

The Quarterly Pulse

Editor: Mark Kramer (PhD)

PhASRec Recap and Highlights

Special points of interest:

- Recap
- Stories
- Projects, grants, and publications
- Meet the team

In this issue of the newsletter, as we near the finish line of 2023, we would like to highlight the many successes of PhASRec across a wide range of activities focused on the second half of the year.

Not only do we talk-the-talk, but we also walk-the-walk as evidenced by the fact that our department has received several awards for teaching & learning, research, and rating. See [page 3](#) for more details.

We are enhancing our international outreach by hosting researchers from Finland, namely Nikki Vilmi, Jere Ahonen and Petra Stenman who are based at the Finnish Olympic and Paralympic Training Center. More of this to come in 2024.

We also had the privilege of welcoming our new Director of Research, Prof Monyeki. We provide a brief introduction, so find out the specifics on [page 4](#).

Our research is on the rise, with the total publication count so far being 31 research articles in impactful journals. We have provided a short highlight of a select few within this issue.

We are also expanding our reach with travel to international destinations continuing unabated. We have provided the relevant highlights on [page 5](#).

There will be plenty of updates to watch out for in the next installment of the newsletter where we will highlight several of the conferences, presentations,



PhASRec: Focusing on Health and Fitness across the life-span

and community outreach programs and so much more.

Keep watching this space.

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Shining Bright in Borneo

Prof Hans de Ridder

Prof Hans presented a keynote Kota Kinabalu, Malaysia, titled “What your body type reveals about your health” in October.

Although there are 5 body types (Apple, Pear, Hourglass, Inverted Triangle, and Ruler), what carries greater significance is not one's specific body shape but rather the health implications associated with it and how one can effectively adapt their lifestyle to maintain good health. Regardless

of body type, challenges and potential health risks common to all include heart disease, cancer, and diabetes. Arguably some of the best and simplest mitigating strategies include a gentle reduction in caloric intake, and accumulating at least 30 minutes of exercise per day. The combination of exercise and calorie restriction becomes even more important as you age as your body shape tends to change

towards obesity. So keep moving.

Read out more [here](#).





The Child Health Team: Prof Anita Pienaar, Dr Wilmarie Du Plessis, Dr Alretha Du Plessis, and Prof Dane Coetzee

Exploring Child Health

Dr Alretha Du Plessis, Prof Dane Coetzee, Dr Wilmarie du Plessis, and Prof Anita Pienaar

We're thrilled to share our recent journey to the Paediatric Work Physiology 2023 conference. This year's conference, set in the heart of the historic Chepstow, Wales, was dedicated to unraveling child health's complexities. Participants gathered to explore ways to nurture our youngest generation's physical and emotional well-being, paving a path toward a healthier future.

Each of us presented a podium presentation about our research focused on the health components in young children aged 8-13 years.

Standout moments included connecting with fellow researchers and academics whose work we tend to referenced and meeting them in -person. Additionally, exploring the charming cities of Cardiff and Bath adds to the overall highlights of the trip.

We also took the time to visit Swansea University, where we met with the Applied Sports, Technology, Exercise and Medicine Research Centre. Their diverse fields of expertise sparked discussions about potential future collaborations. Furthermore, their commitment

to child health research aligns perfectly with our mission, and we're excited about the prospect of partnering with Swansea University for groundbreaking research in this critical area.

For more details, contact:

Alretha.DuPlessis@nwu.ac.za
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"The fostering of collaborative relationships will benefit the NWU and its students"

Local is Lekker

Dr Retief Broodryk

Dr Retief Broodryk, a senior lecturer in the Sports Sciences program, recently embarked on an enriching journey to Cape Town to participate in the Conqa Elite Sport Summit. The summit was a treasure trove of knowledge, featuring presentations by renowned national and international coaches and high-performance sports practitioners. Engaging panel discussions and

invaluable networking opportunities enhanced the experience. Furthermore, the trip allowed for the forging of stronger bonds with the CHHP colleagues and NWU sports coaches and management, fostering collaborative relationships that will ultimately benefit NWU and its students.

Dr Retief also completed a series of guest lectures, concise research

presentations, and the exploration of potential research projects with international researchers at the University of the Western Cape in collaboration with Prof Kraak. These academic endeavours hold great promise for the future.

Find out more about Dr Retief and his research [here](#).

You Never Forget Your First Time

Duncan Sutcliffe

I had the incredible opportunity to represent PhASRec at the 2023 SASB Conference in Gqeberha.

I presented my PhD research centered on the **effects of a force-velocity-power-based intervention on the performance of male soccer players**. Our

research underlines the importance of individualized training for enhancing team performances.

It was a fantastic experience with fellow biomechanics enthusiasts, and the feedback and discussions were truly invaluable. The conference

provided an enriching platform to engage with experts in the field, knowledge exchange, and performance optimisation to ultimately enhance the world of sports science.

If you are interested, contact me at:
Duncan.Sutcliffe@nwu.ac.za



The South African Society of Biomechanics (SASB) Team

Sleep Deep to Leap in Performance

Dr Adele Broodryk

We all sleep daily, right? But do we really use it to our benefit? When we sleep, our body and mind recharges, enabling us to tackle each day as a new day.

Unfortunately, when the going gets tough, our sleep is the first thing out of the door. Sleep hygiene strategies have gained popularity over recent years to aid improving one's sleep quality and quantity. This entails strategies such as keeping a constant sleeping

routine (i.e. going to bed and waking at the same time daily), minimizing caffeine intake after 3pm, minimizing electronic stimulation (such as screen time on cellphones, laptops and TV), or taking a short "power-nap" during the day.

Currently, we are conducting a research project (SLEEP-study) to evaluate the effects of a sleep hygiene intervention on physical, psychological and physiological parameters in male and female soccer players.

This can provide valuable information to enhance performance, but also general wellbeing. We hope that the findings of our research can be transferred to other sporting codes and eventually translate into match outcomes.

If you are interested in enhancing your sleep, feel free to email the PI for more information at

adele.broodryk@nwu.ac.za



Bringing the Action. Testing athletes before and after a sleep intervention

Academic Promotions and Awards

We truly have a star-studded line-up of award-winning staff within the entity.

The recipient of the 2023 Teaching and Learning Award included Dr Retief Broodryk.

Dr Henriette Hammill was presented with the NWU Excellence Award for innovation in Teaching and Learning.

The recipients of the 2023

Research and Innovation Awards included:

- Mrs Yolanda Stevens in recognition of her first publication.
- Prof Dane Coetzee for increasing her national research rating from Y2 to C2
- Prof Hanlie Moss for her re-rating as a C2 researcher, and

• Assoc. Prof Mark Kramer for achieving his national research rating as a Y2 researcher.

We would also like to highlight the promotions of:

Dr Broodryk from Lecturer to Senior Lecturer,

Dr Theron Weilbach and Dr Mark Kramer to from Senior Lecturers to Associate Professors. Well done!

Congratulations to you all! These are excellent outcomes and set a great example for the staff and students alike. We believe that PhASRec is well set for many more such achievements in 2024.

To follow any of these academics and their endeavours, visit the PhASRec [website](#) to find out more.

It ain't heavy, but it's a bother

Dr Mark Kramer

A recent [study](#) by Dr Kramer, a senior researcher at PhASRec, showed that approximately 60% of children aged 10-13 years, carry a schoolbag mass exceeding 15% of their body mass, and over a quarter of children carry schoolbags exceeding 20% of their body mass! Not surprisingly, children

were 9 times more likely to report pain associated with carrying loads heavier than 15% of their body mass compared to lighter loads. No differences in the perception of pain were reported between male and female children.

Interestingly, South African

children tend to carry substantially heavier loads compared to their counterparts from New Zealand, India, China, Brazil, and Uganda. The next step is to find out how we can reduce these loads and ensure that our children are not exposed to excessive loads for long periods.



Children in South Africa carry exceptionally heavy schoolbags compared to other countries.

Steering Research in a New Direction

Prof Monyeki



Prof Monyeki presenting his keynote at the DCV Research and Innovations research week.

We would like to thank Prof Moss for her amazing years of leadership and guidance of the PhASRec entity as she passes on the baton of leadership to Prof Monyeki as the new Research Director of PhASRec.

Prof Monyeki has a stellar research record boasting over 95 peer-reviewed publications with a specific interest in health-related fitness, epidemiology, and body composition analyses in children.

He recently presented a keynote titled “*Ensuring healthy lives and the promotion of well-being for all at all ages, in the context of Global South*” at the DVC Research and Innovation research week. The primary focus was to create awareness of the detrimental effects of physical inactivity and how the research done at PhASRec can inform the public about ways to mitigate these effects and improve overall health.

As we embark on this new journey, we are looking forward to overcoming new challenges, the role that AI will play in the health sciences, and the role that PhASRec will play across the lifespan.

Visit and/or follow Prof Monyeki’s research [here](#).

NWU Colour Run. PhASRec and the CHHP took part in the NWU Color Run in support of Gender Awareness



Learning how to Learn

Dr Clement Gambelli



Is there a relationship between EQ and Coping Ability?

Reading literacy in South Africa is only 19% at the grade 4 level (see [study](#)). This has clear implications and ramifications at the university level where students struggle to complete their degrees within the allotted time frames (see [data](#)).

To enhance the potential for success, Dr Gambelli has implemented a video series focused on the learning processes which incorporates more efficient methods of learning. The video is available to all students and staff and is hoped to be an effective method for increasing the retention of

what is learnt, as well as increasing pass rates in the long run.

Click [here](#) for the video.

For more information, please contact Dr Gambelli at:

Clement.Gambelli@nwu.ac.za

What's in Store for 2024



Changing the world,
one step at a time

There are numerous projects in the pipeline for the 2024 academic year. Some highlights include the following:

The Cybathlon Project will be in full swing. This is a collaborative effort between PhASRec and Engineering and involves the creation of upper-

and lower-body prosthetics which will be tested for utility and durability in an international competition.

The REHAB project is also underway where we will be testing the use of novel technologies in the treatment of musculoskeletal disorders.

We also have the RUTA project focusing on the educational experiences of students in biokinetics, kinderkinetics, recreation and sport science.

For a full overview of projects visit our [website](#) to get all the latest information.

PhASRec currently has the following on-going projects that are actively seeking participants. If you would like to find out more, please select the relevant link to make contact with the study-leader:

Building K3, Fanie du Toit Sportsfields
c/o Thabo Mbeki and Meyer Str
North-West University
Potchefstroom

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Study

ReHAB Project—Using technology to evaluate and treat various musculoskeletal disorders

The Depression Study—Effects of Exercise on improving depression

EXAMINE-youth Study

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Prof Andries Monyeki
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Physical Activity,
Sport & Recreation

“Researching human movement: from the cradle to the grave”

Meet our Team

Theron Weilbach is a lecturer in the Recreation Programme of the School of Human Movement Science and a researcher in PhASRec.

He obtained his PhD in 2013, studying [leisure perceptions of selected undergraduate students at South African universities](#). Theron was also recently promoted to Associate Professor in 2023.

As an academic and researcher in the field of recreation, Theron focuses on the importance of recreational activities in a person's life and, therefore, has various hobbies and recreation interests ranging from leather work and photography to hunting, fly fishing

and generally just being outdoors.

He is currently involved with a longitudinal research project focusing on how leisure contributes to adjusting to retirement and whether leisure contributes to overall well-being in retirement.

Please feel free to contact him at:



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Assoc. Prof. Theron Weilbach