# WARM-UPS WITH PASSIVE STRETCHING: A PHENOMENOLOGICAL STUDY

Meryll Rianne I. Balansag[a],
Wendy B. Leonor[b],
Jancel A. Zapanta[c],
Aizel T. GagantingCruz[d],
Maryjoy A. Israel[e],
Marjorie C. Largo[f]

[a]hz202300379@wmsu.edu.ph,
[b]hz202304730@wmsu.edu.ph, [c]hz202302397@wmsu.edu.ph,
[d]hz20300201@wmsu.edu.ph, [e]hz202300145@wmsu.edu.ph,
[f]hz202304728@wmsu.edu.ph

Western Mindanao State University, Zamboanga City 7000, Philippines

---

**Abstract**

Physical and psychological preparedness of athletes during warm-up exercises are influenced by a variety of factors including passive stretching. While many prior studies have examined the physiologic responses to stretching finding indicate that have looked at the athlete's own perceived feelings of comfort, readiness, and body awareness. This study sought to determine the lived experiences and perceptions of female futsal athletes relative to the use of passive stretching during warm-up.

Prior research has measured various aspects of stretching, however, there is still little known about how athletes subjectively feel while experiencing stretching and/or preparing for competition. Therefore, a qualitative phenomenological approach was used in order to better understand the subjective experiences of athletes. Ten female futsal players from Western Mindanao State University completed open-ended questionnaires and semi-structured interviews. Athletes reported feeling stiff muscle tightness when they began to stretch; over time these feelings turned to relaxation and adaptations in the body. Stretching led to decreased muscle tension, increased flexibility, and easier movements. Athletes felt physically comfortable, confident, ready to perform after stretching. Additionally, partner-assisted stretching helped provide emotional support and improve the effectiveness of the stretch, although some minor discomfort associated with pressure or positioning occurred rarely. In summary, passive stretching had a positive influence on both the physical comfort and psychological readiness of athletes.

Altogether, passive stretching is not simply a preparatory activity, it also represents a personal experience influencing athletes' perception of their bodies, confidence, and readiness to participate in athletic events. Thus, it is recommended that coaches

incorporate passive stretching as part of well-planned and effectively directed training sessions so that athletes can receive optimal benefits from their warm-up activities.

---

***Keywords***: *Athletes performance, Flexibility, Stretching, Student-athletes, Warm up*

## Introduction

Participants report various thoughts, perceptions, and sensations experienced during a warm-up of passive stretching with the help of a therapist or without any active contraction at all, making it important to understand how they perceive its use in order to improve training and support both physical and mental preparation. Similarly, Behm & Chaouachi (2020) emphasize its role in warm-up routines, yet little research has explored participants' experiences and views on passive stretching as part of warm-ups as noted by Fradkin (2020), and its usefulness may vary since participants can have different feelings or ideas about its effectiveness as supported by Samson (2021), while only a few studies link personal reports with observed data, making it difficult to determine real-world effects (Santos, 2021).

Globally, understanding athletes' experiences and perceptions of warm-ups with passive stretching is essential for improving training practices and performance (Fradkin, 2020); however, evidence shows gaps in knowledge, as many female athletes in Spain do not correctly understand the goal and proper use of passive stretching (Ayala, 2021), and athletes from Brazil and Portugal also struggle to execute these exercises efficiently (Gimenes, 2022). Without proper understanding, warm-up execution, confidence, and engagement during training or competition may be affected, and the lack of direct correlation between participant experiences and observed outcomes leaves a gap in knowledge regarding the actual effects of passive stretching on willingness and discomfort (Barbero, 2020).

In the Philippines, this issue becomes more pronounced, as participants' understanding and experiences of passive stretching remain limited; many local athletes lack awareness, apply routines incorrectly, and are uncertain of their benefits, with some women college players relying on unsupervised generic exercises that limit their preparation for training sessions. Furthermore, few local studies have explored the lived experiences and perceptions of athletes regarding passive stretching in warm-up routines, highlighting a limited body of qualitative research on how Filipino athletes experience and perceive its role in physical preparation, thereby revealing a qualitative knowledge gap concerning how passive stretching influences readiness for competition and optimal performance. Warm-ups prepare participants physically and mentally (Fradkin, 2020), enhancing confidence, motivation, comfort, and engagement when effectively performed, while ineffective warm-ups may reduce readiness and participation (Behm & Chaouachi, 2020); within this process, passive static stretching plays a significant role in shaping how participants feel and prepare for activity, as positive experiences may improve comfort, perceived flexibility, and confidence, ultimately enhancing performance (Konrad, 2021), whereas unclear or negative experiences may lead to uncertainty, reduced confidence, and decreased motivation (Samson et al., 2021).

Despite this, previous studies in sport science have largely focused on physical outcomes such as performance and flexibility, overlooking athletes' lived experiences and perceptions (Gimenes, 2022), thereby creating a social gap in understanding how individuals feel, think, and receive support in their specific contexts, particularly among local female futsal players in the Philippines where research remains limited.

Thus, this study aims to address this gap through a qualitative phenomenological approach that explores the lived experiences and perceptions of athletes regarding passive stretching in warm-up routines, in order to inform more effective and athlete-centered practices. The results of this study will provide coaches, physical education instructors, and sports program facilitators with a deeper understanding of how to implement warm-ups that include static stretching, and will be disseminated through university seminars, professional development workshops, sport-related conferences, and regional and national journals to contribute to evidence-based and effective warm-up practices for athlete preparation. Therefore, the present study aims to explore the lived experiences and perceptions of female futsal athletes regarding the use of passive stretching during pre-exercise routines. Specifically, this study seeks to answer the following research questions: (1) How do athletes describe their physical sensations after performing a warm-up that includes passive stretching? (2) What are the athletes' perceptions of comfort and readiness following passive stretching during warm-up? and (3) What benefits or challenges do athletes perceive when passive stretching is included in their warm-up routine in a coaching or training environment?

**Statement of the Problem**

This study aims to explore the lived experiences and perceptions of female futsal athletes regarding the use of passive stretching during pre-exercise routines. Specifically, this study seeks to answer the following research questions:

1. How do athletes describe their physical sensations after performing a warm-up that includes passive stretching?
2. What are the athletes' perceptions of comfort and readiness following passive stretching during warm-up?
3. What benefits or challenges do athletes perceive when passive stretching is included in their warm-up routine

**Methods**

This study adopted a qualitative phenomenological research design to explore and understand the lived experiences of female futsal athletes in relation to passive stretching during warm-up routines. A phenomenological approach is appropriate for examining how individuals interpret and make meaning of their personal experiences, particularly in the context of physical and psychological preparation in sports.

The primary aim of this design was not to measure variables, but to capture the depth of participants' perceptions, bodily sensations, and readiness associated with passive stretching. This approach enabled the researchers to generate rich, descriptive insights that reflect the essence of the athletes' experiences.

**Participants and Sampling**

The study was conducted at a public higher education institution Western Mindanao State University, Zamboanga City in the Philippines and involved female futsal athletes actively participating in training and competition. Participants were selected using purposive sampling to ensure that those included in the study had relevant experience with passive stretching during warm-up routines. The selection criteria required participants to be active team members, have prior exposure to structured warm-up practices, and be willing to share their experiences.

A total of ten participants were included in the study. This sample size is consistent with phenomenological research, where the focus is on depth of

understanding rather than generalization. The participants represented a range of experiences within the team, allowing the study to capture both common patterns and individual variations in perception.

**Data Collection Procedures**

Data collection was carried out through open-ended questionnaires and semi-structured interviews. Prior to data gathering, participants were informed about the purpose of the study, and their consent was obtained to ensure voluntary participation. The research instruments were carefully prepared and reviewed to ensure clarity and relevance to the research objectives.

During the data collection phase, participants were asked to describe their experiences related to passive stretching, including their physical sensations, levels of comfort, perceived benefits, and readiness for physical activity. Follow-up interviews were conducted to further explore their responses and provide deeper insights into their experiences. All responses were documented and transcribed to ensure accuracy in data analysis.

After the completion of data collection, the gathered information was organized and prepared for analysis. Participants' identities were protected through the use of codes and pseudonyms to maintain confidentiality.

**Data Analysis**

The collected data were analyzed using thematic analysis to identify patterns and meaningful insights from the participants' responses. The analysis involved several stages, beginning with the identification of significant statements related to the research questions. These statements were then examined to formulate meanings, which were subsequently grouped into clusters of themes.

Through careful comparison and interpretation, the themes were refined to accurately represent the participants' experiences. The process was guided by a phenomenological approach to ensure that the findings remained grounded in the participants' perspectives. This method allowed the researchers to construct a clear and organized representation of how passive stretching is experienced by athletes during warm-up activities.

**Ethical Considerations**

Ethical approval was obtained prior to data collection. Participants provided informed consent and were informed that participation was voluntary. Data were anonymized using coded identifiers and stored securely. All procedures posed minimal risk and ensured participant safety.

**Results**

The presentation of the findings focuses on the athletes' physical sensations during passive stretching, their perceptions of comfort and readiness following warm-up, and the benefits and challenges they encountered while performing passive stretching activities.

**1. How do athletes describe their physical sensations after performing a warm-up that includes passive stretching?**

1.1 How Did Your Body Feel (Physical Sensation)While Doing The Passive Stretching?

**Table 1.1.1**

*Enhanced Physical Comfort and Mental Readiness through Passive Stretching*

| Informant | Responses |
|---|---|
| Informant 1 | so I felt the tightness of my muscles but in the end of the stretching I….felt that my muscles relaxed |
| Informant 2 | So at first po syempre kapag ahmm mag begin palang it felt tight pero later na aadapt kasi yan ng body natin so syempre relax din |

| | |
|---|---|
| Informant 3 | Well I felt more ahh..light..lighter or at the same time tight |
| Informant 4 | At first very hard kase like hindi pa talaga sanay ang body pag the day or the times goes by nagiging ano na siya like mas maging comfortable na sya every ahh exercise , it feels relaxed and comfortable |
| Informant 5 | So as I what..like nakalagay dito is it trully help my ano,ahmmm,comfortable and syempre like before the activity like relaxed siya sa feeling so it really help me . |
| Informant 6 | Everytime I do passive stretching ahh I feel so comfortable and relaxed because my muscles are being activated so it loosen my muscle as well as my mind is ready to participat in a vigorous activity |
| Informant 7 | So my Body feel comfortable and ahh.. still nothing uncomfortable while doing the pasive stretching |
| Informant 8 | So yung body syempre can feel relaxed and calm |
| Informant 9 | So ahmm, so while doing it I felt , while doing the passive stretching I felt relax and calm and that's all yah.. |
| Informant 10 | I felt my body relaxed while doing the passive stretching |

In Table 1.1.1, the findings revealed that the athletes experienced initial muscle tightness during passive stretching, but this gradually changed into relaxation, comfort, calmness, and mental readiness as the stretching continued. Most of the informants described that passive stretching helped their muscles adapt and become more relaxed before physical activity. Accordingly, Informant 1 stated that she first felt tightness in her muscles but later experienced relaxation after the stretching. Similarly, Informant 2 shared that although the body initially felt tight, it eventually adapted and became relaxed. Informant 6 also emphasized that passive stretching made her feel comfortable and relaxed because it loosened her muscles and prepared her mind for vigorous activity. In addition, Informants 8, 9, and 10 consistently described feelings of calmness and relaxation while performing passive stretching. These findings suggest that passive stretching contributes not only to physical comfort but also to psychological readiness among athletes. This supports the study of Konrad et al. which stated that stretching can improve muscle relaxation, flexibility, and overall readiness for movement and sports performance.

**2. What are the athletes' perceptions of comfort and readiness following passive stretching during warm-up?**

2.1 What changes did you notice in your body after the warm-up?

**Table 2.1.1**

*Enhanced Physical Functioning and Well-being through Warm-up Activities*

| Informant | Responses |
|---|---|
| Informant 1 | So noticed that my body felt the tension but like in a lesser way na siya before, a lesser way that before doing the warm-up |
| Informant 2 | Well umm, I noticed that ahh I felt less tense, cause warm-up do really help me relaxing my whole system especially if I am consume by nervouses. |
| Informant 3 | So yung na noticed ko sa changes ng body ko, na less tense sya may mild soreness din and na increase yung umm flexibility. |
| Informant 4 | My body felt less tense, and can easily adopt na po during the drills or the game. |
| Informant 5 | Um I felt loose and less tense. I also felt light. |
| Informant 6 | I felt light and less tense. I felt my body heat from the statement I did. |
| Informant 7 | So, ahhh I feel like ano my flexibility increase hehehe |
| Informant 8 | I actually warm-up every morning, just a little warm-up just to loosen up or just to activate my muscles because I believe umm warming up everyday will increase my flexibility. So one thing that I noticed is that my flexibility increases as I do warm-up everyday |
| Informant 9 | more changes and less and mas nag increase yung flexibility for me |

| | |
|---|---|
| Informant 10 | Umm after warm up like ano oh like mas ano na sya like as what I said earlier.. Sa una ok ok pa sya after two day ganyan or one day after warm-up may ma fefeel ka lang sakit sa mga joints pero pag everyday kana mag stretching ano na mas nagiging loose na. |

In Table 2.1.1, the findings revealed that warm-up activities with passive stretching helped reduce muscle tension, improve flexibility, increase muscle looseness, and enhance overall physical functioning and well-being. Most informants observed that their bodies felt lighter, less tense, and more prepared after the warm-up. Accordingly, Informant 1 stated that her body still felt tension but in a lesser way compared before doing the warm-up. Informant 2 also explained that warm-up activities helped relax her whole system, especially when feeling nervous. Furthermore, Informant 7 shared that her flexibility increased after performing the warm-up, while Informant 8 emphasized that regular warm-up and stretching helped activate and loosen her muscles, leading to improved flexibility. Informant 10 additionally stated that continuous stretching made the body feel looser over time. These findings indicate that passive stretching positively influences flexibility, relaxation, and muscle readiness among athletes. This supports the findings of Li et al. which explained that stretching and warm-up activities can improve muscle flexibility, reduce stiffness, and support better neuromuscular functioning.

**2.What are the athletes' perceptions of comfort and readiness following passive stretching during warm-up?**

2.2 How comfortable was the passive stretching for you? Why?

**Table 2.2.1**

*Partnered Stretching Supports Muscle Activation and Flexibility While Managing Discomfort.*

| Informant | Responses |
|---|---|
| Informant 1 | For me it is more comfortable because I had my partner while doing the warm ups so I have my assistants. |
| Informant 2 | So uhhm the passive stretching is ano oh… parang like comfortable siya since uhmm… it really help me kasi syempre like.. may diba may partner yun siya ganyan.. mas feel ko tama yung ginagawa ko that's why really comfortable siya |
| Informant 3 | Uhhm.. it is very comfortable, because yes again it activate my muscle not just activating my muscles but streching the muscles that needed to be strech everyday, it is relaxing as well because uhmm… it will let you be ready not just your muscles not just your body but as well your mind to go through activity throughout the day |
| Informant 4 | "I felt comfortable because it is like any other stretching we did during training." |
| Informant 5 | Comfortable enough. |
| Informant 6 | So as for the sports it self passive stretching is very important since we are uhmm playing noh with the use of our lower extemities which is our legs, our foot, so basically we really need to press and strech that part with partners strenght. |
| Informant 7 | Just a bit comfortable kay.. kasi kind a pressure whenever I have partner to assist. |
| Informant 8 | Uhmmm medyo comtable siya. Pero due to pressure and body position may na feel din ako na ano.. tense sa muscle ko |
| Informant 9 | For me I'm not that comfortable kasi…because of the pressure, kahit wala pang game pressured ano yung mangyayare. Pressured kasi goal keeper. |
| Informant 10 | I think yung ano…lalo na sa ano oh if may goal kana para maging ahh flexible like interms of ahh experiencing sakit sa ganito ano nalang like nasa utak mo nalang ano nalang may goal ka para sa next ano mona para maging flexible ka next ganyan. |

In Table 2.2.1, the findings showed that athletes generally perceived passive stretching as comfortable because of partner assistance, muscle activation, relaxation, and improved readiness, although some informants experienced pressure and mild discomfort during the activity. Most participants viewed partnered stretching as

beneficial in helping them properly perform the exercises and prepare for physical activity. Accordingly, Informant 1 stated that passive stretching was more comfortable because she had a partner assisting her during the warm-up. Similarly, Informant 2 explained that having a partner made her feel that she was performing the stretching correctly, which increased her comfort. Informant 3 also shared that passive stretching activated and stretched the muscles while helping both the body and mind become ready for activity. However, Informant 7 mentioned experiencing slight discomfort due to the pressure applied by a partner, while Informant 8 reported tension caused by body position and pressure during stretching. These findings suggest that passive stretching with partner assistance promotes comfort, muscle activation, and readiness, although improper pressure may lead to discomfort for some athletes. This supports the study of Kim and Park which explained that partner-assisted stretching can improve flexibility and comfort when properly performed, but excessive pressure may also result in discomfort.

**2.What are the athletes' perceptions of comfort and readiness following passive stretching during warm-up?**

2.3 Did the passive stretching help you feel more ready for physical activity? Why or why not?

**Table 2.3.1**

*Holistic Physical and Psychological Readiness Through Stretching*

| Informant | Responses Statement |
|---|---|
| Informant 1 | I think yes, kasi It ahm Its help me feel ready because my muscle were not that stiffness.<br>Yes, It helps my body ahm… warm up and be ready for the activity. |
| Informant 2 | I think yes, kasi It ahm Its help me feel ready because my muscle were not that stiffness.<br>Yes, It helps my body ahm… warm up and be ready for the activity. |
| Informant 3 | Yeah... I feel ready but for some reason I was nervous because, yeah, I was the goalkeeper, Pressure is there. I was the one gonna catches the ball, yeah.<br>Yes, ahm because my body felt less tense and ready. |
| Informant 4 | Yeah... I feel ready but for some reason I was nervous because, yeah, I was the goalkeeper, Pressure is there. I was the one gonna catches the ball, yeah.<br>Yes, ahm because my body felt less tense and ready. |
| Informant 5 | Yes, through stretching we can move freely without any ahmm sourness, noh from our legs.<br>Yes, every time ahm especially in having like a sport or like a game. Passive stretching really important together with the warm up, it's really important having those activities to ready your body to have ahh, to have a game very smooth, to have body activated, your muscle will not sour every time you have vigorous activity as you go through a long the game. |
| Informant 6 | Yes, through stretching we can move freely without any ahmm sourness, noh from our legs.<br>Yes, every time ahm especially in having like a sport or like a game. Passive stretching really important together with the warm up, it's really important having those activities to ready your body to have ahh, to have a game very smooth, to have body activated, your muscle will not sour every time you have vigorous activity as you go through a long the game. |
| Informant 7 | Ahm yes. Because it warmed up my body. The lightness I felt and the comfortability made me ready for physical activity. |
| Informant 8 | Yes of course since ahm footsal diba like very ano sya intense na game ganyan so ah by doing the passive stretching so it really help me to ano to ready for the physical activity mas ganado mag laro.<br>Yes... whenever I'm... Finish doing the passive stretching, I just felt like my body is more lighter and then urge to do any physical activity. |
| Informant 9 | Yes of course since ahm footsal diba like very ano sya intense na game ganyan so ah by doing the passive stretching so it really help me to ano to ready for the physical activity mas ganado mag laro.<br>Yes... whenever I'm... Finish doing the passive stretching, I just felt like my |

| | |
|---|---|
| | body is more lighter and then urge to do any physical activity. |
| Informant 10 | For me yes, kasi ahm as, as a physical ano physical education ahm major ah ano talaga like mas important na we have ahm a proper ah exercise and also ahm and give Talaga ng knowledge hindi, before kasi hindi Talaga ano ba like walang knowledge about sa exercise so kaya "Ay masakit ang katawan, hindi kaya sa ganito ganyan" pero ngayon ah ikaw na Talaga mismo naga salita mag stretching. So, para hindi ka magsisisi at the end of the day. |

In Table 2.3.1, the findings revealed that passive stretching helped athletes feel more physically and psychologically ready for physical activity by reducing muscle stiffness, improving mobility, increasing motivation, and preparing the body for intense performance. Most informants believed that stretching effectively prepared their bodies for sports participation and vigorous movement. Accordingly, Informant 1 stated that passive stretching helped reduce muscle stiffness and made her feel ready for activity. Informant 5 also emphasized that stretching allowed athletes to move freely without soreness and helped activate the body before games. Similarly, Informant 7 shared that the warmth, comfort, and lightness she felt after stretching made her more prepared for physical activity. Informants 8 and 9 additionally explained that passive stretching increased their motivation and readiness to perform in intense futsal games. Moreover, Informant 10 highlighted that proper knowledge about stretching increased awareness of its importance in preventing body pain and improving performance. These findings indicate that passive stretching contributes to both physical preparedness and psychological confidence among athletes. This supports the study of Magnusson et al. which stated that stretching before activity can improve movement readiness, reduce stiffness, and enhance athletic performance.

**3. What benefits or challenges do athletes perceive when passive stretching is included in their warm-up routine?**

3.1 Did you experience any discomfort or difficulty during the stretching? If yes, what was it?

**Table 3.1.1**

*Partnered Stretching Supports Muscle Activation and Flexibility While Managing Discomfort.*

| Informant | Responses |
|---|---|
| Informant 1 | Yes, kase ano hindi ako flexible haha… stretching flexible |
| Informant 2 | So.. some ano like may ano talaga like sa mga stretching like kapag nasosobrahan yung impact masyado yung kapag yung mga ahmm.. yun pag pag stretch is sumosobra sya so like yun lang naman yung challenges pero… like mas ano sya mas lamang parin yung pag kacomfortable nya… yun lang |
| Informant 3 | Yes uhmm.. Muscle tension due to applied pressure. |
| Informant 4 | None…. |
| Informant 5 | No….. |
| Informant 6 | So far… Wala…uhmm wala normal pressure sa game. |
| Informant 7 | Ahhmm.. none so far |
| Informant 8 | None.. |
| Informant 9 | Uhmm. I find no uhmm.. discomfort or any concern about my stretching is just that uhmmm.. everytime that I do stretch if .. if I skip a day or two days not stretching it feels like I am .. my body is back to square one because it feels like my body will… my body will go through again to beginning of my journey of warming up and stretching.. |
| Informant 10 | Sa ano oh sa pag… pag ina pag mayinaassist ka if.. if yung isa hindi talga magproper… proper posture or proper position.. ang position talaga yan talaga ang mahirap kasi hinehelp mo siya pero yung tao nayun is ahh.. hindi talaga mag ano sayo… makinig ganyan so yun talaga ang mahirap na part… for me, wala naman if ano lang talaga if may goal and may nasa nakatatak na talaga sa utok ko na ahh.. need mo talaga gawin ito para sa ano lng din para sa health and goal |

In Table 3.1.1, the findings revealed that although several athletes experienced mild discomfort and challenges during passive stretching, most informants still perceived the activity as beneficial for flexibility, muscle activation, and overall physical preparation. Some participants encountered difficulties such as overstretching, muscle tension, improper posture, and pressure from assisted stretching. Accordingly, Informant 1 stated that she experienced discomfort because of limited flexibility during stretching. Informant 2 also shared that excessive stretching sometimes caused discomfort due to too much impact, although the activity still remained more comfortable overall. Similarly, Informant 3 experienced muscle tension caused by applied pressure during stretching. On the other hand, Informants 4, 5, 6, 7, and 8 reported no discomfort while performing passive stretching. Informant 9 explained that skipping stretching for several days caused her body to feel as though it had returned to the beginning stage of preparation, while Informant 10 highlighted that improper posture and lack of cooperation during partner-assisted stretching created challenges. These findings suggest that passive stretching may involve minor discomforts, particularly when flexibility is limited or stretching is improperly performed, but athletes still recognize its importance for readiness and health. This supports the study of Konrad et al. which noted that stretching may sometimes produce temporary discomfort, yet it remains beneficial for improving flexibility, muscle preparation, and physical performance.

**Discussion**

**Physical Sensations and Bodily Responses to Passive Stretching**

*Muscle Sensation, Relaxation, and Body Adaptation.* In the initial clustered theme displays participants' sensitivity to bodily sensations through their experiences during the initial stage of passive stretching.Many participant experience muscle tightness,stiffness or slight discomfort at first during the stretch. However, the stretching continue positive sensations began to arise where the discomfort had been ,theese were sensations of relaxation,release, and adjustment in the body. This states that rather than passive stretching, the body first went through a process of transition from tense/inhibited to prepared, allowing for better results.

From a phenomenological perspective,this finding identifies the athletes' awareness in their bodily sensations, which is a important in understanding their lived experiences. The participators became more conscious on how their muscles response during stretching and recognize the gradual shift from tension to ease. This body adaptation recommend that passive stretching may help athletes transition more smoothly into physical activity by making them feel more connected to and in control of their bodies before performance.

This finding are supported by the other authors presented in the study. Passive stretching sometimes creates an initial feeling of resistance or tightness because of the fact that the muscles and connective tissues are being elongated. Through over time, the body adapts through viscoelastic relaxation, allowing the muscles to become less tense and more flexible. Accordingly to Magnusson (2021), mechanisms such as stress relaxation and creep contribute to increased extensibility and range of motion, which is consistent with the participants' experiences of moving from tightness to relaxation. This supports the interpretation that passive stretching promotes physical adaptation and readiness by gradually reducing muscle resistance and discomfort

*Reduced Muscle Tension and Improved Flexibility.* The participants noticed the physical benefits they experienced after performing stretching passively. Many athletes expressed that they felt lighter in their bodies, looser in their muscles, and found movement easier and less restricted during warm-up. These answers indicate

that passive stretching was considered an effective method for decreasing the stiffness of muscles and increasing their elasticity during warm-ups.

The results indicate that participants regarded passive stretching as something to release tension and enhance mobility. When muscle tension reduced, it appears that forward players grew more confident in their actions and be able to do drills and change direction and perform sportspecific actions and all that without feeling discomfort or restriction of any sort. In futsal where movement, control, coordination, footwork and balance are necessary components, the enhanced perception of flexibility will be very important in how athletes perceive their readiness to perform.

Study literature provided strong support for the present finding. Earlier studies have shown that warm-up routines include the application of passive stretching to enhance the range of motion of joints and reduce the stiffness of muscles. This is especially so when combined with low intensity aerobic activity (Behm & Chaouachi, 2021, Ahmed & Yildiz, 2023). Also, short-duration passive stretching, especially if less than 60 seconds in duration per muscle group can improve flexibility without significant impairment in performance (Gonzalez et al., 2024) More studies also prove that stretching helps in improving the range of motion (Esteban-García et al., 2024) The studies help to confirm whether the athletes' decreased muscle tension and increased flexibility correspond to a meaningful and lived experience and warm up effect.

**Perceived Comfort and Readiness Following**

*Passive Stretching Enhanced Physical Comfort and Mental Readiness Through Passive Stretching.* The findings reveals that the passive stretching have really played a significant role for shaping the overall warm-up experiences of female futsal athletes, based in the participants statements, the activity involve a progression from initial muscle tightness to relaxation, increased flexibility, and improved comfort. Participants also describe the importance of partner assisted stretching in providing support and guidance, while also acknowledging minor discomfort in some cases. In overall for the clustered themes highlighted that passive stretching contributed to both physical ease and a sense of preparedness before engaging in training or competition.

In the phenomenological perspective, some findings suggest that the passive stretching is not really a physical activity but a meaningful experience that influences body awareness, emotional state, and readiness. The transition from discomfort to comfort reflects the athletes' adaptation process, while the presence of partner interaction emphasizes the relational aspect of the experience. This indicates that passive stretching supports not only physiological readiness but also psychological and social dimensions, allowing athletes to feel more confident, focused, and in control of their performance.

This interpretation is support by the all ready explored literature which helps the structured warm-up routines enhance both physical and psychological readiness among athletes. Studies also shown that passive stretching can also improve flexibility and reduce muscle tension when properly integrated into warm-up routines ( Ahmed & Yildiz, 2023). Moreover, warm-up activities have found that it also contribute to mental focus,confidence,and movement efficiency (Behm & Chaouachi, 2021). These findings align with the present study, confirming that passive stretching plays a significant role in preparing athletes both physically and mentally for performance.

*Comfort and Support in Partner-Assisted Stretching.* This clustered shows the social element of the warm-up experience. Individuals who used partner-assisted stretching described it as helpful, comforting, and beneficial in that it helped get the right stretch, helped them reach a deeper stretch, and felt supported physically. This

means that passive stretching is influenced not only the movement where you're being stretched but also the partner's behaviour and presence and efforts exerted on behalf of the partner.

This is a crucial finding because it illustrates that comfort during warm-up is not just an individual or physical experience, but impacted by interpersonal interaction. Participants were able to feel more at ease with those that had partners who appropriately utilized pressure, who actively communicated and helped with their position. Stretching as part of an assisting partner was also shown to be a role for building trust, collaboration and mutual support. Sports such as Futsal are both a necessity for building these qualities teamwork/communication in order to win games.

Although some of those who participated in this study stated that they had experienced a certain amount of discomfort with the application of pressure (or as a result of poor positioning) while participating in passive stretching; however, the results also suggested that proper communication, mutual trust, and an awareness of each other's needs and limitations, were as important to success as was the effectiveness of the stretch itself.

The literature used in the research supports this interpretation. With partner-assisted stretching, the stretching is more effective. The partner can assist with guidance, comfort, and safety, ensuring that the athlete has correct technique, and is using the right muscle group. Kim and Park (2022) said that the quality of stretching is superior with external assistance from a knowledgeable and responsive partner. Nevertheless, the literature suggests that too much pressure and poor timing, or a lack of communication, can make things uncomfortable. The finding that partner-assisted passive stretching has a social rather than a mere physical character is supported by these studies, which demonstrate that interaction and trust are involved in stretching.

**Perceived Benefits and Challenges**

*Managing Physical Challenges and Maintaining Comfort.* Participants mostly had positive experiences with passive stretching; nevertheless, not all experiences were free from discomforts and challenge. This is the fifth clustered theme. A few athletes experienced minor issues like reduced flexibility, improved stretch-related pain, awkward partner positioning, overuse of partner pressure, and extra strain. Most respondents did not consider these experiences entirely detrimental. Rather, they thought of them as manageable, commonly encountered or expected when stretching.

The results affirm that the participants understood the physical activity of passive stretching to be safe yet tiring. If the body experiences mild discomfort it does not become less valuable nor does it suggest this, but rather that it is an adjustment and adaptation towards more flexibility. The experienced sportsperson will tolerate discomfort temporarily provided discomfort enhances comfort readiness or even performance.

The findings also emphasize the need for moderation and proper technique at the same time. Whenever discomfort is excessive, unnecessary or a result from a postural fault, excess pressure, wrong execution etc, it can block the benefits of the warm-up. So, based on what the participants share, effective passive stretching has the right intensity and is safe. It is something comfortable and familiar to one's own body, rather than just doing the movement.

This is supported by the literature in the study. Differences in the stretching results could be due to variations in sex, training background, age, body composition, and flexibility levels. This might explain why some participants felt more discomfort than others. The idea that individual variations may have a noted effect on stretching perception and tolerance is supported by Ayala et al. (2021).

Moreover, athletes who perform passive stretching may not feel discomfort in due course, which indicates that familiarising over and over can make one tolerate and feel comfortable (Warneke et al., 2024). Yet, the literature shows that if passive stretching lasts too long or is poorly performed, then muscle stiffness or neuromuscular activation may be adversely affected (Li et al., 2023). Evidence shown that discomfort is not always a bad sign that you are stretching wrongly but only if the discomfort is acceptable and with the right techniques, aids, individual needs, etc.

**Conclusions**

The findings revealed that athletes experience a progression of physical sensations during passive stretching, beginning with muscle tightness and stiffness and gradually transitioning into relaxation, comfort, and body adaptation. As stretching continues, the body becomes more responsive, leading to reduced tension, improved flexibility, and a feeling of lightness. This shift reflects the body's natural adaptation process, where initial discomfort transforms into ease and readiness for movement. Overall, passive stretching allows athletes to become more aware of their bodily sensations, helping them achieve a state of physical comfort and preparedness before engaging in activity.

Athletes perceived passive stretching as a key factor in enhancing both comfort and readiness for physical activity. Participants reported feeling more relaxed, focused, and confident after completing their warm-up, indicating improvements not only in physical condition but also in psychological state. The reduction of muscle stiffness and increased mobility contributed to a sense of preparedness, allowing athletes to perform movements more efficiently. Additionally, passive stretching served as a transition into a performance mindset, where athletes felt mentally engaged and ready to participate in training or competition.

The study found that passive stretching provides several benefits, including reduced muscle tension, improved flexibility, enhanced movement, and increased physical and psychological readiness. Partner-assisted stretching further improved the experience by offering support, proper guidance, and deeper stretch effectiveness. However, some athletes also reported minor challenges such as discomfort due to excessive pressure, improper positioning, or limited flexibility. Despite these issues, such challenges were generally considered manageable and part of the adaptation process. Overall, passive stretching was viewed as a beneficial warm-up component that contributes to both comfort and readiness while requiring proper technique and communication to minimize discomfort.

**References**

Afonso, J., Clemente, F. M., Nakamura, F. Y., Morouço, P., Sarmento, H., & Ramirez-Campillo, R. (2021). Time to move from mandatory stretching? We need nuance in recommendations about stretching before and after exercise. Frontiers in Physiology, 12, 719139. https://www.frontiersin.org/journals/physiology/articles/10.3389/fphys.2021.714166/full?utm_source=chatgpt.com

Ahmed, H., & Yildiz, M. (2023). Effects of combined warm-up and passive stretching on flexibility and performance. Ahmed & Yildiz (2023) – PubMed

Alter, M. J. (2020). Science of flexibility (4th ed.). Human Kinetics. https://us.humankinetics.com/products/science-of

Ayala, F., et al. (2021). Knowledge and application of stretching techniques among athletes.https://www.tandfonline.com/doi/abs/10.1080/02640414.2013.861606

Behm, D. G., & Chaouachi, A. (2020). A review of the acute effects of static and dynamic stretching on performance. European Journal of Applied Physiology. https://doi.org/10.1007/s00421-011-1879-2?utm_source=chatgpt.com

Behm, D. G., & Chaouachi, A. (2021). The role of stretching in warm-up routines and performance.https://doi.org/10.1007/s40279-023-

Bishop, D. (2021). Warm-up strategies for sport and exercise: Mechanisms and applications.https://doi.org/10.2165/00007256-200333060-

Braun, V., & Clarke, V. (2021). Thematic analysis: A practical guide. Sage. https://uk.sagepub.com/en-gb/eur/thematic

Creswell, J. W., & Poth, C. N. (2021). Qualitative inquiry and research design: Choosing among five approaches (5th ed.). Sage. https://us.sagepub.com/en-us/nam/qualitative-inquiry-and-research

Esteban-García, P., Abián-Vicen, J., Sánchez-Infante, J., Ramírez-de-la-Cruz, M., & Rubio-Arias, J. Á. (2024). Does the inclusion of static or dynamic stretching in the warm-up routine improve jump height and range of motion? A systematic review with meta-analysis. Applied Sciences, 14(9), 3872. https://doi.org/10.3390/app14093872?utm_source=chatgpt.com

Faigenbaum, A. D., & McFarland, J. E. (2021). Dynamic warm-up protocols and youthperformance.https://pubmed.ncbi.nlm.nih.gov/17273458/?utm_source=chatgpt.com

Fernández-Agulló, R., Sánchez-Sánchez, J., Rodríguez-Fernández, A., & Ramírez-Campillo, R. (2022). Effects of stretching during warm-up on motor performance: A protocol for systematic review and meta-analysis. BMJ Open Sport & Exercise Medicine, 8(1), e001281. https://doi.org/10.1136/bmjsem-2022-001281?utm_source=chatgpt.com

Fradkin, A. J. (2020). Warm-up practices and their effects on physical and psychologicalreadiness.https://doi.org/10.1080/02640410400021579?utm_source=chatgpt.com

Franco, B. L., et al. (2024). Effects of stretching on endurance and power performance. https://doi.org/10.1007/s00421-020-04539-8?utm_source=chatgpt.com

Gonzalez, A. M., et al. (2024). Duration of stretching and its effects on strength and flexibility.https://doi.org/10.1519/JSC.0000000000003177?utm_source=chatgpt.com

Hernández-Martínez, J., García-Unanue, J., Gallardo, L., & Sánchez-Sánchez, J. (2023). Effects of warm-up stretching exercises on physical performance in youth soccer players. Frontiers in Physiology, 14, 1189342. https://doi.org/10.3389/fphys.2023.1189342?utm_source=chatgpt.com

Jochum, D., Behm, D. G., & Chaabene, H. (2025). Acute effects of passive stretching with and without vibration on flexibility and physical performance in young athletes. Journal of Functional Morphology and Kinesiology, 10(1), 17. https://doi.org/10.3390/jfmk10010017?utm_source=chatgpt.com

Kim, J., & Park, S. (2022). Effects of partner-assisted stretching on flexibility and performance.https://doi.org/10.1519/JSC.0b013e3181e06b66?utm_source=chatgpt.com

Konrad, A., Tilp, M., & Nakamura, M. (2024). Effects of stretching on muscle performanceandflexibility.https://doi.org/10.3389/fphys.2021.677981?utm_source=chatgpt.com

Li, Y., et al. (2023). Impact of prolonged stretching on neuromuscular. https://doi.org/10.1007/s00421-018-4026-3?utm_source=chatgpt.com

Lincoln, Y. S. (2020). Trustworthiness criteria in qualitative research. https://us.sagepub.com/en-us/nam/naturalistic-

Magnusson, S. P. (2021). Passive properties of muscle and connective tissue in stretching.https://doi.org/10.1113/jphysiol.1996.sp021172?utm_source=chatgpt.com

Thacker, S. B., et al. (2022). The role of warm-up in injury prevention and performance.https://doi.org/10.1136/bjsm.2003.009373?utm_source=chatgpt.com