



P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (RJIF): 5.38
IJPESH 2024; 11(4): 90-97
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www.kheljournal.com
Received: 17-05-2024
Accepted: 21-06-2024

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Mental imagery (MI), an unknown viable sport psychology intervention: Revelation from three high schools in Eswatini

Godwin Dunira Hungwe

Abstract

The study sought to establish whether coaches, trainers and athletes in the three sampled high schools of Eswatini were aware of the existence of mental imagery as a sport psychological intervention and if they applied mental imagery during skills training and performance and thirdly, to find strategies of encouraging the adoption of mental imagery (MI) by high school coaches, trainers and athletes alike. It adopted a qualitative approach and a descriptive case study design, and was informed by the Bio-informational theory advanced by Lang in 1977. Questionnaires were distributed to the coaches manning soccer, netball and volleyball (N=9), who were purposively selected and two athletes in each of the three sporting codes per school (N=18). The study established that, high school teachers from the sampled three schools had no clue about mental imagery (MI) at all, and were not using mental imagery interventions during skills development and for performance enhancement. It also emerged from this study that the participant coaches had never attended a course or coaching clinic on the role of sport psychology in the modern movement culture, which was worrisome and concerning, in view of the fact that, this discipline is not new. It is envisaged that this study exposes the yawning disparities in the access to sport knowledge, coaching methodologies and especially the non-application of sport science in the local school system with the potential of stifling sport growth and development, which should concern the Ministry of Education and Training (MoET), under whose aampit school sport falls.

Keywords: Mental imagery (MI), imagery ability, sport psychology, vividness, controllability

Introduction

The realm of sport psychology has evolved and gained a lot of traction in recent decades with the impact of transforming the face and the modus operandi in all sporting modalities. Mental imagery has attracted a lot of research to validate its efficacy with reference to; sport performance, skills development more so, as a psychological coping intervention to mitigate the rigors of sport. (Martin, 1999; Di Corrado *et al.*, 2020, Omar-Fauzee *et al.*, 2009; Gulbahce, 2018; Dogan *et al.*, 2014) ^[42, 19, 45, 28, 20]. Consequent to the above, a lot of studies have focused their lens mainly on two aspects of it namely; imagery use in skills and performance enhancement, and athlete imaging ability. (Morris *et al.*, 2005) ^[43]. These continuums are premised upon notions of; vividness and controllability of the simulated or visualized mental images. (Morris *et al.*, 2005; Cumming & Williams, 2014; Cumming *et al.*, 2017) ^[19, 43, 15].

Vividness of the mental practice refers to how close the imaging is to the imagined task or situation or the sensory appropriateness of a mental image. On one hand, controllability of the imaging practice refers to the manipulation of the mental images so much they help the athlete to achieve the desired task or skill. In other words, controllability kicks in when an athlete is able to manipulate the image in its precise details.

(Guillot & Colle, 2010; Cumming & Eaves, 2018) ^[38, 16]. There are two types of mental imagery as applied to sport namely; internal and external imaging. The former refers to the athlete's ability to image and execute a skill from within or their vintage point perspective, (Epstein, 1980; Harris & Robinson, 1986) ^[30], while the latter denotes observing oneself as an external observer for example, when a prepared script is read to the athlete and then visualizing the depictions in the script. (Beilock *et al.*, 2001) ^[7].

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Connected to the above is the fact that mental imaging ability varies from one imager to the next and recent research has shown a disparity in favor of experienced elite performers as opposed to novices. That is, imagery ability is the imager's capacity to achieve controllable and vivid impressions that last for a considerable time span to address a particular situation or perform a given sporting skill. The above implies that, athletes with a heightened mental imagery (MI) capacity benefit more from it than those with a low (MI) ability. (Morris *et al.*, 2005; Hall *et al.*, 1992; Williams *et al.*, 2011; Bali, 2015)^[43, 29, 67, 45, 6].

Sport psychology has been variably defined and as a result, arriving at a widely accepted definition is a daunting task. Several scholars have viewed sport psychology from different viewpoints. Sathish, (2017), perceives sport psychology as a supportive department of sport science applied to sporting circumstances geared towards understanding and predicting human behavior. Adling, (2017) views same as, a field encompassing the disciplines of kinesiology and psychology in as much as they affect sport performance as well as understanding human behavior in sport. Given the above perspectives, sport psychology can then be perceived as a discipline of applied psychology concerned about how the science of psychology is applied to sport and exercise in as far as they provide insights on human behavior in the sphere of sport. Therefore, sport and exercise psychology revolves around the adaptability of the athlete to the rigor of competition and sporting activities including but not limited to; the stress of training, anxieties of competition, building a positive self-image and self-confidence among a host of other factors.

On one hand, mental imagery is defined by Hidayat, (2011)^[32] as, a mental activity involving the creation and recreation as well as manipulation of the correct image or motor experience in one's memory. Omar-Fauzee *et al.*, (2009)^[45], somewhat concurs with the above view determining that, mental imagery is a sport psychological coping mental technique in which the athlete recreates or regenerates voluntary (intentional) and involuntary (unintentional) experiences drawn from the memorial domain. Some scholars critically assert that, these mental images occur in the absence of the actual stimulus but, informed by the quasi-sensual, quasi-affective and quasi-perceptual domains with a lasting psychological and physiological effect on the athlete. The author views mental imagery as, a process of manipulating, visualizing, undergoing a mental rehearsal coupled with creating and recreating mental and emotional events, tasks and skills to be performed in the confines of sport. The coping strategy helps athletes to develop a positive self-image, improve concentration, drum-up self-confidence as well as overcoming a host of other psychological demands placed upon the shoulders of sport performers.

While many scholars have acknowledged the role of mental imagery in providing athletes with a winning edge in modern sporting pursuits, many places in the south remain in abject ignorance of the pivotal role of sport psychology in motor skills training and its capacity to enhance sport performance, and sport self-efficacy. (Williams *et al.*, 2011; Williams *et al.*, 2013; Di Corrado *et al.*, 2020)^[67, 68, 19]. Waldenmayer & Ziemainz, (2007), reinforce the above perspective, observing that, although sporting contests are roundly won based on mental or psychological skills, sadly, the majority of elite performers devote only 5-10% of their training schedules towards sharpening their mental skills. In this context, it can then be opined that athletes who are oblivious about the value

of sport psychology and mental imagery in particular, are victims of inadequate sport grooming. It is also averred that sport training and performance in the absence of sport psychology interventions, is not only unfortunate but also grossly incapacitated, to say the least. The above implies that, such athletes are unable to take advantage of the well-publicized benefits of mental imaging in as far as improving their self-image, overcoming stress, anxiety and negative self-talk, as well as edifying their self-confidence are concerned. (Mamassis & Doganis, 2004^[20]; Omar-Fauzee *et al.*, 2009^[48]; Alp & Horozoglu, 2018; Alexander *et al.*, 2019; Bali, 2015)^[45, 3, 2, 6].

Many scholars, coaches, trainers and athletes across the globe have linked mental imagery (MI) to improved motor skills and sport performance. (Jackson *et al.*, 2014; Cakmaci, 2016; Maxwell, 2013; Gulbahce, 2018^[28]; Williams *et al.*, 2011; Paivio, 1985)^[46]. Some studies have linked (MI) to a motivational role, (Defrancesco & Burke, 1997)^[18] including the wide use of mental imagery technique across many sporting modalities such as tennis and golf, (Rhea *et al.*, 1997; Atienza *et al.*, 1998)^[4]. Very few studies have focused on whether coaches in southern Africa are aware of the existence of mental imagery and its role as a psychological coping intervention in as far as high school sport performance and skills development are concerned, which is the object of this study.

1.1 Statement of the problem

It seems apparent that although the field of sport psychology is not new, its embrace in developing countries, has been tediously slow and unintentional, to say the least. A gamut of literature alongside testimonies from elite athletes re-echo the notion that sporting contests nowadays revolve around the head. The above is summed up by Andres Pirlo's remarks that, football is played with one's head, and the feet assisting as tools. This implies that the sporting sphere has since shifted from being a mere physical encounter towards a mental or cognitive undertaking. Consequent to the above, sport psychology is increasingly becoming the difference that makes the difference in as far as it trains athletes to be more focused, confident, resilient, motivated more so, to be able to summon a panoply of strategies to regulate their emotions in the face of high pressure sporting encounters (Jones, 2003)^[35].

In view of the aforesaid, it is concerning that coaches and trainers in Eswatini schools are somewhat lethargic and noncommittal in as far as embracing sport psychological interventions such as, mental imagery is concerned. This is notwithstanding the overwhelming empirical evidence documenting its proven record in improving sport skills and performance. How then can young athletes be expected to perform to the best of their ability if they are not empowered to do so through proven modern scientific interventions? This thought paper seeks to find out if coaches and athletes in the high school system of Eswatini are aware of the existence of sport psychology therapeutic intervention, of mental imagery, and whether they intentionally apply them during training and competitions, as well as exploring strategies to uplift the place of sport psychology in Eswatini high school sport. No study has explored this dimension with particular reference to Southern Africa, hence, the justification of this enquiry.

This enquiry seeks to establish answers to the following study objectives;

- Determining if the coaches, trainers and athletes in high schools of Eswatini are aware of the existence of mental

imagery as a sport psychological coping and therapeutic intervention.

- Determining to what extent do coaches, trainers and athletes apply mental imagery prescriptions during skill training and during performance in tournaments.
- Finding lasting solutions to encourage the application of sport psychology interventions with particular reference to, mental imagery techniques, among coaches, trainers and athletes in the high school system of Eswatini.

1. 2 Assumptions of the study

The had the following assumptions

- That high school coaches, trainers and athletes are unaware of the existence and the role of sport psychological interventions such as, mental imagery.
- That high school coaches, trainers and athletes do not apply sport psychological interventions such as, mental imagery, during skills training and performance.

2. Literature Review

2.1 Theoretical framework

The study undertook to find-out if coaches and athletes are aware of sport psychology interventions with particular reference to, mental imagery, secondly, whether they intentionally apply mental imagery during training and performance. The researcher adopted the tried and tested Bio-informational theory advanced by Lang, (1977) [36]. The model proposed the Layered Stimulus and Response Training (LSRT) framework in assisting athletes to improve on their imagery ability. In a nutshell, the Bio-informational theory advances that, the imaging process is a set of propositions stored in the long-term memory of the brain comprising of; stimulus and response. The *stimulus* refers to sensory information about the situation being imaged, and *response* refers to how the athlete processes physiological and emotional (kinesthetic impulses), that can be so strong as if it were the actual physical performance. The above implies that, mental imagery revolves around the brain's information processing capacity of coded or layered information stored in the long-term memory. (Lang, 1979 [37]; Hecker & Kaczor, 1988 [31]; Cumming *et al.*, 2017 [15]). The Bio-informational theory alongside the LSRT framework have lasting implications for imagery rehearsal and imagery ability, hence, pivotal and relevant for this study, in the context of high school sport in Eswatini.

Sport psychology is a division of applied psychology which endeavors to unpack human behavior and adaptation in sport training and competitive scenarios. The discipline of sport psychology has been gaining momentum in recent decades in terms of its acceptance and application to the sporting realm. It is a widely accepted fact that the application of sport psychological factors in sport training and competitive situations gives athletes a competitive edge over their opponents. (Mamassis & Doganis, 2004) [20]. It is for this reason that knowledge of sport psychological interventions ceases to be just an option, but an imperative, in school sport. In this context, it is a given that athletes, coaches and trainers deficient of this vital sport development tool, are at a decided disadvantage in terms of their capacity to elevate their confidence level and reach optimal arousal level during performance including, the management of competition pressures.

Although this study focuses on whether coaches, trainers and athletes in high schools of Eswatini are aware of the existence of psychological coping strategies such as, mental imagery,

and its use, it is a given that the lack of knowledge about mental imagery interventions has lasting effects on the quality of athletes who graduate from the school system into the club system. Ultimately, the quality of athletes that filter into national teams also becomes compromised affecting results at international level. This reality is not only concerning but saddening, particularly so, when torch bearers, the teachers, are themselves unsighted, hence, shepherding young athletes astray. However, anything outside the realm of the high school is outside the scope of this thought paper, but none the less, worthy pursuing on its own.

2.2 Factors affecting the application of imagery in sport

The psychological and mental preparedness plays a pivotal role in sport performance and elite performers often regard mental readiness as the difference between winning and losing. Arnold Palmer, a professional golfer added weight to the above perspective contending that the game of golf is 90% psychological. (Bali, 2015) [6]. While there is no contention on the fact that the effective and efficient practice of mental imagery results in positives in motor skills development and improvements in performance, there are several factors that enhance or inhibit the full application of mental imagery within the arena of contemporary sport, for example; imagery ability, the skill level of the performer, nature of the task, individual differences, personality and intellect.

Imagery ability refers to the athlete's capacity to image vivid (rich sensory image) and controllable (preciseness of the imagined event) mental images for a reasonably sustained period to achieve the desired imagery rehearsal, dependent upon the athlete's experience. The images come from the sensory long-term memory domain which are encoded or learned through experience. Consequently, the elite athletes would have mastered and be in a position to manipulate the imaging skill compared to novice amateur athletes. Ideally, the more experienced and successful performers draw from the internal realm of mental imagery which triggers kinesthetic sensation or feedback through the activation of muscular activity compared to less experienced athletes. As the performer rehearses the skill or event from within, they experience the feel of the imagined skill or event, activating the kinesthetic feedback in the process. (Harris & Robinson, 1986 [30]; Glisky *et al.*, 1996 [24]; Di Corrado *et al.*, 2020) [19].

The nature of the task at hand influences the effectiveness of mental rehearsal that is, whether the task is of a cognitive or motor skill nature. Studies have shown that cognitive tasks requiring decision making and perception benefit more from mental practice (cognitive general-involving tactics) than physically inclined tasks (cognitive specific-involving movement), demanding the execution of techniques or skills such as swerve pass in soccer. Numerous meta-analysis studies (Feltz & Landers, 1983) [23], have confirmed that cognitive tasks show more improvement through the adoption of mental practice. The above aligns itself with the postulations of the symbolic learning theory to the effect that cognitive tasks have several symbolized parts which show greater improvement through the use of mental practice. (Di Corrado *et al.*, 2020 [19].)

Sport personalities differ in their physical, mental capacities and emotional dispositions, hence, the individual variations in imagery abilities from one athlete to the next. Some are introverts while others are extroverts in character, and others are shy while others are bold and the list is endless. Athletes leaning towards the extroverted bracket tend to be bolder and more willing to try new approaches while introverted athletes

are likely to be shy and shun new approaches, limiting the grasp and expertise in the application of mental imagery. The above realities call on coaches, trainers or teachers to pay particular attention to these individual dynamics so as to get the best out of each athlete. Tied to the above is the issue of an athlete's personality which also tends to distinguish one athlete from the other based on factors such as; upbringing, perceptions, behavior, belief system, attitude towards life situations and the capacity to regulate emotions among others. (Jones, 2003) [35]. Research has also placed on record how one's personality can influence performance and success in sport to a greater extend.

The last factor that also influences the application of (MI) is the level of the athlete's intelligence which influences ability to carry-out timely decisions and engage in purposeful and conscious endeavors. Intellect enables the capacity to handle complex and dynamic tasks or competencies, including the ability to innovate and conceptualizing new approaches. Intellect also enables the ability to make correct decisions under pressure, an attribute which often makes a difference between a successful and less successful athletes. (Jakobsen, 2020) [34].

2.3 Importance of mental imagery in sport

There are a plethora of uses of mental imagery that athletes can employ targeting three broad aspects of sport development namely; for performance improvement, motor skills development as well as addressing psychological elements of sport. Mental imagery has the potential of enabling the athlete to relive sporting events in the mind triggering nerve impulses similar to the actual physical performance. (Watt *et al.*, 2018; Mamassis & Doganis, 2004; Di Corrado *et al.*, 2020; Sathish, 2019) [43, 19, 20, 41]. Some of the uses of mental imagery are discussed below;

Regulation and control of emotions, one of the chief roles of mental practice is to regulate emotions such as; stress, anxiety and arousal especially towards and during competitions. These psychological disorders are often triggered, stimulated or activated by nervousness, worry, and uncertainties associated with sport contests and if not kept under check can negatively affect performance. A crucial victory could precipitate joy and excitement while a crushing defeat could spell gloom, doom and shame. (Jones, 2003; Alexander *et al.*, 2019; Jakobsen, 2020) [35, 2, 34]. Athletes with resilience (mental toughness are able to keep their emotions under check and can cope under pressure situations. (Gerber *et al.*, 2012).

In essence, (MI) prepares athletes by equipping them with the necessary psychological coping tools that enable them to bounce back from set-backs, countering negative thoughts as well as developing a positive self-esteem. (Alexander *et al.*, 2019) [2]. Athletes who struggle with pre-competition anxiety and burn-out can use mental imagery to help them optimize their arousal to required levels. Alexander *et al.*, 2019 [2]; Aidling, 2017 [1]; Hidayat, 2011 [32]; Crocker *et al.*, (1998) [13], concur with the above establishing that, (MI) is an affective, cognitive and behavioral coping intervention arming athletes with the skills to deal with stressors of sporting. The above correlates with Paivio's motivational general-arousal function, (MG-A), responsible for the athlete's ability to handle arousal and stress issues.

Many studies have also established the role of mental imagery in the development of mental toughness or resilience, a sense of being in control and self-confidence, attributes credited for a majority of sporting successes. (Gregg *et al.*, 2011 [26]; Mahoney *et al.*, 2014 [40]; Reverberi *et al.*, 2020 [48]; Clair-

Thompson *et al.*, 2015 [11]; Benitez-Sillero, 2021 [8]; Gould *et al.*, 1987) [25] Gould. Gould *et al.*, (1987) [25], also determined in a recent study investigating variations in psychological factors on performance among young footballers, that, 82% of coaches believed that mental strength is at the core of achieving sporting excellence. Other studies have unearthed the correlation between mental toughness and mental well-being, critical for sport performance, building self-confidence and the physical fitness of athletes. (Loehr, 1982; Gucciandi, 2017) [39, 27]. Mental toughness aligns itself with Paivio's motivational general-mastery (MG-M) function. (Paivio, 1985) [46].

The motivation of athletes is another positive deriving from mental practice interventions. The process of goal-setting and developing a drive towards achieving such goals has been found to enhance self-confidence and intrinsic motivation among athletes. Studies by (Christensen & Weibull, 2009 [10]; Lebon *et al.*, 2010) [38], corroborate the above noting that, the application of imagery targeting arousal and self-talk improved weight-lifters' motivation and self-confidence levels. Imagery has also found home in the area of rehabilitation as an aid to the recovery of injured players or patients recovering from a stroke with considerable success. In both instances, mental imagery plays the motivational, cognitive and therapeutic functions. In the above context, mental imagery helps the injured athlete to manage pain, regulate emotions, boost confidence levels and prevent the degeneration of previous form before injury among others. (Podlog & Eklund, 2006) [47].

2.4 Strategies of developing imaging ability

There are a plethora of ways coaches, trainers and sport personalities can adopt, in the process of developing a more deliberate imagery rehearsal program from a tender age. There are more recent techniques as opposed to more traditional methods that will be explored below. The ability of recreating the ideal images that are retained for longer periods of time can be quite a daunting task, hence, the need to approach the imaging process systematically and deliberately. The crucial first step lies in developing an ability to generate the right mental images. The generation of the desired images can be improved through regular systematized practice. (Cumming *et al.*, 2017) [15]. Consequently, the extent to which athletes can benefit from their imagery experience is dependent on, how well they can image, an attribute that is experiential. (Cumming *et al.*, 2017) [15].

Occasionally, athletes and coaches have used the Layered Stimulus Response Training (LSRT) as an aid to imagery ability. LSRT fragments the imaged event or skill into smaller tasks (layers) in order to enhance the mastery of the imaging process. Each task represents a stimulus or information about the task while the response relates to how the performer processes the information, for example, the activation of sensory-muscular impulses (kinesthetic feedback). (Lang, 1979; Cumming *et al.*, 2017) [37, 15]. With further practice, research has shown that the athlete learns to draw from different kinds of cues and information and eventually masters the skill of recreating vivid and controllable desired images for sustained periods. (Cumming *et al.*, 2017) [15]. Cumming & Eaves, (2018) [16], also contend that, LSRT system also helps to improve an awareness of imagery experience and reinforces meta-cognitive skills.

Recent studies speak volumes about the efficacy of LSRT technique in improving not only imagery rehearsal, but especially, imagery ability. Submit overwhelming evidence of

the effectiveness of Lang's LSRT framework, applied widely in sport psychology, and across disciplines as well. Same studies detail how athletes are able to generate vivid and sustained images with continued imagery practice over time.

3. Methodology

This study adopted a qualitative approach because it revolves around respondents' experiences allowing the researcher to solicit their feelings and opinions on the phenomena being studied. Qualitative research also allows detailed and in-depth study of the experiences of participants in their social contexts, more so, it is a discovery oriented method. The researcher preferred a descriptive case study design, which allowed greater control over the research process and the collection of in-depth data on the phenomenon under study, from the lens of the participants. Cohen *et al.*, 2017^[12]; Crowe *et al.*, 2011^[14]; Atkins & Wallace, 2012^[57]. Data was collected through questionnaire guides (N=18) distributed to two athletes for Soccer, Netball and Volleyball in three high schools and to three coaches in the three sporting codes per school (N=9). The data from the questionnaire guides was analyzed, and presented in themes. The questionnaire return rate from among the athletes was 18 out of a possible 18 (N=18) which translates to an 100% return rate much higher than the 70% recommended by Mugenda & Mugenda, (2008)^[44]. Permission to collect data was sort from the concerned school principals and consent forms issued to randomly selected learners for permission from parents and or guardians, to address ethical issues. Participants took part in the study on purely voluntary basis and reserved the right to pull out from the research as and when they deemed fit. (Creswell and Creswell, 2017).

4. Results

The findings of this study showed that, there are huge gaps in the manner in which sport psychological interventions such as, mental imagery, are applied in high school sport training and performance in Eswatini. It also emerged that, the majority of the respondents had no clue whatsoever about the concept of mental imagery, as applied to the sport, which is not only concerning but also baffling given the fact that the field of sport psychology and mental imagery in particular, have existed and have attracted a lot of studies spanning over a century. It is categorically clear from the enquiry that both teachers and athletes are neither deliberate nor intentional about mental imagery, this is notwithstanding the fact that the reviewed literature is very loud to the effect that, the application of mental imagery has proved to be the difference between winning and losing sporting contests. More so, mental rehearsals are known to give an athlete a cutting edge over opponents in terms of, skills development, managing competition pressures which include, but are not limited to; regulating competition anxiety, dealing with low confidence, managing negative self-talk, focus and concentration, rehabilitation from injury and mental strength to highlight a few. (Aidling, 2017^[1]; Mamassi & Doganis, 2004^[20]; Bali, 2015^[6]; Jakobsen, 2020^[34]; Reverberi *et al.*, 2020^[48]; Gucciandi, 2017)^[2,27]. The study also established that none of the teachers cum coaches who participated had had any formal training in sport psychology let mental imagery psycho-therapy. Given the above it goes without contest that the quality of athletes produced from the Eswatini school system is heavily undertrained with the far reaching impact of also compromising the club and the national teams alike. On whether they were aware of the concept of mental imagery

applied to sport, a netball coach and soccer player, CNB-C and PSO-A, respectively, made the following remarks respectively;

I am not aware of the concept of mental imagery and have never used it during training or competitions. The soccer player also made the following declarations on the same question; *I am hearing of it (mental imagery) for the first time and our coach has not introduced it to us.* Asked which strategies they used to prepare their athletes for competition, the following responses emerged;

A volleyball coach, CVB-A, remarked; *I only prepare them on mainly technical aspects of volleyball with a little bit of tactics, based on my previous experience as a player.* While a netball coach, CNB-B, declared; *I only instill physical fitness because I believe that if an athlete is physically fit, then nothing is impossible.* On the other hand, a soccer player, PSO-C, made the following comments on how he coped with competition pressure; *I have to have someone older in the team, because if there is someone older than me, then I know that he or she will help me in the game,* while a netball player, PNB-A, responded on the same issue as follows; *I tell myself that I am the best, as the best, I relax, calm down and believe that everything will be okay. I expect even negative outcome as I believe that failure does not determine my skill.* A volleyball player, PVB-B, also had a somewhat similar lens on the same coping strategies in managing competition pressures opining that; *I calm myself and try to express what I feel, also I am used to telling myself that, my teammates will be with me as we play the game.*

It is crystal clear from the above sentiments which were by and large in the majority that, there is a glaring absence of a deliberate and intentional approach to the application of sport psychological therapies and especially, mental imagery, in secondary school sport in Eswatini in as far as skills training and performance are concerned. It can be inferred and averred therefore that, such athletes are victims of under-training owing to the wide use of outdated traditional training methods, inadequate to deal with the vagaries of the grueling world of modern sport competition. Worth noting also is that, the majority of the respondents among the athletes recommended the need for their coaches to attend training on sport psychology and mental imagery in particular, given the fact that coaches did not apply and were not intentional about them during training and preparations for matches. In a related development, the sampled coaches in the three sporting modalities also expressed an overwhelming desire for training in sport psychology in general and mental imagery, in particular. The above plays into the assumptions of this study to the effect that, coaches in high schools of Eswatini are not aware of mental imagery and its widely publicized therapeutic value in sport and neither do they apply the concept during training and performance. This is saddening in view of the fact that a gamut of literature details the invaluable and indispensable role of mental imagery therapy in the modern game and especially the well documented reality that games have since shifted from being mere physical contests to the cognitive realm.

4.1 Limitations of the study

The study initially intended to use a case study of five high school but due to Covid-19 restrictive measures which were still in place, at the time of carrying out this study, two schools had not resumed sporting activities electing to focus more on academics in an effort to cover lost ground due to the Covid-19 pandemic. As a result, they did not have teams and

coaches in place since March 2020, when the pandemic kicked-in. The above could compromise the validity of the research process and reliability of the study outcome, more so, its generalizability, given that, a smaller sample of three high schools instead of five, was used.

5. Conclusion

The findings of this study established the following; that teachers who coach soccer, netball and volleyball in high schools of Eswatini are unaware of the existence of mental imagery and do not intentionally apply them during skills training and performance. It also surfaced that sport coaches in the sampled high schools lacked training in sport psychology interventions and the requisite knowledge about their indispensable role in sport development and growth. The study also exposed the existence of a huge and yawning gap in technical know-how among the sampled coaches and athletes, concerning the appropriate application of current trends and the integration of contemporary sport science into high school sport, especially sport psychology, which the researcher found to be concerning.

5.1 Recommendations

Informed by the above outlined findings and conclusions, the following recommendation are drawn; that the national associations seriously consider harnessing resources towards conducting widespread coaching clinics aimed at imparting the requisite and contemporary sport psychological approaches towards skills training and performance in schools. That the Ministry of Education and Training (MoET), should develop a policy framework geared to elevate the place of sport psychology in the local school sport. That all teachers training colleges must introduce a comprehensive sport coaching certificate incorporating sport psychology and its ramifications. That local universities should offer a degree in Physical Education and Sport in view of broadening the scope of sport coaching, performance and management respectively. That the MoET considers inviting and facilitating International coaching clinics run under the auspices of international sporting bodies such as; the International Federation of Association Football (FIFA), International Olympic Committee (IOC), International Volleyball Federation (FIVB) and the International Federation of Netball Associations (IFNA). These are usually facilitated under the technical assistance through national associations. That a broader study involving a larger sample in both primary and secondary schools be carried-out as well as the inclusion of clubs and national teams for thicker insights in view of elevating the place of mental imagery therapy in the local sport context.

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