very high compared to other levels, while the level of vigorous activity was the lowest average. The researchers also found that the average time female students spent in moderate and vigorous physical activities was about 22.6 minutes per day. This is very low compared to global recommendations for at least 60 minutes of moderate to vigorous physical activity per day for children and adolescents (World Health Organization, 2020).

The results of the current study regarding the level of moderate and vigorous physical activity (22.6 minutes) agreed with the study (2017, Zimmo et a) in which they measured physical activity during school hours for Qatari children for 5 days during the week. . They found that the average moderate and vigorous physical activity was (13.5±28.2 minutes) per day, which is less than the internationally recommended minimum. It is also consistent with a study (2019, Al-Juhani et al.) conducted on middle school students in the Kingdom of Saudi Arabia, the results of which showed a decrease in overall physical activity levels with an increase in sedentary behavior. The results also agreed with the study (Al-Khawaja et al., 2002), which showed weak adherence to physical activity recommendations among children.

While a study (2003, Mota et al.) indicated that the average time that children spend in moderate and vigorous physical activity is about (138 minutes) per day, which is more than twice the recommended period. It is worth noting that in this study, moderate and vigorous physical activity was measured throughout the day (from 9 a.m. to 9 p.m.) and was not limited to working hours as in our study. It was commented that males were more active in the after-school period, which could explain the current result.

As for sedentary activity, in a study (2017, Zimmo et a) it reached 8.4±58.1 minutes, which is a much shorter period than the result of the current study (152 minutes) per day, which calls for a reconsideration of quantity and quality. Proposed movement and sports programs and activities within the school. .

The researchers believe that the current results indicate that female students spent a significant amount of time at school in physically sedentary activities, and therefore did not achieve the recommended amount for achieving and maintaining good health. This requires reviewing school programs to increase the opportunities and types of sports and activities. To encourage movement and physical activity. Low levels of physical activity have negative health consequences for children. Therefore, this study calls for increasing awareness of the importance of practicing sports and physical activities regularly among school students.

This is done by encouraging them and providing the appropriate supportive environment for this. Biddle et al (2019) assert that physical activity has many benefits for the physical and mental health of children and adolescents.

It is clear from Table (5) that there is no relationship between all levels of physical activity and lower extremity ability tests (CMJ, FCMJ) in students ($P<0.05$) in all cases. The results indicated a relationship between different levels of physical activity (SPA, LPA). , MPA, VPA, MVPA), which the students practiced during 3 school days, and between two tests of the muscular ability of the lower limbs, which are the vertical jump test from stability (CMJ) and the compound vertical jump test (FCMJ).

The values of correlation coefficients with physical activity levels for the results of the vertical jump stability test (CMJ) ranged between ($r=0.250$) with SPA and ($r=0.271$) with VPA. Therefore, none of these values reached the level of statistical significance, as all values were ($0.05<p$), and therefore there is no statistically significant relationship between physical activity levels and CMJ test performance within this sample.

The results of the combined vertical jump (FCMJ) test indicate that the correlation coefficients with physical activity levels ranged between ($r=0.175$) w
From the presentation of the previous results, the researchers see that in terms of the strength of the correlation, the correlation coefficients between levels of physical activity and the CMJ test ranged between (-0.250 for SPA, 0.271 for VPA). This indicates a slight trend toward a negative relationship between very light physical activity and muscular ability, while high-intensity activity tends to have a weak positive relationship. While in the FCMJ test it ranged between (-0.175 for SPA, 0.226 for LPA), which indicates that there is no clear trend towards a relationship between physical activity levels and this test.

Statistical significance indicates that the highest value was ($p = 0.293$) for the relationship between VPA and the (CMJ) test, while the rest of the values are not statistically significant at the level of $\alpha \geq 0.05$. The researchers confirm that although there was a slight trend of positive correlation between some levels of physical activities (LPA, VPA, MVPA) and the two tests, the statistical relationship was not statistically significant at the significance level ($0.05<p$).
This study agreed with the study of Wang et al (2013), which indicated that there is no statistically significant relationship between levels of physical activity and some components of physical fitness, such as muscular strength and cyclic respiratory endurance. It also agreed with the study (2020, Abdel Karim et al.), which found no relationship between levels of physical activity and fitness in children. It also agreed with the study (Howe et al, 2015), which did not find a relationship between physical activity during the school day and grip strength in children.
While the results of this study differed from the study (Al-Saadi et al., 2019), which indicates that there is a relationship between intense activity and muscular ability among students; Physical activity was positively associated with the muscular ability of the lower limbs of the body. It also did not agree with the study of Al-Rabiah and Al-Hayek (2010), which showed a positive and statistically significant correlation between the level of moderate and high-intensity physical activity and the level of physical fitness in a sample of schools. students. He also disagreed with the study (2003, Motta et al.) which showed a relationship between daily physical activity and some physical fitness indicators.
He also disagreed with a study (2019, Larouche. et al) that found a positive relationship between high-intensity sports activities and arm and shoulder muscle strength in adolescents. He also disagreed with the study (2014, Smith et al.) which showed a

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statistically significant relationship between average daily walking steps and physical fitness rates in children.

While this study did not show a relationship with the muscular ability of the lower limbs. The lack of a relationship may be due to the small sample size of 28 female students compared to other studies, which reduces the ability to detect statistical relationships. It is also noted that the current study only focused on 3 days a week. Including the rest of the days of the week may be useful to obtain a more comprehensive picture of weekly physical activity and its relationship to the components of fitness. In addition, the study only focuses on testing muscular endurance in the lower extremities. It may be useful to add other tests to evaluate different aspects of strength and muscular endurance, to obtain more comprehensive results about the relationship to physical activity.

Conclusions:

Through the results reached by the researchers, the following was reached:

- A noticeable decrease in the levels of physical activity among female students during school hours.

The results of the current study did not show a statistically significant relationship between the levels of physical activity (SPA, LPA, MPA, VPA, MVPA) practiced by the study sample of students and the two muscular ability tests (CMJ and FCMJ).

There is a noticeable decrease in the levels of physical activity practiced during school hours (3 days a week) among first-year students.

Recommendations:

- Conducting further research using larger samples, and measuring physical activity over the course of an entire week, to clarify the true picture of the nature of the relationship between variables.

Conduct a similar search and add physical activity recording days, including weekends.

- Using methods and methods for teaching physical activity, whether when increasing physical activity during school hours.

– Working to improve the muscular capacity of the lower extremities and their functional ability to increase the amount of physical activity.

- Conducting studies on the relationship between the amount of physical activity and aerobic capacity through the shuttle running test at a gradual speed until fatigue.

– Develop policies and programs that encourage students to follow an active lifestyle and practice sports activities regularly. Due to its scientifically proven benefits on physical fitness and overall health.

Conducting studies that include measuring physical activity outside school hours as well, to obtain a more comprehensive picture of students' movement habits.

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A Comparison of Some Important Biochemical Indicators According to Escalating Physical Effort till Fatigue for Elite Freestyle Wrestlers, 800m Runners, and 200m Freestyle Swimmers

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Abstract

It is the nature of the game and the activity that determines the characteristic of the manifestation of fatigue according to what is required by the neuromuscular work in it, as well as the changes that occur in the functional variables and the time of the differential threshold. The location of each activity and the game of these teams have been studied in a special table for energy production systems as a result of continuous changes in their laws, and are considered within the energy systems such as the anaerobic system (Phosphagine) and lactic acid for (800) m runners - freestyle swimmers (200) m in the physical effort till fatigue. The comparison in the important functional indicators for them, and the research methodology embodied in the way of working through the method used, which is the descriptive method in comparison then, the researchers identified the research community for the young national team athletes for freestyle wrestling, and the national team(800)m runners, as well as of the national team in (200) m swimming for the sports season (2022-2023), A total of 21 athletes were selected in an organized manner and distributed into three equal groups (7 athletes) for each of the three types of sports (wrestler, 200-meter swimming and 800-meter running)., and the researchers would conduct tests for the research variables biochemical for the sample members, as well as some variables that have an impact on the results of the study such as (height, age, weight, and the age of training), and the homogenization of the research sample members was carried out. The results of statistical treatments were presented, analyzed, and discussed, supported by sources.

The most important conclusions were that most of the activities and the variation of values are very essential biochemical indicators. The differences were significant and the positive variation in accordance to the type of sport or activity, and the last variation between the activities in terms of comparison in these variables is due to the nature and specificity in terms of the intensity of the resistances and direct and indirect friction For competitors and the expenditure of energy stored in muscles. Finally, the researchers recommended knowing the most important biochemical indicators in these events and sports as they reflect a clear picture of the individuals' internal preparations and functional responses.

Keywords: Biochemical, indicators, escalated physical effort, elite athletes (wrestling, athletics, swimming).

Introduction:

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The training and educational process has now become more connected and related to the attempt of the scientific method and the formation, distribution and planning of training loads and educational curricula according to the functional indicators of the body considering it is the real indicator for reading those loads on the body of the athlete and that the interest and combination between the science of sports training and the science of physiology is one of the important keys that have great importance in the fields of training as a result of the physiological effects of the load of training on the various organs of the body, which in turn lead to the occurrence of appropriate adaptations to develop the technical level of skill, andThe study of these variables is considered one of the most important reasons for raising the level of athletic achievement, and its impact is reflected in the internal functional organs of the body and its ability to implement the requirements of physical performance. Functional body and to delay the fatigue and the onset of the anaerobic threshold.

The anaerobic threshold in the field of sports training is the state of fatigue that the player reaches during physical performance, and this condition differs in terms of the timing of its manifestations in the athletes and the difference in their activities depending on their training, functional and biochemical status that they have reached as a result of the different training operations according to the stresses required by each activity, These sports depend, in their performance, on releasing the necessary energy according to the "lactic" anaerobic system (Salamah,1999, p. 148), freestyle wrestling as well as effectiveness 800 m, with time that ranges between two minutes or more, as well as the activity of 200 m freestyle swimming, as these activities and sports discussed share within one energy system, which is the system (lactic acid) Within the anaerobic work system, these sports and events are classified as individual sports.

The problem of the study is due to the nature of the game and the activity, which determines the characteristic of the appearance of fatigue according to what is required by the neuromuscular work in it, as well as the changes that occur in the biochemical variables and the time of the differential threshold, and that knowing the common and divergent characteristics and answering questions through which sports and events can be classified with variables within a work system One energy, and showing the location of each activity and game of these teams studied in a special table for energy production systems (lactic acid) as a result of continuous changes in the laws of these sports and events, which are considered within the energy systems, including the anaerobic system (phosphagine) and the lactic acid system, and this matter allows the field To answer a set of scientific facts through which it is possible to know the causes of the rapid and delayed onset of fatigue, as well as knowing the biochemical variables, the similarities and differences in the time of the differential threshold, and the location of each activity and game in the classification table of the energy system for these events.

The purpose of the study was to identify some biochemical indicators for athletes (freestyle wrestling, 800 m running freestyle, and 200 m swimming in the increasing physical effort till fatigue, and the comparison between these sports some biochemical indicators according to the increasing physical effort till fatigue.

Method

The researcher's method used the descriptive approach and the method of comparison between the three groups, with his precise scientific steps to the nature of the research problem and its objectives.

The researchers identified the research community and they are athletes of the youth national team for freestyle wrestling, and the runners (800) m, as well as the athletes in 200 m freestyle swimming in (2022-2023), and their number is (21) athletes, divided into (7) ath-

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letes for each group (freestyle wrestling, 800 m running and 200 m swimming), and it was completed They were chosen by the intentional method, as they represent the national team for those sports, and the researchers conducted tests for the research variables biochemical for the sample members, as well as some variables that have an impact on the results of the study such as (height, age, weight, and training age), and the homogenization of the research sample members which had been carried out.

Table (1) the measurements of extraneous variables, arithmetic mean, standard deviation, skewness

T	measurements	mean	std	skewness
1	age/year	19,904	0.889	-0.272
2	weight/kg	68,142	4,714	0.857
3	length/cm	174,285	5,478	-0.282
4	Training age/year	7,619	1,359	0.251

After determining the variables of the study, which are the biochemical indicators, a pilot study was conducted on the devices and tools used in this study, and then the main experiment was conducted for conducting tests and measurements for the research sample on athletes (wrestling, athletics, and swimming), and then conducting the appropriate statistical operations to extract the results and compare them.

The variables were determined by the Scientific Committee to approve the subject and interviews with specialists in the field of sports training, sports physiology, wrestling, athletics, and swimming according to the literature and accurate scientific sources, the supervisor and the researchers, it was noted that they contribute to solving the research problem as the study variables include the following:

First/biochemical indicators:

1-Sugar level.
2-Lactic acid.
3-Calcium.
4-Potassium.

Second/lactic threshold: Konkani test.

Exploratory experiences:

The exploratory experiment is a preliminary experimental study that aims to stand on the level of the devices used and choose them, as well as to know the negative aspects that will face the work and that the exploratory experiment,And through the foregoing, the researchers worked on conducting exploratory experiments to ensure the validity of the devices and tools used in the tests, and to ensure the validity of the escalating physical effort test till fatigue for the athletes of the sample individuals, and to ensure the efficiency of the work team in conducting measurements and tests and recording the results, as well as completing its field duties represented by drawing The blood and put it in the special containers (Tubes) that are numbered according to the sequence of the athletes, and then transfer it from the place of the experiment to the laboratories for measurement, and to identify the time required and taken to implement the tests to single out the sample and the ease of its application, and to know the validity of (the treadmill and the device of theFIT MET PRO) to work continuously and its efficiency.

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Measuring biochemical indicators:

Biochemical indicators (sugar level, lactic acid, calcium, potassium) were measured during rest, as the athlete sits on a chair and the arm is tied with a tourniquet to facilitate the process of drawing blood from it by (5cc) of venous blood by the chemist, as the blood is placed in medical tubes (tubs) numbered according to the sequence and names of the athletes, and placed in a refrigerated box to be transported to the athlete indicator analysis, then the percentage of lactic acid concentration in the blood is measured during rest by taking a blood sample Capillary from the athlete by pricking the finger of the hand and pressing it so that we can extract drops of blood, then it is noted through the device screen the percentage of lactic acid (Lactate Pro2) in the blood, after that the athlete performs the effort (test of physical effort escalating till fatigue) and then the indicators are measured Biochemistry (sugar level, lactic acid, calcium, potassium) Immediately after the effort, the athlete sits on a chair and the arm is tied with a tourniquet to facilitate the process of drawing blood from it (5cc) of venous blood by the chemist, as the blood is placed in tubes Medical tubes numbered according to the sequence and names of the athletes and placed in a refrigerated box to be transported to the analytical athlete for measurement, Then the percentage of lactic acid concentration in the blood is measured after (7) minutes have passed from the implementation of (the escalating physical effort test till fatigue), which is the best period for the transfer and collection of lactic acid from the muscles to the blood (Al-Qat, 1999, p. 27), as the measuring tape is placed In the location designated for it in the device, and after that the bar code number will appear, and then a capillary blood sample is taken from the athlete by pricking the finger of the hand, and pressing it so that we can extract blood drops, then it is noted on the device screen the percentage of lactic acid (Lactate Pro2) in the blood.Then a sample of capillary blood is taken from the athlete by pricking the finger of the hand, and pressing it so that we can extract drops of blood, then it is noted through the screen of the device the percentage of lactic acid (Lactate Pro2) in the blood. Then a sample of capillary blood is taken from the athlete by pricking the finger of the hand, and pressing it so that we can extract drops of blood, then it is noted through the screen of the device the percentage of lactic acid (Lactate Pro2) in the blood.

Image (1) Explain the devices and tools used for biochemical indicators

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The escalating physical effort till the fatigue test:
Test name: con coni test (MACENZIE, 97): is a simple measure of an individual's anaerobic and aerobic extremities:
- The required materials:
* Heart rate monitor.
* Treadmill.
* Stopwatch.
* Assistant.
How to perform the test:
The athlete determines his starting speed and speed increases each (200 meters to complete between (2.5) kilometers and (4) kilometers before he becomes unable to continue using the best time of (10) kilometers, and the time is determined for each (200) meters of the track and the speed of the treadmill test.

Carrying out the treadmill test: The player warms up for ((10) minutes, and by setting the treadmill speed to the required starting speed for the athlete, the athlete sets the heart rate monitoring watch using a recording interval of (5) seconds, the assistant starts the stopwatch timing and the assistant records the time every (200) meters, and the athlete increases his speed every (200 meters and the assistant stops the stopwatch when the athlete cannot follow and records the time, and the athlete stops recording his pulse clock.
As for the test used in the current study, it is a test that was applied to the treadmill for the following reasons:
1- Avoid bias because one of the research samples is field and field athletes.
2- Providing unified and equivalent conditions for all members of the research sample.
3- Controlling the increase in speed with high accuracy, as it is an internationally approved electronic device.
4- It is considered one starting line for all members of the research sample to obtain accurate scientific results.
5- The possibility of increasing the physical effort in it till reaching the stage of maximum physical effort.
6- The possibility of connecting the (FitMeet Pro) device and the real-time and athlete control to extract the results.

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Image (2) Demonstrate the Conconi test on a treadmill

The main experiment was conducted on the adult research sample (21) athletes representing the youth national team athletes for freestyle wrestling, (800) m runners, as well as (200) m freestyle swimmers), on the day corresponding to 3/11/2022 till the day corresponding to 5/11/ 2022 at noon, according to the following sequence:
Day 1, 2, and 3: Before conducting the (rising physical effort test till fatigue) for the research sample, the biochemical indicators (sugar level, lactic acid, calcium, potassium) are measured during rest, and then (the escalating physical effort test till fatigue) and then and immediately after the effort. Biochemical indicators are measured and a venous blood sample is drawn immediately after the effort to measure the biochemical indicators (sugar level, lactic acid, calcium, potassium) the lactic acid concentration is measured by taking a capillary blood sample seven minutes after the end of the test effort, and the tests and measurements were done in the fitness hall In the College of Physical Education and Sports Sciences - University of Baghdad, with the help of the training staff and the assistant work team, the tests were conducted daily by (7) The athletes of the first day for the freestyle wrestling, the second-day athletics, and the third day for (200) m swimmers.

Discussion

Presentation, analysis, and discussion of the results of some biochemical indicators according to the escalating physical effort test till fatigue for elite athletes in wrestling, 800m running, and 200m freestyle swimming

Table (2) shows the arithmetic means, standard deviations, and the value of (t) calculated for correlated samples, the level of test significance, and the significance of the difference for the tests before and after the effort for the most important biochemical indicators of the elite wrestling athletes

variants surveyed	measuring unit	before effort		after effort		value (t) calculated	Sig
		s	±p	s	±p		
sugar level	mmol/L	100.00	13,416	191.00	8,869	21,009	0.000
lactic acid;	mmol	1,128	0.610	13,800	3,321	5,740	0.001
calcium	mg/dl	11,117	0.693	8,710	0.731	18,975	0.000
potassium	mmol/L	22,104	2,277	19,338	2,350	6,792	0.000

sig < 0.05

Through the table (2) The results of the tests before and after the effort showed the most important biochemical indicators of the elite wrestling athletes, where the (T) values calculated for these variables were respectively (21.009, 5.740, 18.975, 6.792), most of which were significant differences at the level of significance (0.05), which appeared under This level is between (0.000 - 0.001), as this indicates that most of the variables were significant and in favor of post-effort tests by the variables that occur to these variables, whether they are high or low, and this indicates that the efforts made by the wrestlers had an impact In these variables in terms of escalating effort till fatigue, this achieves the first objective of the study.

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Table (3) shows the arithmetic means, standard deviations, and the value of (t) calculated for correlated samples, the level of test significance, and the significance of the difference for the tests before and after the effort for the most important biochemical indicators of the 800m runners

variants surveyed	before the effort		after effort		t	significance level Sig
	Sd	mean	Sd	mean		
sugar level	99,285	10,672	189.28	6,993	21,707	0.000
lactic acid;	1,071	0.618	12,257	4,077	5,263	0.002
calcium	11,040	0.858	8,675	0.591	8,736	0.000
potassium	21,414	2,175	18,770	2,360	6,379	0.001

Sig < 0.05

and from table (3) The results of the tests before and after the effort showed the most important biochemical indicators of the athletes (800m) running, where the (T) values calculated for these variables were respectively (21.707, 5.263, 8.736, 6.379), all of which were significant differences at the level of significance (0.05), which It appeared below this level between (0.000 - 0.002), as this indicated that all variables were significant and in favor of post-effort tests, as these variables differ in their significance according to the rise or fall, and this indicates that the efforts exerted by the runners had an effect whether Was positive or negative in these changes that occurred through the escalating effort to reach fatigue, and this achieves the first objective of the study.

Table (4) shows the arithmetic means, standard deviations, and the value of (t) calculated for correlated samples, the level of test significance, and the significance of the difference for the tests before and after the effort for the most important biochemical indicators of the athletes

200m swimming freestyle

variants	before the effort		after effort		t	sig
	s	±p	s	±p		
sugar level	107.71	6,725	190,428	4,117	19,170	0.000
lactic acid;	1,214	0.536	10,414	1,930	8,632	0.000
calcium	11,482	0.482	9,062	0.330	14,752	0.000
potassium	18,432	4,901	16,662	5,783	5,094	0.002

Sig < 0.05

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and table (3-3) Show the results of the tests before and after the effort of the most important biochemical indicators for a swimmer (200m), where the (T) values calculated for these variables were respectively (9.1701, 8.632, 14.752, 5.094) and all of them were significant differences at the level of significance (0.05), which appeared Below this level is between (0.000 - 0.002), as this indicated that all variables were significant and in favor of post-effort tests, as these variables differ in their significance according to the rise or fall because the system used here is the anaerobic system (lactic) and this system and the changes taking place in it As for the blood variables, as they indicate the fatigue of the swimmer according to the special dynamic in this event, and this indicates that the efforts made by the swimmers had a real role in reading the results, whether positive or negative, in these changes that occurred from the escalating effort to fatigue, and this achieves The first objective of the study.

table (5) The analysis of variance shows the analysis of variance after the effort for the most important biochemical indicators according to the escalating physical effort test till fatigue between the three groups (elite athletes, wrestling, and runners).800m and 200m freestyle swimming)

variants	source of contrast	Sum of Squares	grades Freedom	Mean of Squares	F	sig
sugar level	between groups	526,571	2	263,286	4,954	0.019*
	within groups	956,571	18	53,143		
	within groups	70,857	18	3,937		
lactic acid;	between groups	111,350	2	55,675	13,455	0.000*
	within groups	74,480	18	4,138		
calcium	between groups	.142	2	0.071	.152	0.860
	within groups	8,424	18	0.468		
potassium	between groups	117,482	2	58,741	7,026	0.006*
	within groups	150,481	18	8,360		
lactic threshold	between groups	456,000	2	228,000	4,162	0.033*
	within groups	986,000	18	54,778		

Sig < 0.05

and table (5) Show the results between the tests after effort for the most important biochemical indicators (elite wrestling athletes, 800m runners, and 200m freestyle swimmers), where the calculated (F) values for these variables were respectively (4.954, 13.455, .152, 7.026 , 4.162) and most of them were significant differences at the level of

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significance (0.05), which appeared below this level between (0.000 - 0.033), as this indicated that most of the variables were significant between these tests for the dimension of effort, and not significant in the variable (calcium), which showed Significance levels between (0.860), although there is a very slight statistically imperceptible difference between these activities in terms of preference in this variable, as this variable varies in its significance according to the increase or decrease between the activities above, and the researchers used the law of the least significant difference (LSD) to find out the preference between these activities in these variables, as in Table (5), and this achieves the second objective of the study.

table (6) Shows the value of differences in the arithmetic mean of the most important biochemical indicators according to the escalating physical effort test till fatigue and the value of the least significant difference (LSD) between the three groups (elite wrestling athletes, 800m runners, and 200m freestyle swimmers)

Variants	totals	Mean of difference	sig
sugar level	Wrestling - running800 m	1.85714	0.639
	Wrestling - swimming200m freestyle	11.42857 *	0.009
	to run800m - 200m freestyle swimming	9.57143*	0.024
lactic acid;	Wrestling - running800 m	2.11429	0.068
	Wrestling - swimming200m freestyle	5.58571*	0.000
	to run800m - 200m freestyle swimming	3.47143*	0.005
Potassium	Wrestling - running800 m	0.98571	0.532
	Wrestling - swimming200m freestyle	5.43714*	0.002
	to run800m - 200m freestyle swimming	4.45143*	0.010
lactic threshold	Wrestling - running800 m	7.71429	0.067
	Wrestling - swimming200m freestyle	11.14286 *	0.011
	to run800m - 200m freestyle swimming	3.42857	0.398

Sig < 0.05

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from table (6) The results showed the least significant difference (LSD) Between the three activities (elite wrestling athletes, 800m runners, and 200m freestyle swimmers) in post-exercise tests for the above variables with significant differences (sugar level, lactic acid, potassium, lactic threshold), in the first variable (sugar level The results had the opposite effect, that is, the higher the level of sugar in the blood, the lower the physical activity, as the game (wrestling) was the first in that, and then the effectiveness of (swimming) and finally the effectiveness of running (800m), but in the variable (lactic acid) its results were opposite In terms of effect, i.e. the more lactic acid, the greater the burden on the athlets for these activities, where the game (wrestling) was the first in that, then the activity of running (800m) and finally the activity of (swimming), and in the variable (potassium), where its results showed the opposite effect in terms of The function of his work, that is, the greater the percentage of potassium decrease, the greater the effect on the body of the athletes will be negative, as the (wrestling) game was the first in that, and then the activity of running (800 m) and finallyThe effectiveness of (swimming), and in the variable (the lactic threshold) that has a direct positive effect, that is, the higher the threshold is for the athletes, it is a vital indicator of their efficiency in sports activity, which is considered one of the main variables that the longer the delay in its appearance, the player is in the best efficiency to exhaust the effort, as it was The (wrestling) game is the first in this, then the (800m) running event, and finally the (swimming) event.

The results shown in the tables (4, 5, 6), indicate the existence of significant differences between the results of the tests before and after the effort and in favor of the tests after the effort. The researchers, the reason for this increase in his level, is that the effort exerted by these athletes in terms of increasing metabolic processes and the voltage difference inside and outside the cells has an effect on increasing blood sugar, as blood glucose in addition to muscle glycogen are two main sources of energy that are supplied to the muscles at the beginning Physical effort when the body's supply of oxygen is less than the body's need for it, and the participation of blood glucose as well as glycogen as sources of muscle energy increases with the increase in the intensity of physical effort. which provide energy to the muscles, Where it is not possible at this intensity to use fat as fuel, and the concentration of glucose in the blood is controlled by two hormones secreted by the pancreas gland, namely insulin and glucagon, and each of these two hormones affects blood glucose in an opposite way to the other, in the case of a high concentration of glucose in the blood (after eating, for example), the secretion of the hormone insulin increases, and it reduces the level of glucose in the blood, by facilitating the entry of glucose into the muscles and connective tissues, and activating the process of building glycogen in the liver (i.e. converting some of the glucose in the blood into glycogen in the liver), as well as inhibiting the process of catabolizing glycogen The liver converts it into glucose. As for the hormone glucagon, its secretion increases when the concentration of glucose in the blood decreases from its normal level, as this hormone activates the process of breaking down liver glycogen into glucose and activates the process of manufacturing glucose from other non-carbohydrate sources (amino acids and glycerol), and during physical activity. , The body inhibits the secretion of the hormone insulin (because there is a need for glucose), and in return, the secretion of the following counter hormones increases (glucagon, cortisol, catecholamine, growth hormone). For energy), some of these hormones help in the processing of fatty acids to use them as fuel for the muscles, in addition to the above, the increase in the concentration of the hormone catecholamine in the blood contributes to making muscle glycogen the preferred fuel for muscle contraction, especially with the increase in the intensity of physical activity (Al-

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Hazaa, page 217), and in the variable (lactic acid) in the above tables, significant differences were shown in favor of post-exercise tests for the three activities.Growth hormone) These hormones lead to urging the liver to analyze the glycogen contained in it and put it into the blood in the form of glucose (to be used as an energy source), and some of these hormones help in the processing of fatty acids to be used as fuel for the muscles. The hormone catecholamine in the blood contributes to making muscle glycogen the preferred fuel for muscle contraction, especially with an increase in the intensity of physical activity (Al-Hazaa, page 217), and in the variable (lactic acid) in the above tables, significant differences were shown in favor of post-exercise tests for the three activities.Growth hormone) These hormones lead to urging the liver to analyze the glycogen contained in it and put it into the blood in the form of glucose (to be used as an energy source), and some of these hormones help in the processing of fatty acids to be used as fuel for the muscles. The hormone catecholamine in the blood contributes to making muscle glycogen the preferred fuel for muscle contraction, especially with an increase in the intensity of physical activity (Al-Hazaa, page 217), and in the variable (lactic acid) in the above tables, significant differences were shown in favor of post-exercise tests for the three activities.In the variable (lactic acid) in the tables above, significant differences were shown in favor of post-exercise tests for the three activities In the variable (lactic acid) in the tables above, significant differences were shown in favor of post-exercise tests for the three activities(wrestling, 800m running and 200m freestyle swimming) In this variable, the researchers attributes this as a result of the physical effort exerted by the athletes, as the result of any physical effort increases the percentage of this variable, and it is an actual result of high physical activity, and this is scientifically consistent with the nature of these activities and their use of the nature of the anaerobic system and the energy used in it and the accumulation of the products of metabolic processes in The body of the athletes as a result of the high effort, which needs many sources of energy and oxygen to supply the body with energy as a result of the high physical effort and for the continuity of work, as lactic acid is an indicator of the training status of the athletes, whether the percentage of lactic acid before or after the physical effort, in addition to being an important indicator of the intensity Training as well as the ability of muscles and internal body systems to resist fatigue resulting from high-intensity physical effort, so lactic acid is used in evaluating training programs and identifying their impact on aerobic and anaerobic energy production systems (Hassan,2008, p55).

He sees (Muhammad Othman,1990) that the concentration of lactic acid in the blood is one of the main influences that work on the individual's ability to continue performing, and this means that the individual who has this ratio appears in a lower way has a greater ability to continue to perform than others who have a high concentration of this acid (Othman, 1990, page 230), while (Haitham Al-Rawi, 1996) confirms that long-term sports training results in a decrease in the level of lactic acid in the blood after the maximum training load of athletes or trained individuals without trainers. The results showed that the trainers are characterized by the ability to maintain a lower level of lactic acid in the blood during regular training, and this indicates an improvement in the chemical and biological sufficiency of training, And that the athlete can have a high accumulation rate of lactic acid after violent physical effort compared to the untrained, and the reason for this is because the duration of the performance of the athlete is longer than that of the untrained, and this means that there is an increase in the duration of anaerobic work as well as breaking down the amount of glycogen more than It is in the untrained, so there is a greater accumulation of lactic acid, and it can be a positive indicator of the development of the work of oxidative enzymes, as well as the internal

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systems of the body and the ability of the muscle to bear this accumulation, and this is called chemical imprinting (Al-Rawi, 1996, p. 17).

The use of the lactic acid system in energy production is characterized by the rapid supply of the muscle with the direct source of energy ATP, for example, sports activities that perform at high speed during a period from 30 seconds to 3 minutes depending on a large extent on the lactic acid system, and among these activities is the 400-meter and 800-meter run (Aziz, 2018, p. 54).

From the foregoing, we note that the second system of anaerobic decomposition, the lactic acid system, is considered the dominant system for the activities for which the physical and muscular effort is below the maximum, i.e. strongly90% of any activities that are accompanied by performance endurance, and this is what distinguishes many sports and events, and the coaches must build their training curricula according to the advantages of this system so that the athletes can reach the best achievements, and since the final outcome of the anaerobic decomposition of glycogen in the muscles or glucose in the blood is lactic acid and the efficiency of the athlete increases Who can perform for the longest period of time with the increase in lactic acid and for this the exercises that are characterized by the specificity of this system raise the efficiency of athletes to achieve the best results, as for the time period that the lactic acid system provides for the energy needed for muscular work, (Hama Najm, 2001) indicated that the system Lactic acid provides energy for a period of time (1-3 minutes) (Al-Jaf and Taha, 2001, page 74). (1994, Costill) confirms that the lactic acid system does not give a large amount of energy (anaerobic), so it gives energy of high intensity, but it is limited in time due to the accumulation of lactic acid in the muscles and blood, and this appears in the effort and sports that last (1-2 minutes) (Costill, 94, p. 98).

As for the variable (calcium and potassium), the results showed the results of the above three activities between the tests before and after the effort, and in favor of the tests after the effort, as their percentage decreased in all these activities. Inside and outside the cells as a result of compensating for the shortfall in energy exchange in the body calcium mineral in the body is divided into two halves, the first in a free state and the other half united with proteins (fit and asheer, 1982, p. 360).

and that (99% of the calcium in the body is found in the skeleton and teeth, while the rest of the calcium is in the body fluids in the form of ions, so it is required vitally by every cell. Muscles and nerves participate in its irritation and that affects the concentration of the free calcium ion in the muscle cells and participates in the irritation of the membrane (Aday and Hanna, 1987, p. 248).

Calcium liberated from the sarcoplasmic reticulum is considered a response to nervous stimulation, and the amount liberated is proportional to the amount present in the sarcoplasmic reticulum, and its liberation is associated with its concentration at certain limits (benign,1989, p. 71).

It maintains the level of calcium secured in the extracellular fluid and the mineral content of bone over the years despite the variation in the intake of calcium with food, in an effective balance with the functioning of the bone and the control of calcium absorption and excretion. Several kinds of milk are known as (thyroid hormones), but some of these milk are unknown (www.eamg-med.com).

As for potassium, it is considered one of the most positive ions available inside the cells, and also the loss of potassium occurs through sweating as well, as it is excreted with quantities of sodium chloride, potassium is a mono-ketone and has chemical properties similar to the properties of sodium, but its physiological properties inside the body differ from sodium, as the amount of potassium In the blood, it reflects the nature of the metabolism of the cells,

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where the concentration of potassium in the plasma increases when the destruction of the body tissues occurs, as well as the increase in acidity in the body leads to a decrease in the concentration of potassium in the cells as a result of the concentration of cells to neutralize the acidity (Al-Shimi and Al-Minawi, page68).

According to the results shown in the table (5), which indicates that there are significant differences between the results of the analysis of variance tests between the three activities (wrestling, 800m running and 200m freestyle swimming) where most of them showed significant differences between the activities in the post-effort test for the variables (sugar level, lactic acid, potassium, lactic threshold), and the researchers attributes the increase or decrease in some of these variables above to the effort exerted by the athletes in these activities according to the high stresses and the nature of muscular work in them, which requires that from the shortage in the natural stock of these elements, which in turn affects directly On the energy sources in the body and the metabolism process for the continuity of muscular work, which in turn compensates for the deficiency in the body and the body's attempt to obtain the largest amount of food to produce energy and to continue the physical effort till the total effort is exhausted, The increase or decrease is due to the escalating physical effort test till the fatigue exerted by the testers to apply the test, as it was distinguished by the energy system, which is the lactic system, and thus this increase in concentration(glucose level, lactic acid, lactic acid threshold) and lowerpotassiumShows the extent of the high physical effort exerted by the player with its connection with the skills performed for each of the three sports (wrestling, 800m running and 200m freestyle swimming) and the physical capabilities associated with it so that the player is under a high physical effort that matches the nature of the prevailing energy system for those sports, as high intensity work is able to increase lactic acid in the blood due to the anaerobic glycolysis process that the body performs to return the ATP compound inside the cell muscles with insufficient oxygen supplied to the working muscles, which leads to the inability of the mitochondria to enter the liberated hydrogen ion into the respiratory chain, and thus the pyruvic acid unites with the hydrogen ion forming lactic acid, as (Brain) confirms that when its glucose molecule is broken down, pyruvic acid is released with an amount little ATP, then the pyruvate reacts with oxygen,And when the muscle contracts severely, in this case, the percentage of oxygen in the blood will decrease, and thus the pyruvate will unite with the liberated hydrogen ions to form lactic acid (Mackenzie). The coach has a large amount of lactic acid due to the presence of glycogen stored in the muscle or because of the ability to work, and this explains that the percentage of lactic acid concentration is large among the wrestling athletes because they are more adapted as a result of the nature of the effort in the game and therefore they were distinguished by the long period of testing with high intensity and fall within the anaerobic system Lactic acid, as this works by insufficient oxygen in the process of energy liberation, and also works to break down the stored glycogen in the muscles and liver, Therefore, the supply of energy to the body is rapid, and in this regard (Bahaa El-Din Salama) indicates and confirms that the muscles build adenosine triphosphate from the fission of creatine, so anaerobic energy is released, i. In it to restore the construction of ATP to release anaerobic energy, and this process results in lactic acid (Salama, 1999, p. 147), and the current study agrees with a study conducted by a group of researchers on (10) college students as they performed an effort on the stationary bike, and the concentration of lactic acid reached after (3) minutes of effort (130 mg / 100 milliliters of blood), as indicated by (Raisan, Ali Turki,2002) indicates that the percentage of lactic acid during strenuous effort can increase its rate in the blood to (100-200 mg / 100 milliliters of blood) (Kharibt and Ali, 2002, page 107), and the researchers also indicates that in the

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effort exerted in the escalating physical effort test till Fatigue, and so on, is determined by the nature of the game, its description, and the degree of its distinction, as it is characterized by the nature of strong and decisive competition, and despite the different requirements, characteristics, and duties of each player for each game, but the size and intensity of the physical load exerted by the player may be similar, and thus is also reflected in the biochemical effects caused by this effort. Especially lactic acid, due to muscle fatigue, as the percentage of the contribution of this system increases after the first ten seconds of effort, as the increase in the production of lactic acid in the blood depends on the type and intensity of the muscular work performed by the athlete, where the muscular work was of high intensity and takes place in conditions of insufficient oxygen (anaerobic). Increases the accumulation and accumulation of lactic acid in the blood, and the fatigue felt by the player after performing the test, it is known that the player has been afflicted with fatigue and exhaustion after performing (3 minutes of effort) accompanied by a large percentage of lactic acid in the blood, and therefore the researchers attribute this to the fact that the player when performing a physical effort is not anaerobic (after sufficient oxygen).

As for the other variables that did not appear significant in the differences between these activities for the post-effort test, they did not appear statistically. These imperceptible differences represent differences between these activities, and they come from the physical effort exerted for the studied research sample according to the test used to show the differences in them.

Therefore, when the researchers uses the law of least significant difference in the table (6) The results showed a discrepancy between these activities in these variables with significant differences in terms of increase and decrease according to the effect of these variables, In the first variable (sugar level), the results had a positive effect, that is, the higher the level of sugar in the blood indicates the ability to continue physical activity without the occurrence of fatigue, that is, the level of adaptation to the game had a positive effect for that, and therefore we find that the wrestling game is the most positive effect of the activities, as The physical activity as a result of the escalating physical effort test till fatigue is represented in the muscular contractions that need energy to continue, as glucose and fat are the main source of energy and the importance of glucose appears in short activities and fat in severe and continuous physical loads, where insulin plays a vital role in regulating the transfer of glucose from The blood flow into the tissues of the working skeletal muscles, and a rise in the level of sugar is observed after the performance of the physical effort and is due to the increase in its transmission with the blood to the working muscles.(Batayneh,2002, pp. 35-36).

As for the variable (lactic acid), its results were also positive in terms of effect, that is, the higher the lactic acid, the more evidence of the increased tolerance of fatigue among the athletes for this game compared to the rest of the sports. High lactic acid in the blood because the energy system used is commensurate with the type of training, which led to adaptations that make the wrestler continue to perform with high lactic acid in the blood.2007) the use of anoxic exercises that are characterized by less than maximum intensity causes a deficiency in the oxygen needed to produce energy, and energy is produced with insufficient oxygen, and then an accumulation of lactic acid occurs to a greater degree than the rate of its disposal and as a result the blood becomes acidic, and this condition occurs when exceeding The lactic threshold is (4 mmol), and thus the blood pH decreases, which can become dangerous when the vital organizations are unable to equalize the blood and the internal systems and organs are unable to get rid of lactic acid (Al-Kaabi, 2007, p. 207).

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In the (potassium) variable, where its results showed a positive effect in terms of its work function, that is, the greater the percentage of potassium decrease, the more positive the effect on the athletes' body, meaning they have a high endurance. Part of the fluids from the plasma, which leads to a withdrawal from the fluids inside the cell to the fluid outside the cell, to obtain a state of stability in the process of regulating the osmotic pressure on the cell wall, and that the neuromuscular adaptation led to the continuation of muscular work during the physical effort with less breakdown of muscle fibers as a result of performance athlete (Edington, 1987, p. 201), and due to this breakdown, the percentage of (K +) exit from the muscles increases, while a lot of (Na +) goes into the muscle cell with waste from the secretion of the renal channels associated with potassium, making its ratio normal in the blood serum, that is, balanced (Marruy, 1997, p. 688), as he confirms Brouns Sweat secretion reaches its maximum levels at high energy expenditure (Brons, 1991, p. 147).

While carrying out the physical duty of the test, the player must perform the test with the highest degree of performance and as quickly as possible from his maximum capacity, due to the muscle cell's need for the basic elements that contribute to obtaining the maximum contraction of the muscle continuously throughout the basic stages of the test without fatigue with the decrease in the amount of fluid lost as a result of the effort physical.

As for the variable (the lactic threshold), which has a direct positive effect, that is, the higher the threshold is for the athletes, it is a vital indicator of their efficiency in sports activity, which is considered one of the main variables that the longer the delay in its appearance, the player is in the best efficiency to exhaust the effort, as the (wrestling) game was Mostly the first and then the effectiveness of running (800 m) and finally the effectiveness of (swimming), as the continuation of the effort is accompanied by an increase in the anaerobic lactic work and thus an increase in the concentration of lactic acid, but this increase is late in appearance, i. -35), and (Ira Wolinsky & Judy) indicate that the lactic anaerobic threshold is a clear indicator of the value of anaerobic lactic endurance and is of great importance in evaluating the athlete's condition (Driskell, 2008, p. 347).

Except for the variable (sugar level), where the (wrestling) game was the first, then the (swimming) activity, and finally the 800 m running activity and the researchers attribute this to the fact that the wrestling game and the nature of muscular work in it requires very large energy so that the wrestler can maintain the continuity of work in the struggle with the competitor, and this requires him to agree between the energy expended and the energy stored in the muscles and how to balance them, as for the effectiveness of 800m running In this activity, the player must divide the effort during the distance covered by tension and relaxation, and balance by muscular and nervous work between the external and internal resistances of the body to cover the distance in the best possible time. For the 200m freestyle swimming event, the swimmer must balance the energy expended to overcome the resistance of the obstacle, which is water, as well as drain the energy to travel the distance in the best time and balance the internal energy with the external resistances of the water medium.

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Mental arrangement in cognitive processes, processing information accurately, and performing the skill of shooting from both sides in basketball

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Abstract

Basketball is considered an open-surface game that requires the player to deal with the variables of the match according to the movement or stability of the opponent and in the form of motor responses and accuracy and the arrival of the balls to the different playing areas in which the teammate is present to obtain an appropriate opportunity for the process of possession and control of the course of the game that qualifies the team to win the game. Or achieve the required points in the matches. The response is the motor ability that a basketball player needs. It takes a short time to execute, provided that this execution is distinguished by the element of accuracy, which comes from the mental arrangement of cognitive processes through which information related to the details of the technical performance of skills, especially the skill of lateral shooting in basketball, is prepared. The research aims to identify the role of mental arrangement in cognitive processes and prepare information for the accuracy of performing the skill of shooting from both sides of the basket among young players. It is assumed that there is a statistically significant correlation between mental arrangement in cognitive processes and preparing information for the accuracy of performing shooting from both sides of the basket for the youth group, and it was the research sample was 30 young players from the Al-Zafaraniya Youth and Sports Center, Diyala Bridge, and the municipalities in Baghdad - Al-Rusafa. The descriptive approach was adopted using the method of correlational relations, and the researcher used

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statistical methods, percentages, correlation coefficient (Pearson), arithmetic mean, and standard deviation to reach the results, and the results were presented. Analyzing and discussing the results, and arriving at the most important conclusions, there is a significant correlation between the mental arrangement in the cognitive processes and processing of information and the accuracy of shooting from both sides of the basket for the youth group. It is recommended to emphasize the mental arrangement in the cognitive processes and processing of information, provided that it is coupled with the accuracy of shooting side tackles with the ball. Basketball for young players.

Keywords: mental arrangement, cognitive processes, accuracy, basketball handling, Basketball

Introduction

Paying attention to the details of executing basketball skills, reaching the strengths, establishing them, and areas of weakness, and treating them in a scientific, thoughtful, and non-random manner, (Abd & Shabba, 2021) paying attention to the details of the game, delving into its technical aspects, and taking into account the results we arrive at, is the ideal way to move towards the path of winning titles and taking the position that befits that game, so the accelerating events The many variables that a basketball player is exposed to during the match require him to deal with them in rhythms that suit those situations and events according to a mental and cognitive arrangement and the preparation of information in an elaborate manner, especially if the implementation is related to the skill of handling from both sides of the basket, (Abdel-Nabi, M., Taqi, B. M., & Hammood, 2020) and (Ahmed Amer Abdul Hussein, 2020) which is considered one of the important and decisive skills in most cases because it is skills that can Through which the player decides the result of the match points in his favor by performing tackles from or in a vehicle or in the form of groups for a quantity that suits the state of play of both sides, (Ahmed et al., 2023)which requires from the implementer a mental and cognitive arrangement and an organized preparation of information to reach the opponent's basket in an accurate and non-random manner, through the ability of mental recall of the skill and its cognitive arrangement. Preparing the skill performance joints for them enables the kicker to advance the level through the mental arrangement of the performance details, which is considered one of the motor abilities that distinguish the player on the field in making his decision to execute the throws accurately and influencing the outcome of the half or match. (Ali Al-Attar & Jari, 2023) The goal of the research is to know the relationship between the role of mental arrangement in cognitive processes and information processing and its relationship to the accuracy of the performance of handling from both sides for young people in basketball. It was hypothesized that there is a statistically significant correlation between the role of mental arrangement in cognitive processes and the processing of information and its relationship to the accuracy of the performance of handling from both sides for youth. Basketball. (Ali, H., & Khalid, 2018)

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Methods

The descriptive approach was adopted using the correlational method because it suits the nature of the research problem. The population and sample of the research were from the youth and sports centers in Baghdad/Al-Rusafa, consisting of youth basketball players aged 17-18 years, who numbered (30) players, (Al-Shammari & Al Sodani, 2022) they were from the Zafaraniya Youth and Sports Center, Jisr Diyala, and Al-Baladiyat, and their number was (45) players, representing 100% of the total community. (30) Players were chosen as a sample for the research by lottery, (Chermit K.D., Zabolotny A.G., Tikhonova I.V., 2022) and the percentage of the sample was (66.66%).

Some devices, research tools, and means of collecting information were used to perform the research tests. The methods used in the research were personal interviews with the sample with the help of a work team consisting of 5 specialized individuals. Two international referees also participated in the work. One Dell electronic calculator was used to collect data. One Sony Digital camera for photographing the tests, along with some tools used to help in performing the tests, (Dhahi et al., 2022) and (Dr. Zina Abdul-salam, 2020)including 30 funnels, 10 signs, 20 legal basketballs, 4 stopwatches, and recording records.

The steps to carry out the research were based on selected tests suitable for the study, which are: testing shooting at the basket from both sides. (Easa et al., 2022) and (Fahem & Wahid Easa, 2021) The purpose of the test: measuring the accuracy of shooting at the basket. Testing tools: a basketball, (Hadi, A., 2019) a legal basketball court, a whistle. Performance specifications: drawing two lines on one side of the ball. The sides of the court next to the corner area on each side are 20 feet from the basket, and the previous distance is calculated from the middle. (Zeb et al., 2020) The test taker stands on the line assigned to him and makes ten throws towards the basket. Then he moves to the other side of the court and makes ten throws at the same distance. The taker is allowed to use one hand or both hands, and each is granted only one shot. (Hadi & Kadhum, 2021) Two points are calculated for each ball that enters the basket, and one score is calculated for each ball that touches the ring but does not enter the basket. (Kzar & Kadhim, 2020)

Statistical methods: Appropriate statistical methods were used to process the results in the research, which are the arithmetic mean, (Mohsen, Y. F., Makttof, A. M., Sami, M. M., Hikmat, T. Z., Hammood, A. H., Abed, N., & Abdulhussein, 2024) standard deviation, percentages, and Pearson correlation coefficient.

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Results

Results of the arithmetic mean and standard deviations for the mental arrangement of cognitive processes and information processing in handling performance from both sides of the research sample.

Table 1: Arithmetic means and standard deviations for mental organization and handling skills among the research sample

Variables	Arithmetic mean	Standard deviation
Mental arrangement	9.4000	0.5264
Handling from the right side	8.4000	0.6649
Handling from the left side	8.8000	0.7178

Results of arithmetic means and standard deviations for the accuracy of performance of left-side handling and right-side handling skills for the research sample.

Table 2: Arithmetic means and standard deviations of accuracy of performance of handling skills among the research sample

Variables	Arithmetic mean	Standard deviation
Accuracy of handling	7.6000	0.5164
Handling from the right side	7,1000	0.567
Handling from the left side	7.4000	0.699

The extent of the correlation between mental arrangement and the accuracy of performing lateral handling for the research sample

Table 3 shows the correlation, the calculated (t) value, and the tabulated (t) value for the variables in the research sample.

Variables	Calculated value	Tabular value
Side handling	0,420	0,361
Handling from the right side	0,390	
Handling from the left side	0,400	

Below the level of significance (0.05) and the degree of freedom (28)

Discussion

It is clear to us from Table (2) that there is a correlation between the element of accuracy and mental arrangement and its role in cognitive processes and information processing in

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the performance of ambidextrous skills for the left and right handlers of the experimental research sample through the results of the calculated value compared to the tabulated value, which the results of the data in the research attribute to that category Young people have good experience in choosing the appropriate distances and speed of movement, which is compatible with the appropriate choice of performance time, and the nature of the activity of the basketball game, which requires precision in the technical performance of the skills of handling and shooting towards the basket and from both the left and right directions according to the appropriate responses and according to the requirements of the playing situation, the basketball player during Playing requires an element of speed and movement in accordance with the opponent's movement and awareness, which requires him to move in transition when executing various skills or shots quickly and accurately, especially if he has good physical and skill preparation, which helps him to deliver tackles accurately while monitoring the opponent's behavior and how he will react to the variables of the game. For the basketball player to obtain the points that qualify him to win the result of the match, it requires an appropriate and short-term response, which is the decisive factor for the basketball player's behavior in an appropriate manner, especially when shooting shots at the basket in an orderly manner from the mind and knowing how to choose the information that the brain conjures up in an organized manner without rush and confusion to ensure that he does not fall. With legal mistakes in play and the loss of the opportunity to score scoring points, the researcher believes that the basketball player's ability to diversify and connect, use proper timing, and good judgment to form and diversify tackles in a way that is appropriate to the close distances from the competitors and the basketball board, the capabilities, movement or stability of the opponent, and the variables of play, while providing the necessary defenses and with coordinated and studied movements by the requirements. The situation in which the basketball player is among his teammates and competitors and the basic types of shots are shot in an effective and non-random manner to obtain points in the game and control the course of the matches in his favor through the process of linking and diversifying skill shots according to the requirements of the playing situation and its variables that the basketball player faces during execution, which Through it, he can deal with these variables and find appropriate solutions through a coordinated formation of the various maneuvers to obtain the points required to win or deter the risk of wasting opportunities to score points. This comes through mentally arranging the priorities of skill performance and his ability to organize cognitive processes, save information, and prepare it for implementation when it is needed during the match. To reach the achievement and the set goal in a way that helps the player not to waste effort, which regulates the work of the muscles according to coordinated nervous instructions that shift from the storage stage to the implementation stage. Accordingly, this research concluded that the stages of storing information in the mind for technical basketball skills must be in an orderly and consistent manner, especially in the learning stage. Motor skills to perform these skills, and when referring to them and translating them in the field, they are arranged in an organized

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manner while preparing the information required to be implemented in the field for motor performance, especially during competitions.

Conclusions

In this research, it was concluded that there is a significant correlation between the accuracy of the tackles and the motor response to the performance through the role of mental arrangement in the cognitive processes and processing of information for young people in basketball. Also, there is a significant correlation between the accuracy of the handling performance from the left side towards the basket and the mental arrangement of the cognitive processes and processing of information. For youth in basketball, it also appeared that there is a significant correlation between the accuracy of handling from the left and the mental arrangement in cognitive processes and processing of information for youth in basketball.

Recommendations

It was found in this research that it is necessary to emphasize the element of motor accuracy, which has an effective impact in achieving game points in basketball and developing them by coaches when developing their training or educational curricula, also with the necessity of emphasizing the motor response according to the mental arrangement and developing it provided that it is coupled with accuracy. Shooting tackles towards the basket or a teammate, as well as the basic skills in the game of basketball. It is also necessary to rely on innovative devices and tools according to special exercises to develop the elements of accuracy and in a sequential mental arrangement to reach the motor response in the game of basketball. Conducting studies similar to the current study on different categories and games to reach scientific results that serve those games.

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Physical Activity, Sleep and Health-related quality of life (HRQOL) for college students in Iraq

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Abstract

This study demonstrates the relationship between physical activity, sleep, and health-related quality of life among college students, reporting gender differences in levels of physical activity and sleep.The sample comprised four hundred twenty male and female students from the University of Baghdad's College of Physical Education and Sports Sciences. Three questionnaires were finished to gauge the quality of life concerning health, sleep, and physical activity. Stepwise regression, independent t-tests, and descriptive statistics were used to examine the data.The overall sample's health-related quality of life was strongly predicted by sleep characteristics and vigorous physical activity, according to the results ($F = 0.017$, $p = 0.000$). There was no significant correlation found between any level of physical activity and health-related quality of life for females. Still, vigorous and moderate physical activity variables significantly predicted health-related quality of life in males when examined by gender ($t = 6.837$, $df = 309.115$, $p < .05$).Vigorous physical activity and good sleep are beneficial for helping college students improve health-related quality of life, but this benefit may vary by gender.

Keywords: College students; health-related quality of life; physical activity; sleep; Iraq

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Introduction

For many students, college is their first opportunity to establish individual behaviors and become more active. Daily behaviors such as sleep, rest, and exercise affect health, in college, sudden changes occur from interventions on the daily system due to the nature of the university student's daily routine in the physical education and sports sciences faculty, it can be adapted easily or with difficulty depending on the nature of the student's behavior and lifestyle inside and outside the university this type of behavior during the four years of university affects a health student's future.

Modifiable factors such as insufficient sleep quality and low activity levels affect energy balance (Quick et al., 2014). Physical activity and sleep duration are important factors for health and well-being. Adults who get little sleep or little physical exercise run the risk of developing high blood pressure, and physical activity has an impact on the quality of sleep. (Watson, N. F., Badr, M. S., Belenky, G., Bliwise, D. L., Buxton, O. M., ... & Tasali, 2020). Daytime physical activity improves sleep health, while nighttime physical activity has the opposite effect, and short sleep duration is linked to cognitive impairment. The role that activity plays Physical health plays an important role in sleep health and mental well-being, so it should be taken into account that this relationship is negatively affected whenever an individual has fewer hours of sleep on an ongoing basis.

Many things influence HRQOL. Numerous research on the impact of short sleep duration and physical activity (PA) on HRQOL (Ge et al., 2019), showed that college students spent a significant amount of time sitting down and mostly engaged in sedentary behaviors. According to a global survey conducted across 23 nations, between 21.9 and 80.6% of university students do not engage in physical activity (Yang et al., 2012). Furthermore, a further study discovered that Chinese college students frequently had short sleep durations. College students' short sleep duration and low levels of physical activity may affect their health.

Several studies have assessed students' health-related quality of life. The associated effects of physical activity quality and sleep duration on HRQOL are not well-defined. However, the way they affect college students interacting with each other is not clear. Thus, it is these modifiable factors, such as insufficient sleep quality and low physical activity efficiency that affect net energy balance leading to poor health-related quality of life.

There are almost a million university students in Iraq overall, and 21 percent of the population is in the young demographic. (Al-jumaili, 2021). As a result, research on health factors and their causes is essential for this significant population that reflects the early adult period of life. Since college is a time of transition for young people in terms of their lives and behavior, there are a few studies that look at the connection between a healthy lifestyle and sleep quality among Iraqi university students. Their daily routines during this

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time have a big influence on their lives and health choices. Consequently, a person's time in college may be their only chance to completely change their health-related behaviors.

Sleep duration is an aspect of an individual's daily behavior, and lack of sleep may affect energy balance. Feeling tired may negatively affect levels of physical activity and energy expenditure. Also, being awake for longer hours a day provides more time to eat and increases energy consumption. Few studies have identified the factors that predict the duration of sleep for an individual. In contrast, there are many studies linking the relationship between the duration of sleep and the surrounding circumstances that the individual is experiencing, such as illness, age, and psychological and functional status (Quick et al., 2014). In a study of Saudi adults, the prevalence of short sleep among adults was found to be one out of every three people, while long sleep duration is associated with the period of accompanying medical conditions in individuals (Ahmed et al., 2017).

In a study in China on physical activity and sleep, their effect was linked to depression among university students, taking into account physical differences between the sexes. The results did not show any specific relationship between activity and depression for women, but there was a clear benefit from the relationship between good sleep and vigorous physical activity in the life of the student. Daily differences in percentages may differ slightly according to gender (Cahuas et al., 2020). Which indicates that the connection between sleep and activity and their good condition improves the quality of the student's daily life, whether physically or psychologically.

"Adults should sleep 7 hours or more per night regularly to promote optimal health" (Watson et al. 2020). This is the recommendation known to many and the most accurate and widespread in the scientific and medical community, as it has been shown that sleep duration of less than 7 hours may be associated with poor health outcomes with regard to weight, diseases, and condition. Psychological, functional status, weak immunity, and risk of death. What was mentioned is a negative impact on the quality of life related to health, and the opposite is true, as sleep is associated with greater risks, as the number of hours of sleep increased to 9. In the Healthy People 2020 initiative to improve the nation's health, recommendations related to sleep for adults and relationships were shown. While improving overall health.

In reference to the relationship between sleep and health, the relationship may be inverse with lack of sleep, especially in the case of weight gain. In a study of normal-weight adults, energy balance was assessed during the duration of little sleep and the duration of usual sleep. It was found that the duration of little sleep increases energy consumption and the percentage of Fats (St-Onge et al., 2011). In this case, the increased energy expenditure may be compensated for through increased eating, which exposes them to obesity and its associated diseases.

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Another association of health problems with physical activity and sleep was negative. In a systematic study on the management of chronic obstructive pulmonary disease (COPD), good physical activity and good quality sleep were associated with reducing the effects of COPD, as well as with the general health and well-being of adults (Lewthwaite et al., 2017). Many studies have shown that quality of life Health-related health in good condition may be greatly influenced by healthy sleep and vigorous physical activity.

This research aimed to investigate the correlation between physical activity levels, sleep duration, and health-related quality of life in university students. Additionally, any gender variations in physical activity patterns and sleep duration were assessed. Because of the paucity of health data for university students. These results are significant because they provide yet another tool for promoting college students' health.

Methods

Participants and setting

Volunteers were identified from professors of the College of Physical Education and Sports Sciences in order to follow up and explain the purpose of participating in the research, the method of responding to the questionnaires, and ensuring the confidentiality of information for the students participating in this study. After that, the questionnaire form was distributed to their students at the beginning of the second semester of the academic year 2023-2024. The sample represents first-year students in the College of Physical Education and Sports Sciences/University of Baghdad, with a number of 450 male and female students. The final data in this study were analyzed for only 380 participants after excluding students who did not complete their answers as required. The percentage of males was higher than that of females, with the percentage of males reaching 000% compared to females. 97.6% of participants were between 17 and 22 years old, with a mean age of 19 years (SD=1.42 years).

Data collection

The three questionnaires were filled out by participants in the second semester of the 2023–2024 school year. The three questionnaires evaluated sleep patterns, levels of physical activity, and health-related quality of life. In the questionnaire on health-related quality of life (Eeftens et al., 2023), The questionnaire was used to assess each participant's degree of health as well as how they felt about their capacity to carry out daily tasks. Twelve self-administered questions are included in the survey to evaluate health-related quality of life. An example of a question is "Would you say your general health is good?" Excellent, Very Good, Good, Fair, or poor are the available response options, with values of 1, 2, 3, 4, or 5. The values are totaled to provide a possible survey score between 0 and 100. The number of days that are healthy and unhealthy is calculated appropriately based on the results.

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An inactive time log was kept track of every day, along with walking and moderate and strenuous physical exercise. The seven self-reported questions in the IPAQ exam ask the participant to recollect their physical activity during the previous week (Kurth & Klenosky, 2021). The results are used to estimate total physical activity measured by MET-minutes/week and time spent sitting. The Pittsburgh Sleep Quality Index (PSQI) (Buysse et al., 1989), was employed to assess the patterns and quality of sleep. The seven subscales of this questionnaire—"subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medications, and daytime dysfunction"—evaluate the quality of sleep during the previous month. Scores for the answer options vary from 0 to 3, with good to poor options. Poor sleep quality is indicated by a score of five or more out of a possible total.

Results

Descriptive statistics Table:

The averages and standard deviations of the sample's overall survey scores are shown in Table 1, together with the scores for men and women. Twenty percent of individuals consistently engaged in minimal physical activity, fifty-two percent in moderate physical activity, and twenty-eight percent in intense physical activity, and the data shows the participants' gender distribution as follows: 22% of females participated in regular vigorous physical activity, 30% in high physical activity, and 48% in walking physical activity. Of the male participants, 33% engaged in vigorous physical activity, 46% in moderate physical activity, and 21% in minimal physical activity. As depicted in Figure 1.

The students generally had good sleep, as indicated by their average total score of 2.7476; a score of five or higher indicated poor quality of sleep. Poor sleep quality was reported by about 22% of participants overall (18% of men and 25% of women). The students' average overall health-related quality of life score was 32.4548, meaning that 34% of the male students and 40% of the female students exhibited healthy life behaviors.

Table 1 Means and standard deviations for participants' survey subscale score.

Variable	**Mean**	**Standard deviation**
Total PA	102.0619	9.43643
Males	102.2150	9.89005
Females	101.9100	8.49967
Total sleep	102.0619	9.43643
Males	34.0779	9.59411
Females	27.1919	5.17978
Total (HRQOL)	32.4548	9.22694
Male	102.2150	9.89005

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Female	101.5657	5.17978

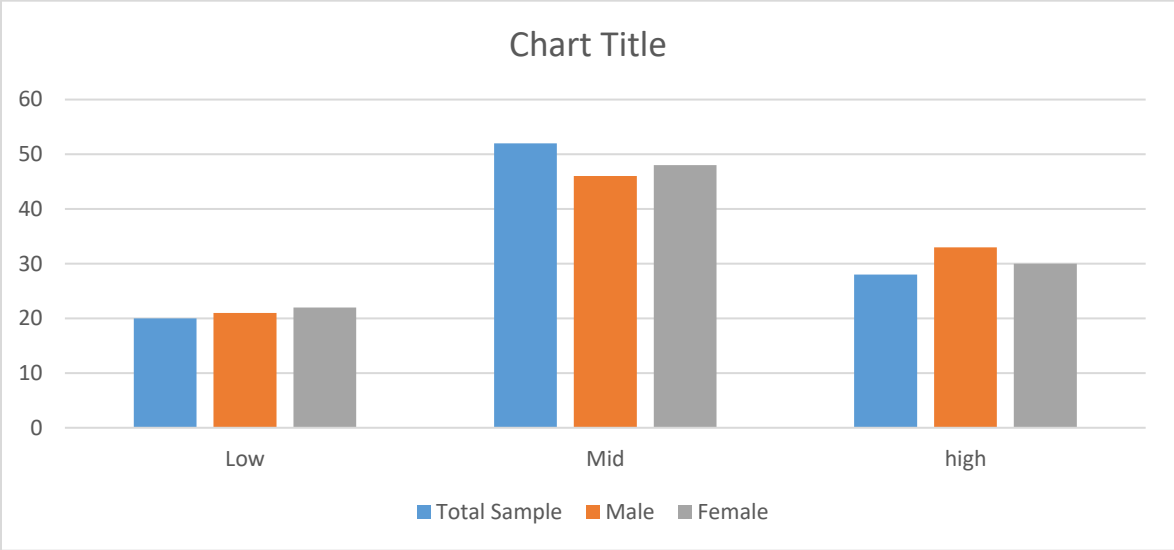

Figure 1 Percentages of self-reported physical activity habits among males, females, and total sample.

Association of physical activity and sleep with health-related quality of life:

With physical activity subscales acting as independent variables and general health-related quality of life as the dependent variable, Table 2 presents the findings of the stepwise regression analysis. The stepwise regression model's results, as presented in Table 2, demonstrated a substantial correlation ($p = 0.000$) between physical activity variables and health-related quality of life. Moreover, 42.1% of the variance in health-related quality of life was explained by variables related to physical activity. Exercise was linked to an improvement in health-related quality of life, according to the data, which showed that physical activity strongly predicted health-related quality of life ($b = -0.200$, $p = 0.000$). For females, there was no significant correlation found between the level of physical activity and overall depression.

Table 3 presents the findings of a stepwise regression study that employed sleep subscales to forecast the sample's overall health-related quality of life. As demonstrated in Table 3, the multiple regression model's findings showed that sleep-related quality of life for the sample had a significant relationship with sleep variables ($F = 0.017$, $p = 0.000$); for males, the sleep subscales with individual relationships with quality of life that were significant included General health-related ($b = 0.002$, $p = 0.000$). In addition, sleep-related factors explained 33.5% of the variation in females' health-related quality of life. The total health-

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related quality of life for females was strongly predicted by subjective sleep quality, according to the results of regression coefficients (b = 0.083, p =.000).

Table 2 Results of a stepwise regression model using physical activity subscales to predict overall health-related quality of life (HRQOL) for total sample.

Variable	R	R2	F	df	Sig.	B	t	Sig.
Total PA	.073	.005	2.261	1	.133	.200	1.504	.133
Total (HRQOL)				419		25.487	5.474	.000
PA Males	.194	.038	12.436	1	.000	.552	3.683	.000
(HRQOL) Males				320		14.764	2.683	.008
PA Females	.729	.532	110.077	1	.000	1.095	10.492	.000
(HRQOL) Females				98		64.981	17.953	

Table 3 Results of step-wise regression model using Sub-scales of Sleep to predict total Health-related quality of life (HRQOL) for total sample.

Variable	R	R2	F	df	Sig.	B	t	Sig.
Total Sleep	.006	.000	.017	1	.898	.006	.129	.898
Total (HRQOL)				419		33.083	6.749	.000
Sleep Males	.002	.000	.002	1	.000	.002	.043	.966
(HRQOL) Males				320		34.314	6.152	.000
Sleep Females	.125	.016	1.541	1	.218	.083	1.241	.000
(HRQOL) Females				98		35.614	5.233	.218

Gender differences:

The findings of independent t-tests comparing the mean scores of males and females on physical activity and sleep factors are shown in Table 5. Table 5 indicates that when it comes to subjective sleep quality (t = 0.598, df = 203.638, p <.05) and overall health-related quality of life (t = 6.837, df = 309.115, p <.05), men scored considerably worse than women. On the other hand, in terms of overall physical activity, men scored noticeably higher than women (t = 1.164, df = 309.115, p <.05).

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Table 4 Results of independent t test comparing mean scores of males and females

Variable	t	df	Sig
Total PA	1.164	159.744	.859
Total sleep	.598	203.638	.004
Total (HRQOL)	6.837	309.115	.000

Discussion

The purpose of this study was to look into how students at the College of Physical Education and Sports Sciences responded to physical activity, sleep, and health-related quality of life. According to this study, increased health-related quality of life in students was significantly predicted by vigorous physical activity as well as all sleep subscales (subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medications, and daytime dysfunction). However, different factors affected the quality of life connected to health for men and women differently. It might be more significant and helpful to look at these gender disparities to understand the particular interventions and investigate their effectiveness on health status. Vigorous and moderate physical activity were substantially linked to better health in males. Comparable findings have been found in other studies about the connection between men's health-related quality of life and physical activity.

In a recent study of 1279 students at an Italian university to investigate the prevalence of poor sleep quality and insomnia and reveal the association with health-related quality of life, it was found that a group of 65% of them suffered from poor sleep quality, and 55% suffered from symptoms of insomnia. The students who suffer from health-related quality of life Sleep and insomnia have the highest level of stress and the lowest level of quality of life-related to health, both physically and mentally (Carpi et al., 2022). In this study, improving subjective sleep quality and sleep duration is significantly associated with an increase in health-related quality of life.

According to these results, male college students may find it beneficial to commit to engaging in regular, intense or moderate physical activity as well as to develop strategies for enhancing the quality of their subjective sleep, falling asleep more quickly, and maintaining their health, particularly given the college's daily schedule and the inclusion of sporting events in the curriculum. Which can give them confidence to keep up their strong work over the day. However, this research also revealed no statistically significant link between increased physical activity levels and better health-related quality of life in

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women. This finding is in opposition to several research that demonstrate that regular physical activity can enhance health-related quality of life, notwithstanding the rarity of studies that specifically focus on females. (Lavados-Romo et al., 2023).

In this study, women's health-related quality of life was found to be positively correlated with enhanced sleep quality, sleep latency, and sleep disruptions. These findings show that it is advantageous for female students to investigate specific techniques to enhance sleep quality, fall asleep fast, and feel rested during the day with a busy school day or even on routine days in order to improve health-related quality of life. Few research have looked at gender differences in the association between sleep and health-related quality of life, but prior research has shown that those with unhealthy lifestyle choices are much more likely to experience sleep disturbances. While getting enough sleep and exercising can enhance one's quality of life in terms of health (Lee et al., 2021). The existence of gender-based variations in physical activity characteristics was investigated in this study. According to the findings, women engage in far less physical activity than men do on average. This could imply that women's quality of life at college is worse when it comes to their health.

This is in line with other studies that show women sleep for longer periods of time than males do (Peltzer & Pengpid, 2016). This is in line with other studies that shows women to have greater rates of hours spent sleeping than men do, as well as significantly poorer rates of sleep quality in women than in men. Women also scored higher on the measures measuring sleep disorders and quality of sleep. This is in line with research findings that indicate teenage girls are most likely to experience poor sleep quality. (Fatima et al., 2016). When compared to the overall levels of physical activity for females, the percentage of guys participating in this sort of physical activity was higher. Prior research has revealed that male college students engage in more intense physical activity than female counterparts. Additionally, male college students are more driven to exercise due to their focus on professionalism, challenge, and seriousness of performance, whereas female students are more concerned with weight management, appearance, and health benefits. (Pauline, 2013).

These disparities in motivations and gender disparities in physical activity participation suggest that social, cultural, and physical inequalities may be influenced in some way. According to the Leisure-Time Physical Exercise (LTPA) survey, men engage in leisure-time physical exercise at a higher rate than women. (Beville et al., 2014), Research on the relationship between gender and health, physical activity, and sleep quality is needed since there is evidence of disparities between the sexes in these areas. These differences may have biological or cultural roots. Although this study indicated that students' health-related quality of life is positively associated with both sleep and physical activity, more research is needed to account for gender differences in this relationship, as well as the possibility that positive health outcomes promote physical activity. Adding some activities to their daily routine (Koh & Salamuddin, 2014), and also knowing the

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importance of the need for self-monitoring of health and increasing the number of activities and walking on a daily basis by students.

There were several restrictions on this study, and the self-administered questionnaires used to collect the data may have introduced bias or imprecision. The socioeconomic situation of the students' families, which can occasionally have an impact on their health, was not a question that was asked of them. Furthermore, since only one college at the University of Baghdad was used for participant selection, the findings cannot be applied to all Iraqi university students. To get more general findings on the connection between sleep, health, and physical activity among college students, this study may pave the way for future research that choose a large sample of individuals from other universities or ages.

Conclusions

A healthy lifestyle may be enhanced for college students by frequent exercise and restful sleep. But gender may also be a predictor of physical activity and sleep quality, so students might only experience restful sleep if they adopt healthy lifestyle choices that enhance their quality of life in terms of health. Studying sustainable health involves assessing how variables are impacted by the quality of sex as well as the physiological pathways via which exercise and sleep promote better health. Campuses can use this study and similar ones to help students' overall health by encouraging physical activity and sharing recommendations for healthy sleeping habits that take gender differences into consideration.

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The use of an innovative device to improve the efficiency of the posterior quadriceps muscle of the man after the anterior cruciate ligament injury of advanced soccer players

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Abstract

Objective of the research This study aimed to manufacture an innovative device that enables the player to walk after the operation and improves functional efficiency through improvement in the range of motion as well as improvement in the size of the muscles working on the knee joint Imposing research There are statistically significant differences between the pre and posttests of the experimental and control groups, there are Statistically significant differences between the post-tests between the experimental group and the control group in favor of the experimental group of the research sample. The researchers used the experimental approach by designing the control and experimental groups with a test (pre-post) for the suitability of the approach to the research problem. The study population consisted of players with severed anterior cruciate ligaments for advanced soccer players, and the number of the research sample was (5) injured for the control sample and (5) for the experimental sample. The researchers concluded that the use of the innovative device showed good results in accelerating the rehabilitation process, and the development of body parts was In line with the progress of bending and stretching in the innovative device. There is no delay for one part of the body at the expense of another part, the most important recommendations. The necessity of using partial movement braces in the rehabilitation of the anterior cruciate ligament injury of the knee in advanced soccer players, the use of the number of walking steps and the pressure applied to the ground as a criterion for the progress of rehabilitation and recovery, the researcher recommends using the device early after the operation.

Keywords: cruciate ligament, cruciate ligament tear, range of motion of the knee joint, athletic rehabilitation, thigh muscle circumference, static balance, thigh muscle strength.

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Introduction

Football players frequently sustain injuries from collisions with rival players or from overusing their organs. One of the most prevalent ailments among football players worldwide is knee strains.)Agility and Others, 2018

The world has witnessed a scientific theory age in recent decades (Steinberg et al., 2000), and society has been obliged to keep up with the progress of these theories. Sport medicine is a discipline that is vital to all domains and sports (Easa et al., 2022). It is a science that must be applied to the treatment of personal injuries, particularly those sustained by athletes. It is important to understand that each person's recovery process differs in terms of performance (Jawad, M., & Jabbar Shinen, 2016) according to Mahmood et al. (2023), due to the inaccuracy with which therapeutic equipment and exercises are used, the degree of the injury, the mechanical data, the time the injury occurred, and the sports therapist's expertise and intelligence. Consequently, the implementation of pre- and post-sport therapy, particularly gymnast knee surgery performed in a precise scientific manner, results in the quick return of athletes to their pre-injury state (Mondher et al., 2023), and the knee rehabilitation process following front-end crusade surgery for football players for candidates requiring individuals with substantial experience in this field (Jawad Kadhim M, 2018) presumably allows them to carry out their duties as intended (Kadhim, 2012). As one of the most common injuries (Moayed, A., Moayed, G., & Javad, 2019), the researchers chose advanced football players for whom frontal cross-coast surgery was performed with the goal of designing an innovative device that they named the motor support device to speed up the return of athletes to the stadiums as quickly as possible (Kzar & Kadhim, 2020). This helps to advance mathematical reality by developing and rehabilitating athletes and fully recovering from the infection. Among the players for whom the forward cross-coast operation was carried out in Baghdad is the research community.

Method and tools:

To tailor the approach to the research challenge, the researchers created test-tested command-and-experience groups using the pilot approach. The research community determined which ten advanced football players at the Abu Ghraib General Hospital (Physiotherapy Center) and the Yarmouk Educational Hospital (Physiotherapy Section) had front-coast surgery performed for them between April 15, 2022, and May 1, 2023.

The researchers used the injury grounds established by the qualified physician for the rehabilitation of individuals with disabilities in order to attain complete harmony. They shared the same type of person who had participated in the frontal crusade. The novel device was utilized for the experimental group while staying within the pain threshold during the two-week tribal testing following the Crusade operation. Every afflicted person had sustained their injury no more than two weeks ago. Individuals for whom the physician suggests receiving rehabilitation therapy.

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Both the researchers' instruments and gadgets, such as camera time, were utilized in addition to research instruments (Arab sources and references, observation and analysis, testing and metering, Internet).

Innovator procedure:

The College of Physical Education and Sports Sciences at Bagdad University provided the researchers with a significant facilitation book that was addressed to the Ministry of Health and Abbey Ghraib General Hospital in 265 and dated 13/4/2022. On March 5, 2023, the Ministry of Health granted approval for it as the recipient of the research by virtue of its book No. 3217. Two days a week, on Saturday and Tuesday, the patients in the physiotherapy department were monitored by the researchers. With Mr. Sheriff's assistance, the researchers created and manufactured the mobile support device as there was no prior gadget that satisfied the search criteria.

The device that the player wears following frontal crusade surgery is designed to improve the knee's kinetic range and functional efficiency. It also speeds up the healing process from injuries by enabling the player to resume normal activities such as walking and exercise immediately following the procedure. The device is made up of multiple parts: an accelerator that holds the injured man from the femoral to the foot area for a length of 70 cm; an accelerator in the femoral and leg area that fixes the accelerator on the injured man; a computer (digtal) with a battery size of 7–3 cm; a lock that transfers the body weight from the femoral to the leg and foot beyond the crusade location; an external borbonnet battery that connects the pinnacle to the pinnacle; a memory that counts the steps taken each week; a dick that uses a lock to connect the top to the pulver; links to the knee and a 40 cm foot of the pole; A pole, as well as an external borebite connected to the monitor. per the explanation in an attachment (1). After presenting the device's concept to an electronics specialist, the researchers created specialized software that can read the data stored in the memory, link it to a computer, and extract the results using Excel, which precisely captures each patient's data. Of the information provided (step count, wounded man's body weight). A mechanical engineer was employed by the team to fabricate the device using the kinetic range control method. the shift of weight from the afflicted person's femur to their leg and foot, staying above their knee and within the bounds of their pain. The number of steps connected to the device served as a basis for the researchers. Weekly evaluations were conducted, and individuals with injuries who experienced a decrease in the number of steps they took received feedback and served as models for appropriate device use.

That evaluation happened within the first three days to give the impression that the researchers were continuously monitoring his work. The injured man's development and recovery are not served by any employment retrogression. Each and every member of the sample has promised to do so. In terms of wear and tear, the number of steps has steadily increased. One thousand steps were taken within the first week. The pace was 3000 steps per week in the second and third weeks, 4000 steps per week in the fourth week, and 6000 steps per week in the fifth and sixth weeks. In the seventh and eighth weeks, to 800 steps.

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Field search procedures:
Examinations used in research:

In order to create tests related to study variables, the researchers consulted contemporary scientific publications. A number of tests were decided upon following consultation with specialists: Using the injured player sitting comfortably in short shorts, we measure the circumference of the femoral muscles. Next, we use a standard bar to measure the length of the femoral thigh, measuring from the beginning of the knee to the end of the femoral bite.
It is necessary to split the femur area into three equal sections and measure the surrounding area. The kinetic range (also known as the military range) of the wounded man's knee joint is measured using the barometer of the four-headed femoral muscillator of the centimeter. The measuring person will first ask the laboratory player, who is seated on the terrace, to extend the wounded man's tidal range forward while measuring the kinetic range of the man's tidal range in the case of the tidal tidal tidal. The scrubbling and hand carried over tests are used to determine the knee shaft's kinetic range. Second, the lab participant is instructed to bend the injured man as far inside as possible while the measuring person sits next to them on the terrace. This is how the kinetic range is determined in the instance of bending. The stereometer, pivot, and ruler are used to measure the kinetic range of the knee shaft. The kinetic range is expressed in degrees (the angle).

The player measures his or her maximum weight in grams while the player's rear legs (the knee joints) are tested for muscle strength. The injured arm's kinetic range is determined by measuring the inner shoulder joint's angle with the genometer and the angle with the grades. The injured man's standing is used for the balance test.
stands on the damaged foot while the other man is raised, hands in the chest, eyes closed, and remains motionless for as long as possible. The test is timed starting at the beginning and ending until the person is finished (in seconds).

Reconnaissance experiment:

A week prior to the main experiment, the researchers helped the Assistant Task Force perform a reconnaissance experiment on two samplers at the Abby Ghraib Hospital Rehabilitation Center in order to assess the accuracy of the sample response, the reliability of the support device, the device's control, its software, and the suitability of the subordinate task force.

Tribal tests:
For each of the two groups, the researchers administered tribal search tests. On September 15, 2022, it comprises the measurement of the femur muscle strength, the kinetic range of the knee joint, the muscular ocean, and the constant balance in the gym.In order to identify the same characteristics in the dimensions tests, the researchers considered the factors of the test from place and time, as well as the manner in which the test was conducted.

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Dimensional tests:

Soon after the two-month tribal test period, the novel tool was employed by the experimental sample searcher, and the researchers provided support for the aforementioned remote experiments. The dimensional tests were comparable to the particular conditions from time and place in the same manner, which the researchers considered.

Statistical means:

Use of statistical bag (spss) and statistical treatments:

- Standard deviation
- Accountant
- Standard deviation
- Test (t.test) for independent and related samples.

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Results:

Presentation, analysis and discussion of the results:

4.1 Results of the muscular perimeter, rear quadripartite strength, and fixed balance indicators are presented. Based on the data collected by the researchers, the following table displays the results of the muscular perimeter, rear quadripartite strength, and fixed balance indicators: (1) A statistical analysis of the tribal sample and the experimental sample's post-test results for muscular perimeter, back quadripartite strength, and fixed balance

Variables	The math center.	Sample size	Standard deviation	Average mistake
Quantification. Quadruple, muscular, and ocean in front of me.	44.4000	5	1.51658	.67823
A gauge. Quadruple, muscle, ocean.	49.6000	5	1.14018	.50990
Scale, range, motion, reach, for two men in front of me.	140.0000	5	1.58114	.70711
Stretch... after me... scale... range... motion... for two legs	169.6000	5	2.96648	1.32665
Range, scale, motion, bend, for two persons in front of me.	143.0000	5	2.12132	.94868
Bend... after me. Scale... range... action... for two legs	13.6000	5	2.07364	.92736
Strength, muscle, quadruple, background	10.5000	5	1.11803	.50000
Strength, muscle, quadruple, background	32.0000	5	2.73861	1.22474
Balance. Steady	14.0000	5	1.41421	.63246
Balance. Steady. After	40.4000	5	2.88097	1.28841

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Table 2 displays the sample's computed value (v) for the muscular ocean indices, rear quadratic muscle strength, and constant balancing tests conducted on the tribal and distant samples of the experimental sample.

Variables	The math center.	Standard deviation	Standard error	T-counted.	Level of flexibility	Sig. (2-tailed)
Measurement.Ocean.The muscle.The quad.Before me - measure.Ocean.The muscle.The quad.After me.	5.200	1.78885	.80000	6.500	4	.003
Measurement.Range.Move.For the two men.Before me - measure.Range.Move.For the two me.After me.	29.600	4.15933	1.86011	15.913	4	.000
Measurement.Range.Move.For the two men.Tunnel.Before me - measure.Range.Move.For the two men.Tunnel.After me.	129.400	3.50714	1.56844	82.502	4	.000
Muscle strength.The quad.Background.- Before me. - Power.The muscle.The quad.Background.After me.	21.500	3.35410	1.50000	14.333	4	.000
Steady balance.- before me. - Balance.Steady.After me.	26.400	1.67332	.74833	35.278	4	.000

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In terms of the muscular ocean indices, the rear quadratic muscle strength, and the constant balancing tests, Table 2 displays the sample's computed value (v).

Variables	The math center.	Sample size	Standard deviation	Standard error
Measurement. Ocean, muscle, quadruple, before me.	44.0000	5	1.22474	.54772
A measure. Ocean, muscle, quadruple. After me.	46.6000	5	1.14018	.50990
Scale... range... motion... for two men... reach... before me.	141.0000	5	2.73861	1.22474
Scale... range... motion... for two men... stretch... after me.	157.6000	5	2.07364	.92736
Scale... range... motion... for two men... bend... before me.	143.4000	5	3.28634	1.46969
Scale... range... motion... for two men... bend... after me.	42.2000	5	2.28035	1.01980
Strength, muscle, quadruple, background, before me.	11.0000	5	1.36931	.61237
Strength, muscle, quadruple, background, after me.	17.0000	5	4.47214	2.00000
Balance. Steady. Before me.	14.2000	5	2.28035	1.01980
Balance. Steady. After me.	24.8000	5	1.92354	.86023

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Table 4 displays the calculated value of (v) for the sample used in the tribal and remote tests. The sample was controlled for rear quadratic muscle strength, constant balance, and muscular ocean indices.

Variables	The math center.	Standard deviation	Standard error	T-counted.	Level of flexibility	Sig. (2-tailed)
Measurement.Ocean.The muscle.The quad.Before me - measure.Ocean.The muscle.The quad.After me.	2.60000	.89443	.40000	-6.500-	4	.003
Measurement.Range.Move.For the two men.مد.Before me - measure.Range.Move.For the two men.مد.After me.	16.6000	3.64692	1.63095	-10.178-	4	.001
Measurement.Range.Move.For the two men.Tunnel.Before me - measure.Range.Move.For the two men.Tunnel.After me.	101.200	3.83406	1.71464	59.021	4	.000
Power.The muscle.The quad.Front.- Before me. - Power.The muscle.The quad.Front.After me.	11.5000	4.54148	2.03101	-5.662-	4	.005
Power.The muscle.The quad.Background.- Before me. - Power.The muscle.The quad.Background.After me.	6.00000	3.79144	1.69558	-3.539-	4	.024
Balance.Steady.Before me--balance.Steady.A lens.	10.6000	1.34164	.60000	-17.667-	4	.000

Sig < 0.05

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The regulation of the muscular perimeter indicators, the rear quadratic muscle force, and the constant balance are all within the statistical description of the sample research presented in Table 5. It also includes the dimensional test of the experimental sample.

Variables	Sample	Sample size	The math center.	Standard deviation	Standard error
A measure. Ocean, muscle, quadruple. After me.	Pilot group	5	49.6000	1.14018	.50990
	The commanding group.	5	46.6000	1.14018	.50990
Scale... range... motion... for two men... stretch... after me.	Pilot group	5	169.6000	2.96648	1.32665
	The commanding group.	5	157.6000	2.07364	.92736
Scale... range... motion... for two men... bend... after me	Pilot group	5	13.6000	2.07364	.92736
	The commanding group.	5	42.2000	2.28035	1.01980
Strength, muscle, quadruple, background, after me.	Pilot group	5	32.0000	2.73861	1.22474
	The commanding group.	5	17.0000	4.47214	2.00000
Balance. Steady. After me.	Pilot group	5	40.4000	2.88097	1.28841
	The commanding group.	5	24.8000	1.92354	.86023

Discussion of the outcome:

The researchers attribute that the equipment contributed to the stabilization of the knee, as it contained an accelerator that prevented the knee movement in any direction other than the anatomy of the joint. This enhanced the failure of the joint to slide in any direction and could affect it and prevent its recovery. This led to greater bone cohesion, better recovery of the strings, less friction

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of the bones within the joint, and a case of foot-strength which increased the burden on the muscles surrounding the joint. The device contributed to the player ' s ability to walk without feeling pain. This increased muscle strength and gave the injured person a sense of confidence to the injured, gradually improving the functional efficiency of the joint, depending on the increased kinetic range (tidal and pagan) of the injured man. "The bandages, muscles, and strings of the muscles have the effect of stabilizing the joint by holding the end of the bones together. The bandages and muscles increase the stability of the joint. The researchers attribute that the wear of the device has contributed to the development of the muscle strength of the injured man in terms of pain-free walking and fear of repeating or exacerbating the injury. The device has given confidence to the injured person to move without hesitation or fear of re-infection, and the constant sense of progress in healing and increasing the strength of the constant muscles of the joint (Prof. Dr. Mohammed Javad Kadhim, Prof. Dr. Ghadah Muayad Shihab, 2021, as power is the basis of every movement of the injured, as well as a direct link to the improvement of other physical qualities such as flexibility, grace, speed and organ, has given the patient the possibility of covering all of these qualities, power plays a significant role between physical qualities and shows their importance in sports.(Majid, S., & Jawad, 2023).

Reference is made to the table of tribal and remote tests of the kinetic range of the man affected in the tidal and pagan cases in the preceding tables shows that those injured in the research and research groups who have applied the Centre ' s rehabilitation and experimental exercises that have applied the rehearsals associated with the equipment have positively improved the kinetic range angles measured by the Gnometer system in the remote tests compared to the level of the tribal tests. From the review of the scale of the dimensional tests of these two groups in both these measurements, the patients in the experimental group are found to be superior in their results to those in the commanding group. The researchers attribute the improved and superior range of the patients in the experimental group in these kinetic ranges to the use of the equipment, which enabled the injured to increase the rubber of his muscles and according to the muscular work in each of the rehabilitation exercises, which led to a better extension of the knee separation and better to the machine ' s ability to maintain the detail and not to allow the side movements to intervene (Kesiktas et al., 2021). This gave a greater opportunity to allow the detail of the length and then the fold, and the continuous degree of tidalism and indeterminateness, not to be afraid and to increase confidence in the device. The researchers used this device with the ability to function and to accomplish more than one muscle function in order to allow the main muscles and muscles to help perform their role in a manner that would serve each other ' s independent motor duty and to help the injured to be an effective contributor to the preventive support of the muscle sensor, particularly the muscle spinners responsible for the tide, and to reduce the inhibition of the trench sensors, such as those spread in the muscular strings that tell the brain.

The role of the movement with resistance and the number of repeats of the painless walking route has had a clear impact on the increase in muscle rubber, the ability of the evaporation strings, the

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proximity of the joint motion and its natural range. The increase in the angle of the knee particle and the small amount of the bend is indicative of the increase in the muscle pole, its flexibility and the ability of the hypotenuse to withstand this expansion. This positive effect has been caused by the continued natural movement of the arthritis, free from the effects of the operation included in the rehab exercises associated with the device to overcome the resistance of the main muscles, the muscles, the muscles supporting the muscles, which combine their work in an integrated manner, and the detailed prophylaxis of the catalysis phenomenon, which may be sustained by the injury and the effects of continuous kinetic determination (Jawad Kadhim, M., & Salman Ahmed, 2016).

The researchers explain that the increase in the improvement of muscle rubber and ligaments is from the gradual increase in the kinetic range (tidal and pagan). Within the limits of the pain, the functional efficiency of the infected joint has improved in general and the muscles on the knee joint have improved further. Increasing the kinetic range means an improvement in the muscle rubber and the ligaments surrounding the joint, as well as improving the neurological work, moving the joint freely and naturally, as the ligatures, muscles and strings affect the stability of the joint by holding the end of the joint bones together. (Mbala et al., 2021)

With reference to the table of tribal and remote tests of the muscle strength of the injured man in the previous tables, it appears that the injured persons in the research and research groups who applied the rehabilitation exercises in the centres, and the experimental ones who applied the rehabilitation exercises in the centres as well as the use of the equipment, have developed the muscle force towards positive development in the dimensional tests from the tribal tests in both the muscle strength tests of the injured man's femurs, all of which show that those in the experimental group are superior in their results to those in the control group. The researchers attribute the evolution and superiority of the injured in the experimental group to the positive impact of the equipment, which made it easier for the motorized muscle contractions to form easy-to-use resistance in the necessary emphasis of the movement (Rehab.l.tasyon, 2016), since the device has a great ability to determine the intensity of the pressure on the joint and its ability to control the work when the infected person feels a degree of pain that requires it to stop easily.

The strength of the muscles, the strength of the man's structure, the strength of the equipment, the strength of the equipment, the strength of the equipment, the strength of the equipment, the ability of the equipment to use the joints, and the degree of difficulty of the muscles to stabilize the body in the event of an imbalance, which was appropriate and consistent with the elements of the curriculum. After weeks of evolution of the artifact, and the strength of the muscles, the strength of the man's strength will help to alleviate the burden on the other part. The equipment has helped to balance the work of the muscles around the joint, which has been instrumental in increasing the muscle strength of the body in the event of an imbalance, which was appropriate and consistent with the components of the rehabilitation and gradual approach, since weeks after the evolution of the artifact, its peripheric muscles, its high strength and the joint ties have enabled the patient to

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use the joints daily and to scale up to the difficulty in the basic and daily life forms (Fadel et al., 2021). (Servant & Tr, 2023)

The researchers attribute the evolution of the muscle force on the injured knee joint through the increase in the number of paces of walking using the equipment, which was gradually increasing with the progress of time. The increase in tidality and dependence on the injured man has evolved considerably and has become an integral part of the daily life of the injured person. Continued wear of the device throughout the day has allowed the injured person freedom of movement and freedom from fear of movement. "The quality of the muscle can be identified by knowing what it can carry and the degree of tolerance on it, as well as how much of the muscle it produces in the operation of the regular rehabilitation exercise, which is an essential component of most sports activities. It also contributes to improving the functioning of the muscle and nervous organs and contributes to coordination between different parts of the body, as well as to reducing pain."Harvey, 2016

Rehabilitation training is one of the most effective forms of physical therapy in the treatment of physical injuries by means of rehabilitation programmes designed on the basis of a well-thought-out science. Rehabilitation exercises aim at the rapid recovery of the body and functional capacities of those affected. Rehabilitation exercises help to speed up the isolation of populations and the accumulation of blood. They also help to speed up the recovery of muscles to their functions.Moayed, 2016
"A good degree of muscle strength contributes to the prevention of injury and gives the body the form of healthy body, and muscle force plays a key role in contributing to the symmetry of most tissue damage to the body." (Gercj, 2013, p. 25). 113)

The factors influencing the production of the muscle force are determined by the number of muscle fibers that are irritated, the side of the muscle or muscle involved in the performance, the composition of the muscle fibres, the angle of the muscle force production, the length and relaxation of the muscle or muscles before the contraction, the length of time spent in the muscle contraction, the degree of compatibility of the muscles involved in the performance, the emotional state of the player before and during the production of the muscle force, age, sex, and protection. (Prof. Dr. Mohammed Javad Kadhim, Prof. Dr. Ghadah Muayad Shihab, 2021

From the review of the table of tribal and remote tests of the fixed body toxoids, it is clear that those injured in the two research groups who applied the Centre ' s rehabilitation and experimental tests, who applied the rehab and equipment, have positively developed their ability to static balance when standing on the injured man ' s dimensional tests above the level of the tribal tests, and attribute the injured researchers in the experimental group to the test results on the injured in the police group to the role of the equipment, which was compatible with the easy-to-hard-to-use step-by-step approach. This was confirmed by the number of steps that were consistently increasing with the progress of time and weeks of rehabilitation. This led to the ability of the injured person

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to prolong the time of the infected foot while walking, which raised the man ' s ability to bear the body weight and rely on it more and more time. This was the result of a well-established link of the detail and pain in the length of time, which increased the man ' s muscle force and weeks of the men ' s stress at the bottom of the foot. The evolution in the level of muscle force has helped to support muscle muscles by enabling them to increase the level of muscle synergy to maintain balance, because the development was a muscle to communicate information to the balancer, which in turn enabled the body to balance, i.e., this improvement was directly linked to the evolution of muscle work and the development of muscle neurological control, while at the same time it was a supportive result of muscle strength. The researchers were keen to follow the sensitivity of the number of steps and pressure on the ground from the first days after surgery for the first weeks, because of the inability of the injured person to use the equipment and continuous feedback on how it worked during all stages of the sanatorium. This has led to the ability to avoid pain and to change the position of the organ to enable the injured person to progress in the process. This has had a positive effect on improving their constant balance.Steinberg et al., 2000)

To preserve balance, the directional direction of neurosyncs from the cerebral cortex is directed towards muscles that increase body control in unnatural balance conditions, and in fact, the muscle intensity continues to clamp in some muscles to preserve balance or people without feeling it unless we concentrate on it or increase it as necessary to ensure balance, and repetition with different conditions helps to increase our ability to accelerate the balance situation if we face unstable conditions of strength. (Cord & Rehabilitation, n.d.)

The muscle balance on both sides of the body is the actual basis for good strength and adjusts the shape of the body from its present state to the ideal condition that it must be able to rehabilitate in order to increase the multiple capabilities of the victim to lead to physically and psychologically significant matters, to support the muscle detail after the loss of muscle strength, to reduce the risk of loss of balance, to a successful return to normal life at the end of the rehabilitation period, and to reduce re-infection. (WE & LT, 1991)

Conclusions:

The researchers concluded as follows:

According to the results of statistical processing of data collected from tribal, inter- and post-tribal measurements and tests, the following conclusions were reached:

1. The muscle strength of the front and back femoral muscles evolves when the joint is installed and the weight pressure is significantly reduced.

2... The muscle force of muscles working on the knee joint evolves as the front and back femoral muscles develop.

3. Continuing to move the joint with partial stabilizers has developed from the kinetic range.

4. The strength of the muscles working on the damaged knee joint has had a significant impact on the stability and balance of the injured man on the ground.

5. The use of substamps in the injured knee joint has had a significant impact in reducing pain

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during the qualifying period of the search sample members.
6. The designer device had a significant effect on the improvement of the constant balance.

7. The use of the device during the period of rehabilitation has a positive impact on trusting the injured and reducing fear of foot use, mobility and pressure.
8. The use of infected feet has evolved with the development of the rehabilitation curriculum in increasing the number of steps.
9. The use of injured feet has evolved with the development of the rehabilitation curriculum and increased pressure on the ground for the injured man.
10.The innovative foundation has a major role to play in accelerating the rehabilitation of the joint and the muscles working on it and in returning to the natural pre-infection condition.

The following recommendations are made by the researchers:
The use of partial stressors in the rehabilitation of the knee's frontal region in advanced football players is advised in light of the researchers' findings.
2. Measuring recovery and rehabilitation progress using the quantity of footsteps and ground pressure
3. The researchers advise using the device as soon as possible following surgery.
4. The researchers advise conducting comparable studies in order to create a novel device.
5. The researchers suggest further investigations and studies pertaining to the back crusader injury.
6. The researchers suggest doing comparable studies with other age groups and sample sizes.

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Appendices:

Annex (1) shows the chart and image of the device

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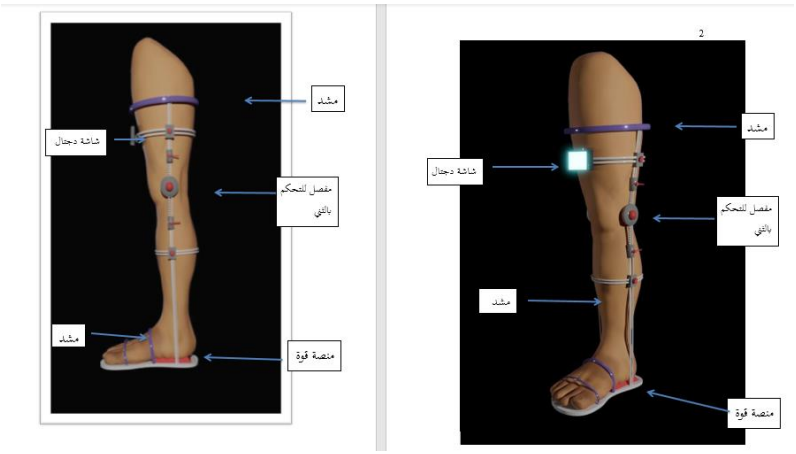

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The Impact of Mechanical Training in Accordance with Regulating the Optimal Stride Length in the First and Second Straight Phases on the Achievement of 400 Meter Events for Men

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Abstract

The significance of this research is primarily anchored in the sustained interest in athletic achievements and the ongoing process of their development through the application of biomechanics and its integration into the science of sports training. The study aims to focus on the regulation of the optimal stride length according to the runner's height, necessitating specialized mechanical training tailored to specific distances when sprinting in both the first and second straight sections of the 400-meter event. This is proposed through the suggestion of six interval distances (90, 80, 70, 60, 50, 40 meters).

The research problem delves into the importance of training 400-meter sprinters by leveraging the first and second straight sprints with an ideal stride length, calculated as the runner's height × 1.22 according to James Hay's equation, and utilizing this to compensate for the deficit incurred during curve running due to changes in running mechanics to overcome centrifugal force.

In light of their research objectives, the authors hypothesized that there would be no significant statistical differences between the pre-test and post-test measurements of male 400-meter sprinters. The researchers employed an experimental method with a single group to suit the nature of the research problem. The sample consisted of six athletes representing (Army, Police, Militia) clubs. The training program included 24 training units over eight weeks, with an average of three training units per week. The researchers concluded several key findings, notably that the designed training had a significant impact on the sample group, as evidenced by the significant differences observed. In light of the results, the researchers recommend the application of these training methods according to the special equation for calculating the optimal stride length in other activities to enhance performance towards better outcomes.

Keywords: Mechanical training, Optimal stride length, 400-meter event.

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Introduction:

The realm of sports constitutes one of the pivotal arenas in the lives of nations, hence the continuous focus on athletic movements to achieve the highest levels of performance. This is achieved through the employment of both theoretical and applied sports sciences. Among the foremost reasons for attaining sports achievement is the fulfillment of all general and specific requirements and means for an athlete's success. It is recognized that one of the crucial means and requirements is the science of biomechanics and the utilization of mechanical indicators in diagnosis firstly, and treatment secondly, through the application of equations and laws specific to the science of movement, which the researchers consider theoretical sciences that can be applied in practical reality.

The 400 meters event, like other sprinting events in athletics, fundamentally relies on physical elements, particularly stride length and frequency, which are significant factors in achieving success in the race.

Maximum speed is one of the most important of these physical elements, along with other primary elements that must be present in an athlete, where stride length and frequency are crucial variables in achieving victory and performance.

Upon reviewing most of the existing literature and previous research, the researchers found that stride length and frequency are among the most prominent variables that should be focused on. Numerous studies on the 400 meters event have addressed important topics related to mechanical indicators, especially the variables of stride length and frequency, which are among the most important determinants in performance improvement, warranting a brief mention of the most significant among them.

The study by Mohammed and Al-Shamaa (2021) aimed to prepare functional strength training with relative weights to develop special capabilities and performance in the 400 meters sprint for men, and to understand the impact of functional strength training with relative weights on developing these special capabilities and performance in the event. The significance of the research lies in preparing functional strength training with relative weights to body parts of the athlete without adversely affecting motor performance. The research problem involves preparing training with relative weights for each part of the athlete's body for the muscles working during the 400 meters event to develop the special capabilities for this event. The researchers employed an experimental method with equivalent groups to solve the research problem, making experimental and control groups similar in all variables except the independent variable. The researchers selected their sample intentionally from elite athletes specializing in the 400 meters sprint in Iraq for men (ages above 20 years), then divided them into two equivalent groups, each containing 4 players. The researchers concluded that there was a significant improvement in the level of specific physical capabilities for the 400 meters event as a result of using functional strength training with relative weighting, and there was a clear interaction in the experimental research sample with training by relative weighting compared to other strength training methods. The researchers recommended the use of functional training to develop muscular strength in all sports events in general and the 400 meters event in particular, and to conduct future research using relative weighting and focusing

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on using practical weights first, and the possibility of easily changing their weights with the capability of placing most of the heavy weights in particular.

The study by Ajil and Al-Fadhli (2020) aimed to prepare special training according to the centrifugal law on some physical capabilities for the second curve and the performance of running 400 meters, and to understand the impact of special training according to the centrifugal law on these physical capabilities and performance. The researchers relied on the experimental method with a single group pre-test and post-test design, and the research sample was intentionally selected for the availability of conditions and ease of implementing field procedures, consisting of 6 runners for the 400 meters hurdles within the Sports Talent Center in Baghdad. The researchers measured the performance of running 400 meters and the speed rate for the second curve during the first and second tests and a 300 meters run from a high start. The researchers concluded that training according to the centrifugal law had a significant effect on improving the performance of running 400 meters.

The study by Ali Lefta (2010) aimed to prepare exercises using distances shorter than the race distance to develop special speed endurance and performance in running 400 meters for youth athletes. The research also sought to understand the impact of these exercises on developing special speed endurance and performance in the 400 meters event for youth. The researcher used the experimental method suitable for the nature of the research, and the sample consisted of 12 runners training on the Rusafa side in the centers of Al-Shaab Stadium, Hay Ur Center, and Al-Kashafa Stadium, fitting the research conditions in terms of age, regularity, and training continuity, with their ages ranging between 14–16 years. The researcher chose a 300 meters run speed endurance test to measure the special speed endurance capability for the 400 meters event and a 400 meters performance test. The researcher concluded that using exercises shorter than the race distance helps to develop special speed endurance for running 400 meters as well as its performance. The specificity of training quality from testing an appropriate training load and specific distances similar to the actual performance of the race itself and physical capabilities associated with running 400 meters have a positive effect on developing the performance level of the players. The researcher recommended using exercises with distances shorter than the race distance to develop special speed endurance and performance in running 400 meters, focusing on shorter distances, conducting similar research on middle distances (800 and 1500 meters) and 400 meters hurdles, and using appropriate time duration and high intensity in developing special speed endurance. Emphasizing that as the race approaches, it is preferable to use distances shorter than the race distance for the specificity of the 400 meters event.

Following this review of the most significant previous studies related to the research topic, it is essential to present the logical reasons for benefiting from these studies. In the first study, it was indicated that preparing functional strength training with relative weights aims to develop special capabilities and performance in the 400 meters sprint for men. The second study highlighted the preparation of special training according to the centrifugal law for some physical capabilities for the second curve and the achievement in running 400 meters. The third study focused on preparing exercises using distances shorter than the race distance to develop special speed endurance and performance in running 400 meters for youth. The researchers leveraged previous studies in determining the sample and conducting tests, exploring what is new and unstudied in previous studies, specifically the optimal stride length in the first and

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second straight sections, one of the reasons for undertaking the current study is the possibility of identifying the optimal stride length for each runner relative to their height through James Hay's equation, and the researchers' belief that stride length and frequency are decisive in achieving victory in the race, necessitating the employment of all feasible methods for this purpose, including ABC training and inclines with a gradient of (5-20) degrees for ascending and descending to develop muscular strength (the mechanical action of the working muscles).

Procedures:

The researchers employed an experimental design with a single group (Al-Kazemi, 2012), and the research population was selected intentionally, consisting of 400-meter runners totaling 12 individuals. The research sample represented 50% of the research population, amounting to 6 athletes who participated in the Central Iraqi Union Championships for the year 2023.

A preliminary experiment was conducted on the research sample on Friday, August 25, 2023, at the Najaf Al-Ashraf International Stadium for Athletics, involving two runners outside the sample group. The purpose of conducting the preliminary experiment by the researchers was to ascertain the following:

- The suitability of the location for the main experiment.
- The appropriateness of the devices and tools used in the tests.
- Determining the responsibilities of the support team.
- Establishing the placement, height, and distance from the running field for the cameras, specifically in the second straight section.
- Identifying potential difficulties that the researchers might face during the main experiment.

Observations from this preliminary test were noted for the purpose of addressing them during the main experiment.

Subsequently, the main experiment was conducted on Friday and Saturday, September 1 and 2, 2023, at the Najaf Al-Ashraf International Stadium for Athletics on the research sample by conducting three tests: a 50-meter flying start test, a 300-meter seated start test, and an individual performance test for runners (IAAF2019), to allow motion analysis cameras to accurately measure stride length. Two (CASIO FH13.5) motion analysis cameras were set at a speed of 120 frames per second and a height of 1.3 meters, orthogonal to the last 40 meters of both the first and second straights, and placed 13 meters away from the second running field. Every 20 meters was filmed by a camera to analyze the stride length in the last 40 meters of each straight, and then a suitable training program was developed for each runner based on the motion analysis data for stride length and compared with James Hay's equation. On the first

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day, a 50-meter flying start test and a 300-meter seated start test were conducted, whereas on the second day, a 400-meter seated start test was carried out as follows:

First Test/ 50 Meter Flying Start Test: (Al-Hakeem, 2004, p. 113)

- **Purpose of the test:** To measure maximum speed and analyze the stride length for the last forty meters.
- **Equipment used:** A straight running track measuring 65 meters in compliance with regulatory requirements, three stopwatches (for timekeepers), and a clearly visible pink marker indicating the end of 15 meters and the beginning of 50 meters.
- **Performance method:** The test starts from a standing ready position, and upon the start signal, the participant accelerates towards the start line, ending at (15) meters, where the first assistant signals with a quick gesture from the wrist and an extended hand holding a red flag. At this point, the timekeepers start the stopwatches, and when the participant crosses the finish line of the (50) meters, the stopwatch is stopped.
- **Measurement method:** The time is recorded to the nearest 0.01 second using three stopwatches, with the median timing taken.

Figure (1) illustrates the procedure for initiating the 50-meter test from a flying start position on the straight track.

Second Test/ 300 Meter Run from a Seated Start: (Ajil & Al-Fadhli, 2020)

- **Purpose of the test**: To measure the performance of running (300) meters, starting from the 1500 meters race start line, for the purpose of analyzing stride length on the first and second straights.

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- **Equipment used:** A running track measuring 300m in compliance with regulatory requirements, and three stopwatches (for timekeepers).
- **Performance method:** The test begins immediately after the warm-up process, with the participant positioned at the start line in a seated start position. The starter then gives the signal to commence, at which moment the timekeepers activate the stopwatches. When the participant crosses the finish line, the stopwatches are stopped.
- **Measurement method:** Time is recorded to the nearest 0.01 second using three stopwatches, with the median time being taken.

Figure (2) demonstrates the method for conducting the 300-meter test from a seated position at the 1500-meter start mark.

Third Test/ 400 Meter Run from a Seated Start: (International Association of Athletics Federations IAAF, 2019)

- **Purpose of the test:** To measure the performance of running (400) meters and analyze the stride length on the first and second straights for the last forty meters of each.
- **Equipment used:** A running track measuring 400m in accordance with regulatory requirements, and three stopwatches (for timekeepers).
- **Performance method:** The test begins immediately after completing the warm-up process, with the participant being signaled at the start line. The participant then assumes a seated start position. Following this, the starter gives the signal to begin, and at this moment, the timekeepers activate the stopwatches. When the participant reaches the finish line, the stopwatches are stopped.

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- **Measurement method:** Time is recorded to the nearest 0.01 second using three stopwatches, with the median time being taken. Additionally, Figure (3) illustrates how to commence the race, and Figure (4) shows the placement of cameras on the first and second straights.

Figure (3) illustrates the procedure for initiating the 400-meter test from a seated start position.

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Figure (4) demonstrates the placement of cameras for all three tests.

Regarding the method for measuring stride length, measurement is conducted using the Kenova motion analysis software, as illustrated in Figures (5), (6), and (7).

The figure (5) illustrates the method of measuring step length in a 50-meter sprint test.

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Figure (6) illustrates the method of measuring step length in a 300-meter seated test.

Figure (7) illustrates the method for measuring stride length in the second straight section of the 400-meter test.

Upon completing the designated training from September 3, 2023, to October 26, 2023, post-test assessments were conducted on Saturday and Sunday, October 28 and 29, 2023, following the same procedures and conditions as the pre-test. Subsequently, the results were analyzed using the Statistical Package for the Social Sciences (SPSS) Version 24 for statistical processing, including mean, standard deviation, skewness coefficient, and the T-test value for paired samples, along with the significance value (sig).

Results:

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Table (1)

Displays the mean, standard deviation, and skewness coefficient for the research sample in the studied variables.

Variable	Unit of Measurement	Mean	Median	Standard Deviation	Skewness
Height	cm	1.756	1.755	0.0175	-0.248
Mass	kg	76.33	76	2.9439	-0.206
Chronological Age	years	27.16	27.5	2.3166	-0.300
Training Age	years	7	6.5	1.2649	0.889

This table encapsulates the statistical analysis of four different variables: Height, Mass, Chronological Age, and Training Age. Each variable is quantitatively described by its mean, median, standard deviation, and skewness metrics, with units of measurement appropriately assigned.

Table number (1) presents the mean values, standard deviations, and skewness coefficients for the research variables. The mean values are greater than the standard deviations, indicating a lack of dispersion among the sample members. The skewness values ranged between (0.889 and -0.300), which are confined within (± 1), suggesting that they fall within the normal distribution range.

Table (2) Displays the differences between the pre-test and post-test for variables related to stride length and performance in (400, 300, 50) meters.

Test	Unit	Pre-Test Mean	Pre-Test SD	Post-Test Mean	Post-Test SD	t-Value	Sig. Value	Significance
50 Meter Test	seconds	5.47	0.287	5.35	0.281	13.37	0.000	Significant
Stride Length	meters	2.18	0.015	2.21	0.020	-3.13	0.026	Significant
300 Meter Test	seconds	38.27	0.747	37.46	0.315	3.199	0.024	Significant
Stride Length in the First Straight	meters	2.17	0.012	2.18	0.013	-2.236	0.076	Not Significant
Stride Length in the Second Straight	meters	2.21	0.013	2.24	0.014	-4.341	0.007	Significant
400 Meter Test	seconds	49.55	0.791	48.45	0.583	3.122	0.026	Significant
Stride Length in	meters	2.08	0.013	2.11	0.017	-6.708	0.001	Significant

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the First Straight								
Stride Length in the Second Straight	meters	2.13	0.016	2.15	0.011	-3.114	0.027	Significan
Degrees of Freedom (df) = n-1 = 5... Significant at (Sig) < 0.050.								

Discussion of Results:

The results presented in Table (2) show significant statistical differences in all the studied variables except for one, which is the stride length in the first straight of the 300-meter performance test. The researchers attribute this to the specifically designed training based on mechanical principles through ABC exercises aimed at developing the regulation of stride length, as well as slope and interval distance exercises through step regulation exercises suitable for each runner's height according to James Hay's equation during maximum speed phase or maintaining maximum speed when running in the straight section.

From both practical experience and theoretical background in biomechanics and sports training (movement sciences), the researchers realize that one of the most challenging aspects of speed training in general is controlling stride parameters (stride length and frequency) and the dialectical inverse relationship between these two variables.

An important issue to address is when to increase stride length and when to increase its frequency. The available answer to this two-part question involves analyzing the entire race distance, identifying key strengths and weaknesses, and how to control the race based on each athlete's capabilities.

Through this research and previous studies, it is observed that 400-meter runners often attempt to divide the race distance mostly in terms of energy expenditure and distribution.

It is evident that their effort distribution focuses on four main areas representing the basic distance of the race, comprising two curves and two straights. Most runners increase their speed on each straight, with a preference for the first straight over the second due to fatigue accumulation at the end of the race. At the same time, speed moderation is noticed on curves due to mechanical factors including centrifugal force and attempts to change body mechanics and effort distribution during the race.

The researchers structured their training around three axes. The first involved exercises specific to step technique for a distance of 40 meters, including a set of ABC exercises aimed at developing specific coordination for the legs and arms, thus regulating stride length parameters.

The second axis involved interval distance exercises (90, 80, 70, 60, 50, 40 meters) with specific markers placed at the last 40 meters for foot placement and flight of both feet, using small training hurdles for step regulation.

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The third and very important axis involved running on slopes with an incline of (5-20) degrees for both ascending and descending, aimed at increasing stride length (resistance) during ascent and stride frequency (assistance) during descent as a primary objective. (See Appendix 1 for the content of exercises designed according to the targeted objectives.)

Regarding the first axis, the researchers agree with Adel and Sofyan that running basics can be addressed through ABC exercises to improve acceleration, balance, coordination, and speed capabilities, thereby enhancing running techniques if performed with correct movement. These exercises are determined by the type of event and thus have mutual effects on performance such as muscle strength, reaction speed, contraction speed, and their coordination (Tangkudung & A., 2018, p. 31).

The researchers believe these exercises have a clear impact on improving stride length for the targeted interval distance, especially since these exercises were given at the beginning of the training unit, making their effect more potent due to the restfulness of the neuromuscular system and readiness for activity.

Through mentioned findings, it is found that such exercises serve multiple purposes and develop capabilities related to agility and coordination in addition to strength and speed. In most research, there are mutual relationships between these capabilities and performance speed or achievement time, legitimizing the training of runners with exercises that bear these capabilities to develop their performance, which was implemented using ABC exercises within the interval distances. Hence, Ritdorf and Syafruddin note the mutual effects in performing ABC exercises such as muscle strength, reaction speed, contraction speed, and coordination (Ritdorf, 2009; Syafruddin, 2011).

The researchers agree with Priyono and Giartama that the relatively required physical component for running is speed, which according to the concept of sprinting means running as fast as possible, achieved through practicing exercises for acceleration, balance, and coordination, possible through ABC exercises. A study showed significant effects of these exercises in improving sprint results for (100) m, (200) m, and (400) m distances, finding an increase in running speed for short distances closely associated with basic movement training of ABC (Priyono, 2019, p. 3; Giartama, 2018, p. 13).

Regarding the second axis, the researchers agree with Maher et al. that interval distances in training according to race distance segmentation have a significant effect on developing relative times and performance techniques, thereby improving achievement levels (Shlash, Al-Amiri, Al-Awadi, & Al-Fadhli, 2023, pages 543-554).

Thus, the effect of the designed exercises became evident through the significance of the differences, noting that in one of the variables, there were no significant differences in stride length in the first straight of the 300-meter performance due to the statistical insensitivity of differences caused by the small sample size. However, differences between means were noted in favor of the post-test mean. Regardless, the specificity of the distance and the runners' accustomed practice of dividing the race distance remain the most significant factor in determining the required execution.

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The researchers distributed the optimal stride length for each runner according to the runner's height (see Appendix 2) using James Hay's equation for adjusting the optimal stride length (Hay, translated by Al-Ankari, 2009, page 225).

Regarding the third axis, slope training, the researchers dealt with this mechanical characteristic as a main part of each training unit in the three weekly sessions. Running on slopes is considered running over natural and artificial inclines, both ascending and descending at various angles to develop physical capabilities including strength and speed for different distances appropriate to the event type and athlete's capabilities. Slope training ascending provides a type of resistance effective on the thigh muscles (anterior-posterior) and calf muscles physiologically, while mechanically, it provides kinetic momentum to the runner, exerting a doubled stride length than that during normal running on flat ground.

Previous research confirmed that stride length and frequency success through increased muscle group strength associated with running, resulting from increased external resistance applied to these muscles, aligns with the researchers' goal of improving stride length and frequency through slope training.

Inclined training is a form of training aimed at developing physical qualities related to the type of sport, including speed, strength characterized by speed, explosive strength, and speed endurance, among other special qualities for runners in general and 400-meter event runners in particular.

The researchers believe that downhill training on slopes provides a type of assistance aimed at speed development, emphasizing that natural speed with control over arm action and free leg movement (flying) should be maintained, focusing on the natural stride length as in running on flat ground.

The researchers, in agreement with Maher and others, in addition to the biomechanical benefits of stride length and frequency from slope training, view it as foundational in developing a range of physical qualities including muscular strength, explosive power, muscular flexibility, and developing body posture (body angles) and the effective use of the upper body part and physical effort regulation (Shlash, Al-Mashhadani, & Al-Ruwaishdi, 2022, pages 295-315).

The main part of the unit begins with basic movement ABC exercises, followed by a series of special exercises according to defined interval distances, targeting the last 40 meters with distinctive markers to accustom the runner to touch those markers with each step or cross the small training hurdles in an attempt to create adaptations for the runners as much as possible, then proceeding to slope exercises with an incline of (5-20) degrees ascending and descending. (See Appendix 3 for the model of a training unit prepared within the general curriculum).

The researchers, in agreement with Bruce and Thier, believe that slopes are the best method for developing instantaneous strength or special quick strength related to the type of skill, contributing to increased recruitment and stimulation of muscle fibers to participate in muscular work and enhancing their neuromuscular coordination within and between muscles (Gradfwnts & Gambettes, 1983, p. 91).

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The researchers worked on training load fluctuation at a ratio of (1:2) within the general curriculum, with Sunday and Tuesday being high intensity days, whereas Thursday being a low-intensity day (see Appendix 4 for the training fluctuation schedule).

Conclusions:

1. ABC exercises play a crucial role in improving performance technique (stride length and frequency) for the first and second straights of the 400m sprint.
2. Exercises based on segmenting the race distance have a clear effect on regulating stride length and frequency for 400-meter event runners.
3. Slope exercises have a clear impact on improving stride length during ascent and stride frequency during descent due to resistances and assistances.

Recommendations:

1. The researchers recommend applying these exercises to other categories and runners of other events due to their utmost importance for them.
2. The researchers recommend adopting James Hay's equation (runner's height × 1.22) for adjusting the optimal stride length for sprinters.

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Appendix (1)

The Fundamental ABC Technique Exercises

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Code	Exercise Content	Training Objective	Mechanical Purpose
ABC 1	A-skips: Alternating high knee lifts for 40m	General preparation of the runner and technique adjustment	Path control through performance angles
ABC 2	B-skips: Alternating knee lifts with thrust for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment
ABC 3	C-skips: Alternating knee lifts at a 45-degree angle for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment
ABC 4	D-skips: Knee lifts with thrust using one leg for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment
ABC 5	E-skips: Medium knee lifts with one leg for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment
ABC 6	Happy Feet: Running on toes for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment
ABC 7	1.2.3's: Three hops on the right then three on the left for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment
ABC 8	Straight legs: Running with straight, level legs for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment
ABC 9	Straight legs Bound: Running with straight, low legs	General preparation of the runner and technique adjustment	Path control through performance angles and stride frequency adjustment
ABC 10	Angling: Running on the ankles for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment
ABC 11	Fast leg: Foot strike motion from a step for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment
ABC 12	Ready for accelerations: Various accelerations for 40m	General preparation of the runner and technique adjustment	Path control through performance angles and stride length adjustment

The Fundamental Running (RU) Exercises for Interval Distances (90, 80, 70, 60, 50, 40 meters)

Code	Exercise Content	Training Objective	Mechanical Purpose

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Ru1	Sprint from starting blocks for 40m with step control markers	Develop reaction time, block clearance time, and acceleration onset	Control movement path through performance angles and stride frequency adjustment
Ru2	Sprint from starting blocks for 50m with step control markers	Develop reaction time, block clearance time, and acceleration onset	Control movement path through performance angles and stride frequency adjustment
Ru3	Sprint from starting blocks for 60m with step control markers	Develop reaction time, block clearance time, and specific speed	Control movement path through performance angles and stride length adjustment
Ru4	Sprint from a standing position for 70m with step control markers	Develop specific speed	Control movement path through performance angles and stride length adjustment
Ru5	Sprint from a standing position for 80m with step control markers	Develop specific speed and speed endurance	Control movement path through performance angles and stride length adjustment
Ru6	Sprint from a standing position for 90m with step control markers	Develop specific speed and speed endurance	Control overall path, stride length, and frequency
Ru7	Sprint from a standing position for 40m	Develop initial acceleration phase	Control acceleration path, stride length, and frequency
Ru8	Sprint from a standing position for 50m	Develop initial acceleration phase	Control acceleration path, stride length, and frequency
Ru9	Sprint from a standing position for 60m	Develop specific speed	Control maximum speed path, stride length, and frequency
Ru10	Sprint from a flying start for 40m	Develop maximum speed	Control acceleration path, stride length, and frequency
Ru11	Sprint from a flying start for 50m	Develop maximum speed	Control acceleration path, stride length, and frequency
Ru12	Sprint from a flying start for 60m	Develop maximum speed	Control maximum speed path, stride length, and frequency

The Fundamental Running (RUS) Exercises on Slopes Ascending and Descending from 5 to 20 Degrees

Code	Incline Percentage	Exercise Content	Training Objective	Mechanical Purpose
RUS1	20 degrees	Running 30-40m uphill	Develop initial acceleration	Stride length - Instantaneous push
RUS2	20 degrees	Running 30-40m downhill	Develop initial acceleration	Stride frequency - Instantaneous push
RUS3	15 degrees	Running 40-50m uphill	Develop initial acceleration	Stride length - Leg strength

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RUS4	15 degrees	Running 40-50m downhill	Develop initial acceleration	Stride frequency - Leg strength
RUS5	10 degrees	Running 50-60m uphill	Develop secondary acceleration	Stride length - Power agility
RUS6	10 degrees	Running 50-60m downhill	Develop secondary acceleration	Stride frequency - Power agility
RUS7	10 degrees	Running 60-70m uphill	Develop maximum speed	Stride length - Specific coordination
RUS8	10 degrees	Running 60-70m downhill	Develop maximum speed	Stride frequency - Specific coordination
RUS9	5 degrees	Running 70-80m uphill	Develop special speed endurance	Stride length - Step rhythm
RUS10	5 degrees	Running 70-80m downhill	Develop special speed endurance	Stride frequency - Step rhythm
RUS11	5 degrees	Running 80-90m uphill	Develop special speed endurance	Stride length - Kinetic harmony
RUS12	5 degrees	Running 80-90m downhill	Develop special speed endurance	Stride frequency - Kinetic harmony

Appendix (2)

Adjusting the Optimal Stride Length According to James Hay's Equation

Runner's Height	**James Hay's Equation**	**Optimal Stride Length at Maximum Speed Phase**
1.75m	× 1.22m	2.14m
1.76m	× 1.22m	2.15m
1.73m	× 1.22m	2.11m
1.77m	× 1.22m	2.16m
1.78m	× 1.22m	2.17m
1.75m	× 1.22m	2.13m

Appendix (3)

Week Three, Training Unit Eight, Within the Prepared Curriculum

Tuesday, September 19, 2023 - Intensity: 90%, Duration: 97 minutes, Objective: Specific Speed, Special Speed Endurance									
Section and Duration	**Attributes and Elements**	**Intensity**	**Exercise Name**	**Work Time**	**Number of Repetitions**	**Rest Between Repetitions**	**Rest Between Exercises**	**Total Work and Rest Time**	**Notes**

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35 min	Aerobic	-	800m + accelerations	270 sec	1	-	-	270 sec	General warm-up
	Flexibility	-	Dynamic	20 sec	3	60 sec	90 sec	270 sec	From jogging
	Skill	-	ABC 1	10 sec	3	120 sec	120 sec	390 sec	Stride length
	Skill	-	ABC 2	10 sec	3	120 sec	120 sec	390 sec	Stride frequency
	Skill	-	ABC 3	10 sec	3	120 sec	120 sec	390 sec	Knee lift
	Skill	-	ABC 4	10 sec	3	120 sec	120 sec	390 sec	Exchange
46.5 min	Acceleration	85%	Ru1	4 sec	2	90 sec	120 sec	220 sec	Unit volume 860 meters
	Acceleration	95%	Ru2	4 sec	2	120 sec	120 sec	250 sec	
	Stride Length	90%	Ru5	8 sec	2	180 sec	300 sec	500 sec	
	Stride Frequency	85%	Ru6	9 sec	2	180 sec	270 sec	470 sec	
	Speed Endurance	95%	RUS11	10 sec	2	180 sec	300 sec	500 sec	
	Speed Endurance	90%	RUS12	10 sec	2	180 sec	270 sec	470 sec	
	Educational	-	Explanation of the day's goal	390 sec	-	-	-	390 sec	
15.5 min	Flexibility	-	Static	20 sec	3	60 sec	90 sec	270 sec	From lying down
	Aerobic	-	800m	270 sec	1	-	-	270 sec	Only jogging
	Psychological	-	Encouragement and motivation	390 sec	-	-	-	390 sec	Relaxation

Appendix (4) The Schedule for the Prepared Curriculum and Periodization Across Weeks and Units

Weeks	Intensity Used	Sunday (Date)	Tuesday (Date)	Thursday (Date)
Week 1	80%	75% - 3/9	85% - 5/9	80% - 7/9
Week 2	90%	85% - 10/9	95% - 12/9	90% - 14/9
Week 3	85%	80% - 17/9	90% - 19/9	85% - 21/9
Week 4	90%	85% - 24/9	95% - 26/9	90% - 28/9
Week 5	100%	95% - 1/10	105% - 3/10	100% - 5/10
Week 6	95%	90% - 8/10	100% - 10/10	95% - 12/10

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Week 7	100%	95% - 15/10	105% - 17/10	100% - 19/10
Week 8	90%	85% - 22/10	95% - 24/10	90% - 26/10

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The Effect of Special Exercises in Soccer Skill Tests for Young Players

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ABSTRACT

The aim of the research is to develop the skill aspect of soccer side among the young players age of (15) years old, because these skills are the basis for the player at the beginning of a way towards developing the rest of the skills. The researcher used the experimental method. The research sample consisted of young players, Al-Kahraba Club, with (10) players (the control group). The subjects were (10) young soccer players from the AL-Zwraa Club. A set of special exercises were designed and the program was applied for developing the basic skills (passing, trapping, dribbling and scoring) for (8) weeks followed by tests. The data was collected and treated using proper statistical operations to conclude a weakness in the skill side of young soccer players and that the proposed program of special exercises have an effective role on developing these skills in young soccer players. Finally, the results showed that were working with their coach.

Keywords: young soccer players, skill tests, soccer, special exercises.

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introduction:

The game of football is one of the games that requires special specifications that enable the player to perform movements and skills in an exemplary manner, as well as possess all the physical qualifications and thus the ability to face the nature of the game, which is characterized by its competitive nature and characteristics that distinguish it. It achieves a high level of excitement, suspense and fun, and is characterized by fast play and the performance of skills. Suitable for the playing situation, in addition to the size of the football field and the time required for precise skill performance throughout the match, The game of football requires mastering many basic skills (driving, handling, and scoring), in addition to acquiring physical qualities so that the player can provide the best for his team. The junior category (age 15) is very important as it is the beginning of the path in player preparation and the first steps in building... His skills, which must be built in a distinct manner, and therefore this will be in the player's interest in the future and will help him master the most important football skills and become easy to apply, enabling him to move to advanced stages of skill, physical and tactical preparation. As for the problem of the research, by informing the researcher about the junior football teams, and I was a former player, the researcher found that there is a weakness in the skill aspect of the game because most coaches perform the skills individually and do not perform them in a complex way to avoid the aspect of boredom and increase the fun and excitement during the training unit. The importance of the research lies in improving the basic skills of players and elevating them, as it is one of the basic pillars in raising the level of skill performance among junior football players, as the coach must choose the method and method of training, and the intensity and volumes it includes, that are appropriate for this age group. The research aims to prepare special exercises to develop the skills of budding football players and to identify the effect of exercises on developing some skills of budding football players. Studies show that special compound exercises have a significant impact on developing the skill and tactical aspect, as confirmed by the study of Lazam & Jasim (2016), Shaghati,. (2015)), (Hamid, 2017) in preparing complex exercises (skills - tactical) to develop some skills, so that the use of the computer program (FT4A) in designing the complex exercises helped in developing some skills and tactical situations, and achieved better results than the complex exercises that did not Designed using (FT4A) program. The study (Majeed & Hassan.,2017), Hamdan & Ghazi.,2020), (Ghawi 2020) showed: in preparing special exercises (physical - physical - skill - skill) using the QUALITY RESPONSE device designed by the researcher and using the (FITLIGHT) which is used for the first time in Iraq using the experimental method by designing two equal groups in the pre- and post-tests to suit the nature of the research. The results showed that the exercises for using the QUALITY RESPONSE and FITLIGHT devices used on the experimental sample were effective and had a positive impact in developing the speed and accuracy of performing some complex skills and physical abilities. The study (Hassan., 2016) (Fadil & Fouad., 2018) and (Marzouk, . 2016) suggested the use of special complex physical exercises and devices with stimuli (audio and visual) in developing some basic physical and skill abilities in women's futsal, as it helped in developing Physical abilities and basic skills. The study (Abbas & Yasser., 2021) (Shamil, 2011) (Hussein. 2016) confirmed that the use of special exercises is effective in developing the accuracy of scoring from stability and movement for the experimental group. The study (Ghawi, . 2020) was: In preparing special exercises (physical - physical - skill - skill) using the QUALITY RESPONSE device designed by the researcher, and using the FITLIGHT device, which is used for the first time in Iraq, had a positive effect in developing the speed and accuracy of

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performing some complex skills and physical abilities. Likewise, a study by (Shamkhi, 2014) showed that compound exercises had a positive effect on the differences in physical abilities in indoor football.

Procedures and tools:

The researchers adopted the experimental method in the style of two equal groups (experimental and control) with pre- and post-tests, as this method suits the nature of the research problem, and the research community was chosen from Baghdad club players in the junior category aged (15) years for the sports season (2022-2023), as the number of teams reached (10) teams officially accredited by the Iraqi Football Federation. As for the research sample, it was chosen intentionally because it is one of the regular training teams. The experimental group on which the training curriculum will be applied, as they were chosen randomly, are junior players from Al-Zawraa Club, as the research sample included (10) players, and thus the control group became the junior players of Al-Kahraba Sports Club, also with a number of (10) players.

Table (1) shows the equality of the experimental and control groups in the research variables

m	test	Experimental group		Control group		T	Sig	Statistical significance
		س−	ع ±	س−	ع ±			
1	Handling	10,11	1,44	8,93	0,89	1,64	0,12	Not a sign
2	Scoring	11,89	1,32	11,30	1,56	1,40	0,19	Not a sign
3	Rolling	8,20	1,62	6,92	1,60	1,22	0,26	Not a sign

D at an error rate less than or equal to (0.05) and a degree of freedom (18)

• The researcher chose the research variables (3) basic skills that must be taught and mastered to emerging players, which are (handling, scoring, and dribbling), and chose tests that suit these skills and presented them to the experts. The previous tests were chosen because they are standardized scientific tests that are characterized by (validity and consistency) and were used in similar previous research. In its samples with the sample of this research, A reconnaissance experiment was conducted on Monday, August 1, 2022, to ensure the suitability of the equipment, the time it takes for the test, and the ability of the auxiliary work team. On Thursday, August 4, 2022, the pre-test was conducted on the research sample (experimental) at the Al-Zawraa Club Stadium. At four o'clock in the evening, and on Friday, August 5, 2022, the pre-test was conducted on the (control) group at the Kahraba Sports Stadium at four o'clock in the evening. The researcher prepared special exercises with a number of (24) exercises, for a period of (8) weeks (three units per week). The total number of training units reached (24) training units, and the time of the training unit allocated to the main part of the exercises was (25 - 35) minutes. Its goal is to develop the handling skill, scoring skill, and dribbling skill of the experimental group, starting from Sunday, 8/7/2022, until Thursday, 10/6/2022. The researcher relied on the method of low-intensity interval training that is compatible with the ages of the players, since "the training method The period

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is based on an organized sequence of load and rest. After the load, which is determined by a certain intensity and duration, a rest period must follow, and the emerging players need rest times between exercises, especially since they are in the general preparation period, and the level of intensity required for the exercise was determined from Through the time equation, which is (maximum time x 100/required intensity) (Reda, 2008) The tests were conducted for both the control and experimental groups in the same way as the pre-tests. The post-test for the experimental group was conducted on Saturday, 10/8/2022, and the post-test for the control group was conducted on Sunday, 10/9/2022, at the same time, which is four o'clock in the evening, and in the same place, tools, and conditions as It was applied in pre-tests in order to determine the extent of development among the research samples. The researcher used the statistical package (SPSS) to obtain the research results by using the laws of the arithmetic mean, standard deviation, percentage, and T-test.

Results:

Table (2) It shows the arithmetic means of the pre- and post-tests, the average differences, the standard deviation of the differences, and the (t) value calculated for members of the control group.

Variables	measruing unit	test	Pre.test	mean	sd	(T)	Sis	Statistical significance
Handling	Class	7,20	7,66	0,58	1,61	3,10	0,04	significance
Scoring	Class	8,90	9,97	1,11	2,62	2,53	0,02	significance
Rolling	second	8,11	7,94	0,79	1,28	2,43	0,03	significance

Table (3) It shows the arithmetic means of the pre- and post-tests, the average differences, the standard deviation of the differences, and the (t) value calculated for members of the experimental group.

Variables	measruing unit	test	Pre.test	mean	sd	(T)	Sis	Statistical significance
Handling	Class	7,21	9,53	2,67	1,17	9,65	0,03	significance
Scoring	Class	10,09	12,69	3,04	3,41	5,71	0,04	significance
Rolling	second	8,03	9,69	1,97	2,33	4,93	0,03	significance

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Table (4) It shows the arithmetic means, standard deviations, calculated T value, and probability value for the post-tests between the control and experimental groups.

m	Variables	measruing unit	Control group		Experimental group		T	Sig	Statistical significance
			mean	sd	mean	sd			
1	Handling	Class	6,98	1,22	10,11	1,19	4,89	0,04	significance
2	Scoring	Class	9,88	2,08	13,06	2,31	5,10	0,03	significance
3	Rolling	second	9,33	2,18	8,69	2,04	5,03	0.04	significance

Discussion:

It is clear from Tables (2), (3) and (4) the results of the tests for the experimental and control sample, as Table No. (2) shows the results obtained by the control sample, which indicate that there was a slight development that occurred for the emerging players to whom the training curriculum was not applied. Hussein & Nuruddin., 2019) (Baraa, D. A.-D. 2012) The reason for this development is the training curriculum approved by the trainer. Table No. (3) shows the results of the experimental sample to which the training curriculum designed by the researcher was applied, as confirmed by Ghazi & Tariq. ., 2023) and also Essa & Saleh., 2023)) These results indicate that there is a good percentage of development between the pre- and post-tests, in favor of the post-test, and this indicates the success of the training curriculum designed by the researcher. As for Table No. (4), it indicates a comparison of the post-test results for the control and experimental samples (Abass & Mehwes., 2022), as it was shown through the presentation of the results that the experimental sample was superior to the control sample in all research variables, and the researcher attributes Ali & Remadan (2023). (Hamza, 2011)) The reason for this superiority is that the experimental sample relied on the training curriculum designed by the researcher, while the control sample relied on the routine curriculum available to most trainers of young age groups, as the researcher relied on Aldulaimi. (2009), Jaleel, Q., & Radhi, S. (2008) on complex special exercises that increase the process of fun and suspense among young players. The researcher believes that exercises are of great importance in training, as these exercises play a role in arousal and suspense and as an incentive that helps In bearing the burdens of strenuous exercises carried out in the same competition conditions He mentioned (Al-Sayed, 2002) and 2016). Nabhan) (Abbas., & Yasser 2021) It is performed in playing situations in accordance with the conditions and laws of the practiced activity and works to link the elements of the components of the training load to prepare the football player under competition conditions or close to them, and it also generates in them a great desire to develop in all physical, skillful and tactical aspects and this What was emphasized by (Beck, 1994)(Hisham & Gassem., 2019) Mohameed, S. (2015)) as

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he believes that exercises similar to competition conditions are an important means through which the components of the training load can be linked in order to reach the players to the best levels of All physical, skill, psychological and tactical aspects, as stated by (Al-Jasmani, 1984), (Jalal., & Abdul Azeez, T. (2019)), (2021.yasser & mohsin) that the availability of these exercises in the training unit will increase the players' motivation from Learn and master these skills and bring players to the required level. (Beck, 1994)(Hisham & Gassem., 2019) Mohameed, S. (2015)) as he believes that exercises similar to competition conditions are an important means through which the components of the training load can be linked in order to reach the players to the best levels in all physical aspects. And skill, psychological, and tactical, as mentioned by (Al-Jasmani, 1984), (Jalal., & Abdul Azeez, T. (2019)), (2021.yasser & mohsin) that the availability of these exercises in the training unit will increase the players' motivation to learn and master them. Skills and bringing players to the required level.

Conclusions:

- The special exercises were appropriate for the sample and had a positive impact on developing all the variables under study.
- The tests proved their validity to measure handling, rolling and scoring for junior football.
- The tests conducted by the researcher were accurate, objective, and appropriate for junior players.
- Through the tests that the researcher dealt with, they played a major role in developing the skill aspect of junior football players.

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Special competitive exercises and their impact on some offensive tactical skills in football

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Abstract

The study aimed to become acquainted with the special training for striking and the effect it inflicts on some planning skills for The Force of Al-Jawiya for men in football. The researcher used the training curriculum of the two experimental groups and the before and after control of the tests. The research sample consisted of 20 youth players who were divided into two groups equally. The researcher used a set of personal interviews, test, measurements and information and data collection. The statistical data were processed by the following mathematical means, the standard deviation, tests (t) of the associated samples, and the test (T) of the independent samples, and the conclusions were. the competitive exercises that were applied had a positive room in developing accuracy and time, competing for offensive planning skills. The overlap of basic skills and physical qualities when the planning skills lent to an increase in the ability of the player when preforming the overall plan. The recommendations were to choose more realistic and more capable exercises to respond to similar play condition to its requirements. The need to use different methods and diversify different planning performance, trainings and not rely on one style.

Key words: competitive training, planning skills.

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Introduction

All the major and developing countries of the world in our modern time are racing among themselves to reach the summit in the fields of life. One of the most important field of these fields is the sports field, which has become one of the biggest interests because of the popularity of these sports, especially the effectiveness of football, which is the first in the world, the youth and the elderly watch it alike for its beauty in physicality, skills, strategy as well as psychological aspects, which raise the level of performance and its positive impact to obtain results. Competitive performance made those who are interested and experts on the development of football to develop football and new training means for its exercises to reach similar conditions and requirements for matches and play using various planning skills. The planning aspect is the culmination of what the coach does using his training idea for the solutions and situations that occur in the matches and the development of realistic competitive trainings that contain the thrill, not without beauty and harmony between the player and his duties on the one hand, and the coach's thought on the other hand. Attention to competitive exercises is what makes the level and performance of players reach the level of matches and apply what is required of it for changing courses and situations for many moments. Competitive exercises have a very great benefit because they are commensurate with what the coach and players from reading the reality of each match and repeating most of them in other matches to gain experience in matches, and this is a very good case through which it is the use of planning skills and playing methods, and it is mentioned Lindsey and Tim (2009)

that football developed in the modern era and took new forms in the many aspects required by competitive performance and the methods of its training, so it was or initiative. These methods varied and multiple methods varied and resulted in a difference in the offensive, defensive, individual and collective plans that required a distinctive degree of skill performance during more complex situations and require strength, speed, accuracy and continuous struggle throughout the match time. Therefore, we emphasize the importance of using training forms that are very similar to the form of competition in football, which are called (competitive exercises). Modern requirements in football take great importance for competitive performance and the use of plan skills in it, and given the experience and history possessed by the researcher. As a player and coach of the clubs and the national teams and the knowledge he has about the competitive exercises that are characterized by speed and accuracy and through the follow-up of the training of most youth teams of the elite league and their matches and the opinions of some experts, it was noted that there is a very clear weakness in the exercises and competitive play by most of the coaches for this category, if he finds it is slow and frying and characterized by randomness away

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from the novelty of football and its competitive advantages because of its similarity to the circumstances and situations of the match, so the researcher considered studying this problem and developing appropriate solutions to it to suit the requirements of modern play by placing competitive exercises in the development

Football offensive planning skills

The researcher dealt with this topic when a study confirmed (Ahmed Mamdouh is smart and Mamdouh Ibrahim Ali 2002(

The study aimed to identify the impact of the use of offensive competitive exercises on the effectiveness of the behavior of the ball in the attacking stadium and some manifestations of attention for the young footballers, and the researcher concluded that the competitive training played an influential and positive role on the effectiveness of the behavior of the ball in the attacking third and the manifestations of attention,

A study by Batgzio, Norijad, Dorsu (2001) photos of competition activity in football

The study aimed to identify the movements of football juniors. The study concluded that the activity of competition in football has an effective and large role that led to the high intensity of running.

Study of the monastery of Mr. Deir Al-Sayed (2006)

The study aimed to identify the impact of competition training on the level of physical and technical performance of the football startup. The study concluded that the competitive training used was of good quality, directed and progressive, reflected on the results of the physical and technical performance of the experimental group.

In the after tests

Method and tools:

The research used the experimental approach to suit the nature of the current study, and the sample was selected in the random way, which was represented by (26) players from the Air Force Club, where (8) players were excluded for the reconnaissance experiment, and the players were divided into two groups, their number (20) players randomly into two experimental groups and an officer, each (10) players, and to give an explanatory and accurate picture of the conditions and developments of the research. The data was statistically processed using the mathematical average and standard deviation, test (c) for associated samples, and tests (c) for independent samples

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)Spss, the processing was carried out in the computer using the researcher's statistical package. The researcher prepared competitive exercises and applied them for two months with the number of training units, three units per week and the total 24 training units, and the training unit time was 25-30 minutes.

The tests used

The first test

The name of the test / the skill of creating a schematic space and football scoring

-Test goal / speed of skill creation of void and scoring accuracy.

The second test

The name of the test / the skill of planning wall handling (dubus) and football scoring

-Test target/wall handling speed and scoring accuracy

The third test:

The name of the test / the skill of the front stand the planning and the football scoring

-Test target/front prestion speed and scoring accuracy.

Table (1) It shows the equivalence between the two groups for the planning skill variables (creating the vacuum, the wall handling, the planning attributions)

T	The variables	The groups	x	y	(T)the calculation	The significance
1	Creating the planned vaccum	The control	10.81	1.66	0.001	1.01
		The experimental	10.90	1.70		
2	Mural handling	The control	11.01	0.79	1.021	2.28
		The experimental	12.28	0.57		
3	Planning the stands	The control	2.09	0.83	1.032	2.008
		The experimental	1.90	0.83		

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Search results :

The schedule (2) Arithmetic media, standard deviations and value (T) calculated between the pretests and posttests of football basic skills (emptiness creation, wall handling, planning) for the experimental research group

The variables	Pretests		Posttests		(T) Calculated value	Probability percentage of error
	S-	±A	S-	±A		
Create a tactical vacuum	1.90	0.83	4.81	0.98	11.60	0.0001*
Planned wall handling	10.90	1.70	16.90	2.02	7.52	0.0001*
Tactical attribution	12.28	0.57	9.29	0.44	6.85	0.000*

Significant change<0.05

Table (3) Arithmetic means, standard deviations, and T-value calculated between the pre- and post-tests, tactical skills in football (creating space, handling, scoring, tactical attribution) for the control research group

The variables	Pretests		Posttests		(T) Calculated value	Probability percentage of error
	S-	±A	S-	±A		
Create a tactical vacuum	2.09	0.83	3.36	0.92	4.54	0.001*
Planned wall handling	10.81	1.66	15.27	1.61	8.16	0.0001*
Tactical attribution	11.01	0.79	9.91	0.59	1.85	0.0001*

. *Significant difference < 0.05

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Presentation and analysis of the results of post-tests for tactical skills in football (space creation, wall handling, tactical support) between the experimental and control research groups: Table (4) shows the arithmetic means, standard deviations, and calculated T-value between the experimental and control groups in the post-tests of the variables under study

The variables	Pretests		Posttests		(T) Calculated value	Probability percentage of error
	S-	±A	S-	±A		
Create a tactical vacuum	4.81	0.98	3.36	0.93	3.13	0.001*
Planned wall handling	16.90	2.02	15.27	1.61	2.51	0.0001*
Tactical attribution	9.29	0.44	9.91	0.59	1.56	0.0001*

Discussion

All the results of the experimental group showed an improvement in favor of the post-tests, which indicates the success of the competitive exercises and their tests set for the sample. The competitive exercises were of appropriate intensity and training volumes, based on the correct scientific foundations. They had an effective impact in developing the tests to create tactical space and wall handling, in addition to the skill of support, as group work was important. Between the players and their harmony at a very high level, and the competition training that relied on regular repetition helped in improving and developing special tactical skills in accordance with the scientific foundations and principles of training science, and thus requires developing the basic skills on which tactical performance is built and then increasing coordination among them when implementing these skills. Tactical, Essam Abdel Khaleq (2003, p. 145) states that achieving good coordination of the movement is achieved through practice and repetition, and the movement becomes more accurate by performing the tactic. Significant differences can be observed in the tactical tests, all of which flow from achieving the scoring skill associated with the end of the tactical performance, which was given special importance in daily training. Which was designed in a competitive atmosphere similar to real play, and this agrees with (Salem 1988) when he says that goal-scoring exercises must be formed so that they are consistent with the real conditions that occur in the matches, since the researcher verified the equality of the players of the two research groups before starting to implement the vocabulary of the tactical exercises using the network. The training and any change that occurs in the results, positive or negative, is the result of the training

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that each group underwent, with the different exercises that were carried out in different ways, periodic, repetitive, and alternating. The experimental group was superior, which the researcher attributes to the methodology he followed by formulating the components of the competitive exercises according to the scientific method and the correct progression in their repetition, which provided Players need an atmosphere and conditions similar to real play, which gives more motivation towards training, and this is what (Al-Bilbisi, 2000, p. 80) indicated, citing (Mukhtar), that training in skills must be under conditions similar to the match atmosphere. The researcher believes that the intersection of speed of performance and the accuracy required for performance had a positive impact on optimal performance, which in turn develops mental abilities, which shed light on the player's mentality through competition exercises. Implementing tests for tactical skills requires mastering the transfer of the ball using quick and accurate handling and controlling the ball at the appropriate time and place.

This was confirmed by the researcher during the tactical application included in the competitive training, which the researcher attributes to the reasons for the moral differences that appeared in all tests and the organization of competitive exercises and their effectiveness in the skill of creating a tactical vacuum to create a state of development in the level of players' performance through harmony, as well as the skill of tactical support and scoring is also developed and developed from During the competitive exercises and creating an atmosphere of harmony based on the abilities of the players and their technical abilities, this was demonstrated by the results, and that the reason for the development of the tests between pre- and post-tests in favor of the experimental group came from the effectiveness of the competitive exercises that the researcher used in most of his training units and were applied to the members of the experimental group, which were implemented using a rapid plan for this test. He confirms (Burkin 1993, p. 18) The game of football requires the player to demonstrate his ability to control his voluntary movements towards a specific goal.

Conclusions

The competitive exercises that were implemented had a positive role in developing accuracy and time, as the improvement in this indicator appeared due to the application of correct repetition during the tactical performance.

-Competitive training brought about an effective and effective change in the implementation of the technical performance of tactical skills and the effectiveness of this implementation in application.

-The intersection of basic skills and physical characteristics with tactical skills has led to an increase in players' ability to perform general tactical actions.

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Recommendations

The necessity of using different methods and diversity in different tactical performance exercises and not relying on one method.

-The importance of mastering complex offensive tactical skills as they are most closely linked to the course of play during matches by the player and the team.

-Work on selecting exercises that are more realistic and more capable of responding to playing conditions and similar to their requirements.

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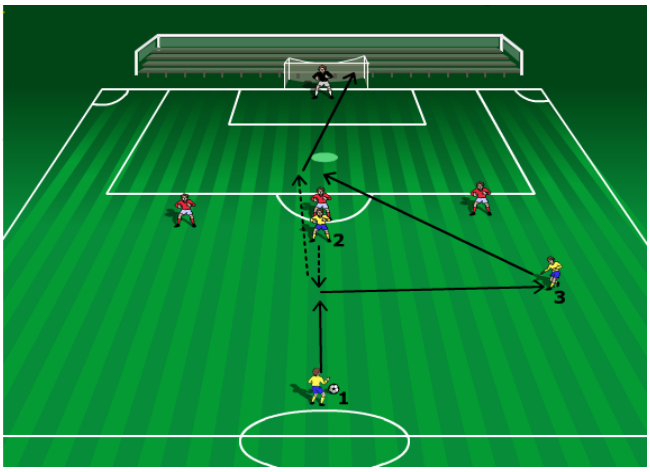
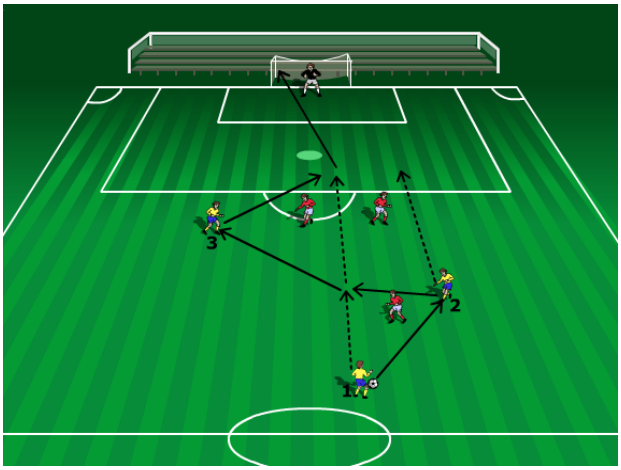
Appendix:

Appendix No. (1) Some examples of competitive exercises and their forms

For exercise No. (1) method of performance: Player No. (1) passes the ball to player No. (2), who runs towards player No. 1 to receive the ball and then passes it to player No. (3), where No. 2, after handing the ball, does A quick rotation around the opponent and advancing towards the penalty area to receive the ball from number (3), who then passes it towards the penalty spot and then shoots towards the goal, with the possibility of the attackers playing on the defender's reaction if the first performance is not successful.



Exercise No. (2) Method of performance: Player No. (1) passes the ball to player No. (2) moving forward, who plays a direct ball to No. (1), who runs from behind the defender towards the penalty area to receive the ball and then shoots toward the goal. With the possibility of the attackers playing on the defender's reaction if the first performance is not successful.



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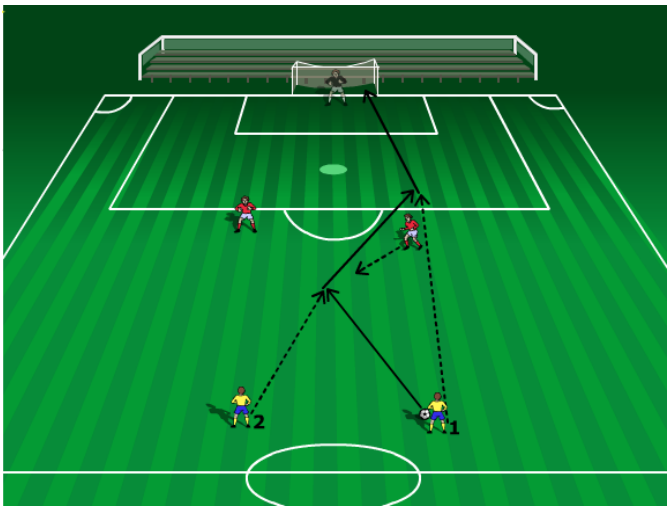
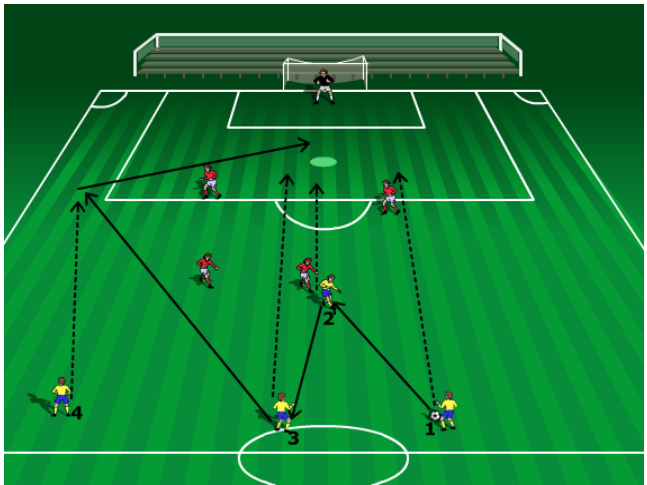
Exercise No. (3) Performance Method: Player No. (1) passes the ball to Player No. (2) and runs forward to receive the ball from Player No. (2), and then No. (1) passes it to Player No. (3) to play a ball. Inside the penalty spot, the players No. (1) and No. (2) coming towards the penalty spot have one of them receive the ball and shoot towards the goal, with the possibility of the attackers playing on the defender's reaction if the first performance is not successful.



Exercise No. (7) Method of performance: Player No. (1) plays the ball to No. (2), who plays the ball to No. (3), where he handles the ball by playing the ball to the side towards No. (4), who runs to receive it, where both players stand. (1), (2), and (3) by running towards the penalty area to receive the ball from No. (4), who plays a cross to the players, so that one of them shoots it towards the goal, with the possibility of the



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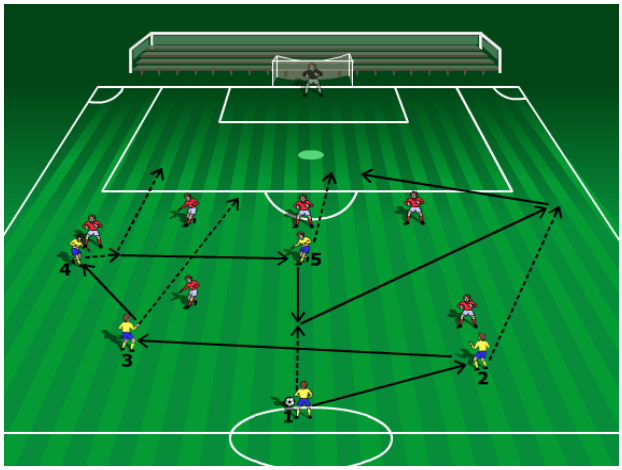
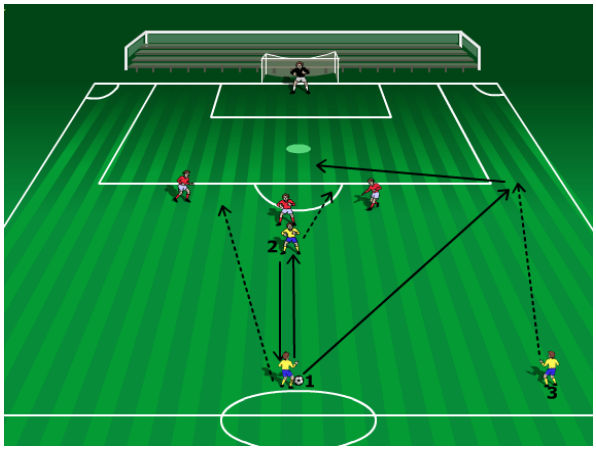
attackers playing on the defender's reaction if the first performance is not successful, with the possibility of playing Attackers on the defender's reaction if the first performance is unsuccessful.

Exercise No. (8) Performance Method: Player No. (1) passes the ball to Player No. (2), where No. (2) passes it to Player No. (3) and runs to the side, and No. (3) passes it to No. (4) and runs To the penalty area, where number (4) passes it to player number (5), and moves to the penalty area, where number five returns it to number (1), who passes it to number (2), where number (2) passes a cross into the penalty area to Players to shoot at goal, with the possibility of attackers playing on the defender's reaction if the first performance is unsuccessful.



Exercise No. (9) Method of performance: Player No. (1) passes the ball to player No. (2), who returns it to No. (1), and player No. (1) handles the ball to the side to No. (3), and No. (1) And (2) entering the penalty area to receive the ball and shoot it towards the goal with

The possibility of the attackers playing on the defender's reaction if the first



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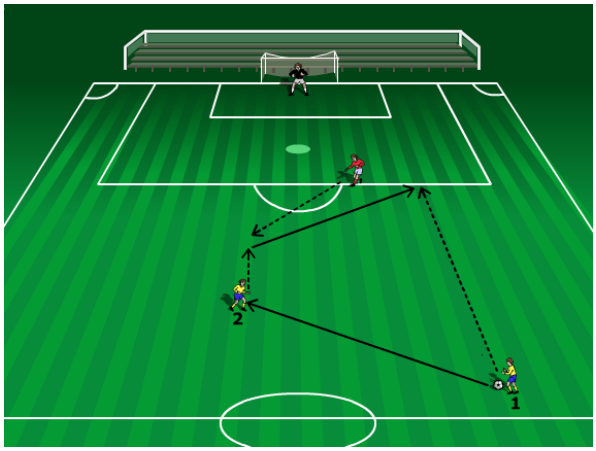
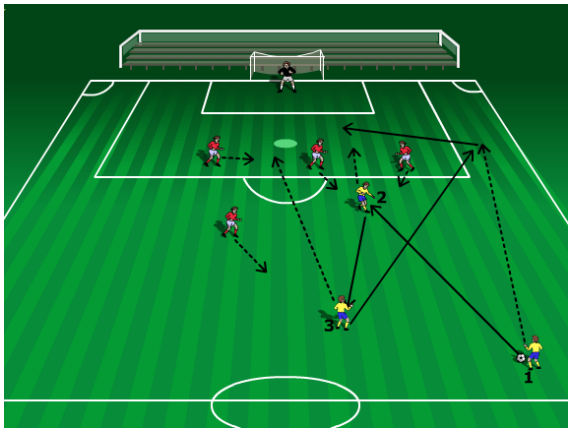
performance is unsuccessful.

Exercise No. (13) Method of performance: Player No. (1) passes the ball to player No. (2), where No. (2) advances the ball to pull the defender towards him and then hands it to player No. (1), with the possibility of the attackers playing on the defender's reaction. If the first performance is not successful.



Exercise No. (14) Method of performance: Player No. (1) hands the ball to player No. (2), and No. (2) hands it to player No. (3), where No. (3) hands the ball to player No. (1), where he No. (1) by playing a cross ball inside the penalty area to the players who entered the area, with the possibility of playing to two attackers based on the defender's reaction if the first attempt is not successful.



Appendix No. (2)

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Models of competition exercises for different training methods

Exercise time ranges from (25-30) minutes for each exercise

First week Preformed using a high-intensity interval training method					
The exercises	The tension	Repetition	Interstitial comfort	Totals	Comfort between totals
1 Sunday	80	10	30sec	2	2-3
2 Monday	80	10	30sec	2	2-3
3 Tuesday	82	11	30sec	2	2-3

Second week Exercises are preformed at maximum intensity using the method (repetitive training). With a competitor on target					
Comfort between totals	Totals	Interstitial comfort	Repetition	The tension	The exercises
2-3	2	30sec	7	90	T 7 Sunday
2-3	2	35sec	5	90	T 8 Monday
2-3	2	35sec	8	92	T 9 Tuesday

First week Preformed using a high-intensity interval training method					
Comfort between	Totals	Interstitial comfort	Repetition	The tension	The exercises

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totals					
2-3	**2**	**30sec**	**10**	**80**	**1 Sunday**
2-3	**2**	**30sec**	**10**	**80**	**2 Monday**
2-3	**2**	**30sec**	**11**	**82**	**3 Tuesday**

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