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# **IMPACT OF YOGA PRACTICE ON FLUTE PERFORMANCE**

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## **ABSTRACT**

### **Impact of Yoga Practice on Flute Performance**

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The impact of Yoga practice on flute performance was examined to ascertain the suitability of inclusion in the training for success in flute performance. The existing literature was examined on a number of issues especially: musician and flute player's health, posture, injuries and their prevention, and performance anxiety; playing fatigue, mental training, and issues related to audition and competition preparation. Furthermore, literature on the use of Yoga in training for peak performance, developing awareness, and current research on the use of Yoga as an intervention for disorders in Musicians was explored. Qualitative data was collected through interviews with three professional flutists with an established Yoga practice, questioning if and how their Yoga practice impacted their flute performance. It was found that Yoga practice can make a positive impact on flute performance, with the research complementing and satisfying issues and recommendations raised in the literature. The research recommends a short but frequent Yoga practice for improved performance.

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## 1. INTRODUCTION

The Western concert flute is one of the most popular orchestral and solo instruments, used in a variety of professional contexts and played by expanding age, ethnic and wealth demographics. At the elite level, flute performance can include soloists and chamber musicians, and in a variety of ensemble contexts including large symphonic and opera orchestras, chamber orchestras, salon orchestras, wind bands and military bands, and contemporary music ensembles (Lonsdale, Laakso, & Tomlinson, 2014). Professional flutists can also be found teaching and studying at music Universities and Conservatories, in fellowship, academy, practicum and other training programs affiliated with professional ensembles, and teaching at Primary and Secondary Schools and Music Schools. Furthermore, flutists can be found performing in Jazz, Rock, Pop styles, Improvisation, Ancient music on the traverso and historical instruments, as well as Ethnic and Folk Music ensembles including from Asian Irish, Jewish and Latin-American traditions.

As the professional profile of the instrument expands, so too does the research into playing related issues. Extensive studies have been made into the most relevant topics, issues and problems that arise for both elite professional flutists as well as students of the instrument, including performance anxiety, playing fatigue, audition training and playing-related disorders and injuries. The reoccurring concern from the literature is the lack of a method of training and conditioning for success in flute performance, as well as addressing the health-specific issues that arise in flute performance. This research seeks to discover if a Yoga practice would be an effective tool for training and conditioning for success in flute performance. Due to the researcher's own experience as a professional flutist and practicing Yogi, it is hypothesised that it will be shown that a Yoga practice can positively impact flute performance. Yoga is an ancient holistic practise created by Indian Sages that combines elements of Psychology and Philosophy with physical exercises and postures with the objective of bringing the mind, body and spirit into alignment and balance (Sivananda Yoga Vedanta Center , 2010).

To better understand the issues related to flute performance, literature will be examined relating to musician's and flute player's health, posture, playing related injuries and their prevention, performance anxiety, playing fatigue and stamina, mental training and concentration, and issues related to audition and competition preparation. Furthermore,

literature on the use of Yoga in training for peak performance, and developing senses and awareness will be explored, as well as the current research on the use of Yoga as an intervention for disorders in musicians. As well as having careers as established and emerging professional flutists and flute mentors, Sally Walker, Professor Gisela Mashayekhi-Beer and Hannah Reardon Smith are experienced Yoga practitioners. Qualitative data will be collected through interviews with the three Yogi-flutists, questioning if and how their Yoga practice impacts their flute performance. Interviewees will also be questioned on the significant flute-related issues that will be raised by examining the existing literature. The Thesis hypothesis will be tested by comparing and contrasting the results of the research to the issues raised in the existing literature, looking for similarities and contradictions and answering the research question.

The ultimate aim of this Thesis is making a recommendation of a Yoga practice that can help flutists, especially for those studying at school and tertiary level, with Yoga as a method for improving performance quality in auditions and competitions. The research seeks to discover a Yoga practice with maximal benefit to flute performance including stretching and breathing exercises, and meditation; as well as specific postures and breathing exercises that target specific problems experienced in a flute player's body. Further implications of the research could be the recommendation for potential inclusion of Yoga into study curriculums at Universities, Conservatories and Orchestra Academies.

## 2. WHAT IS YOGA

### 2.1. YOGA DEFINITION AND HISTORICAL CONTEXT

Yoga is a science perfected by the ancient seers of India, not of India merely, but of humanity as a whole. It is an exact science. It is a perfect, practical system of self-culture – Swami Sivananda (Sivananda Yoga Vedanta Center , 2010).

The term ‘Yoga’ comes from the Ancient Indian Sanskrit root *Yuj* [To yoke] which is interpreted as a union of *Atma* (translated loosely as ‘soul’) with *Paramatma* (translated as ‘the universal soul’). In Sanskrit, the terms for practitioners of Yoga are *Yogin* (masculine) and *Yogini* (feminine); however this has been replaced in Western practise with the genderless term ‘Yogi’ (Hinduwebsite.com, 2015). Developed by the Indus-Sarasvati civilisation in Northern India, Yoga first appears in literature around 5000 years ago in the *Rig Veda* – the oldest sacred texts consisting of songs, mantras and rituals to be used by the Vedic priests, the *Brahmans* (Burgin, 2017). It is difficult to discern an exact origin as the *Rig Veda* was spread orally for many years, however images depicting a meditating Yogi originating from the Indus Valley Civilisation can be dated as far back as seven thousand years ago (Hinduwebsite.com, 2015).

Starting around 2000BC and after many years of experimentation, development and refinement, the *Brahmans* and *Rishis* (mystic seers) began to document their Yogic ideology in what would become the *Upanishads* (Hinduwebsite.com, 2015). An expansive work containing over 200 scriptures, the *Upanishads* are a first complete description of the principals, goals and practises of Yoga (Burgin, 2017). The text takes the previous Vedic practises, of ceremony and ritual sacrifice to appeal to external gods, and internalises them. The *Upanishads* teach that through inner sacrifices and sacrifice of the ego the Yogi can become connected or ‘one’ with ‘the Supreme Being’ - often referred to as *Brahman* or *Mahatman*. This is achieved through practises of self-knowledge, moral culture, karmic action and the training of the mind (Burgin, 2017) (Hinduwebsite.com, 2015).

The next major development of Yoga occurred sometime in the 2<sup>nd</sup> Century BC with the emergence of the Hindu Sage and Scholar Patanjali. After the creation of *Upanishads* many more texts on Yoga practises were created, most of which contained conflicting and

contradicting beliefs and practises (Burgin, 2017). With his seminal work *Yoga-Sutra* Patanjali, now regarded as the father of modern Yoga, initiated the Classical period of Yoga and the tradition of Hatha Yoga through his systemised Yogic practise the 'Eight Limbs of Yoga'. It is an approach to Yoga detailing steps and practises one may follow to quieten the mind and connect with the infinite known as obtaining *Samadhi* or 'Enlightenment' (Burgin, 2017) (Hinduwebsite.com, 2015) (Sivananda Yoga Vedanta Center, 2010). It is an integral ideology to Hatha Yoga and therefore has application to most modern forms of Yoga today. Understanding the Eight Limbs is important to most Hatha Yoga practises (Feuerstein, 1975):

1. *Yama* – Moral integrity, guideline for controlling human instinctual nature. Non-violence, truthfulness, non-stealing, Brahmic conduct, greed-lessness.
2. *Niyama* – Self-discipline, purity, detachment from objects, austerity, study of self, religious devotion.
3. *Asana* – Postures of Yoga, Yogic tool for strengthening the body.
4. *Pranayama* – Control of *Prana* [Life-force] through breathing exercises.
5. *Pratyahara* – Progressive withdrawal of senses.
6. *Dharana* – Conscious and disciplined withdrawal from external environment, total focus on single point, often part of the body or rarely an external object.
7. *Dhyana* – Concentration leading to mediative absorption, intensification of sense of presence and wakefulness.
8. *Samahdi* – Total meditative absorption, conscious mind absorbed into the 'Absolute Consciousness' (Feuerstein, 1975).

A new philosophy of Yoga began to emerge a few centuries after the innovations of Patanjali in a period which is now called Post-Classical Yoga. Surpassing the teachings of the ancient Vedas with an emphasis on meditation and cognitive activities, Yoga Masters instead focussed on the physical body as a tool to achieving enlightenment (Burgin, 2017). Tantra and Hatha Yoga were created with new exercises including *Pranayama* [breathing exercises]



and *Asana* [postures] to cleanse the mind and body, with the aim of removing the Yogi from the experience of the physical world of sensation and existence (Burgin, 2017).

Modern Globalisation between the late 1800's and early 1900 enabled Yoga Masters to travel to the Western World, taking with them their Yogic practise. In 1893 Swami Vivekananda introduced Yoga for the first time to America at the Parliament of Religions Exposition in Chicago. Hatha Yoga came into prominence in India the 1920's and 30's with the work of T. Krishnamacharya who opened the first Hatha Yoga studio in Mysore, India (Burgin, 2017); Krishnamacharya's studio was responsible for the instruction of B.K.S Iyengar, T.K.V. Desikachar and Pattabhi Jois who became major exponents of Hatha Yoga to the West. Also significant to the integral to the growth of Hatha was Swami Sivananda, the author of more than 200 books on Yoga and who beginning in 1936 established nine ashrams and several Yoga centres around the world. Furthermore, the Russian Indra Devi was an important spokeswoman for the introduction of Hatha Yoga to America, opening her Yoga studio in Hollywood in 1947 (Burgin, 2017).

For a large portion of its existence Yoga was only available to people who were financially stable, or willing to relinquish status and assets and live a devout and solitary existence (Sivananda Yoga Vedanta Center , 2010). However, over its course of development and through exportation from India by pioneering Indian and Western teachers, Yogic ideology and practise have now found widespread application to Modern society and at present with millions of followers over a variety of Yogic disciplines (Burgin, 2017).

## 2.2. YOGA PRACTISES AT PRESENT

In Western Culture there currently exist many various forms of Yoga practise, each emphasising a variety of particular features or practices, but most include the same basic Asanas. The most popularly practiced styles are (Do Yoga With Me, 2017):

- **HATHA YOGA** – General category of Yoga that encompasses many various forms. Emphasises the practise of Asanas and Pranayama, developing concentration and preparing the body for meditation and spiritual practises. Can refer to a relatively gentle, slow practise, relaxed style with postures held for longer periods (Do Yoga With Me, 2017).
- **ASHTANGA** – System of Yoga brought to the Western world by Sri K. Pattabhi Jois. It is typically fast-paced, vigorous and physically challenging. Yogis are led through the Ashtanga series, encouraged to breathe with the movement from pose to pose. There are six series of postures in total, progressively increasing in difficulty (Do Yoga With Me, 2017).
- **POWER YOGA** – Form of Ashtanga Yoga for Western students. Vinyasa-style Yoga, with no series of poses allowing the teacher freedom of focus. It was invented by students of Pattabhi Jois with Americans Beryl Bender Birch and Bryan Kest (Do Yoga With Me, 2017).
- **BIKRAM YOGA** – Founded by Bikram Choudhury, consistent practise of series of twenty-six postures and two breathing exercises in studio heated to 40 °C with 40% humidity. The heat and humidity are intended to flush toxins, manage weight and allows Yogis to move deeply into postures (Do Yoga With Me, 2017).
- **JIVAMUKTI YOGA** – Created in 1984 by David Life and Sharon Gannon, based on teachings of Pattabhi and Swami Nirmalanada. Ashtanga-style flow, Jivamukti warm-up sequence with weekly themes, chanting, meditation, readings and affirmations (Do Yoga With Me, 2017).
- **IYENGAR YOGA** – Developed in Pune, India by Guru B.K.S Iyengar. Long held postures concentrating on musculoskeletal subtleties. Uses props such as blocks,

belts, bolsters, chairs and blankets to accommodate tightness, structural imbalances or injuries, and proper alignment (Do Yoga With Me, 2017).

- ANUSARA YOGA – System of Hatha Yoga founded by Johan Friend. Teaches a set of ‘Universal Principles of Alignment’. Yogic principle is categorised into three “A’s” - attitude, alignment and action (Do Yoga With Me, 2017).
- SIVANANDA YOGA – Form of Hatha Yoga founded by Swami Sivananda and brought to West by Swami Vishnu-Devananda with his International Sivananda Yoga Vedanta Centres. Consists of five principles including proper exercise, proper breathing, proper relaxation, proper diet, positive thinking and meditation. Sivananda’s twelve asanas focus on the strength and flexibility of the spine (Sivananda Yoga Vedanta Center, 2010).
- VINIYOGA – Tailored to the individual to facilitate self-discovery and personal transformation. Developed by T.K.V. Desikachar, it combines elements of Asana, Pranayama, Bandha, Sound, Chanting, Meditation, personal ritual and study of texts (American Viniyoga Institute, 2016).
- KUNDALINI YOGA – Awakens the ‘Chakras’, the energy at the base of the spine. Brought to the West by Yogi Bhajá, focuses on breath and movement of energy throughout body. It integrates repeated movements and exercises, Pranayama breathing techniques, chanting, meditation and mantras (Do Yoga With Me, 2017).
- YIN YOGA – A slow, restorative Yoga form, postures held from 5-8 minutes. Long postures apply moderate stress to the connective tissues including the tendons, fascia and ligaments with aim of improving deep flexibility and increased blood circulation to the joints. Was first taught in the United States by Taoist teacher and martial arts expert Paulie Zink (Do Yoga With Me, 2017).
- ANA FORREST YOGA – It is a modern Yoga style created by American Ana Forrest based on Hatha Yoga. Described as being intense, long held postures, standing postures and attention on the core. Emphasises connection to feelings to address emotional and physical trauma (Knolls, 2018).

### 3. FLUTE PERFORMANCE ISSUES

#### 3.1. PERFORMANCE ANXIETY

‘Stage Fright’ also known as Performance Anxiety is an inflated and sometimes debilitating fear associated with performing in public. The physiological and mental aspects of playing an instrument can have significant influence on a musician’s ability to perform – without proper performance-related psychological training and conditioning, any elite musician can experience unsatisfactory performance as a result of the mind sabotaging itself (Bruce, 2013).

Performance-related stress triggers the ‘fight or flight’ reaction of the autonomic nervous system. When a person is in a normal unstimulated state the activity of neurons in the locus coeruleus, the part of the brain responsible for arousal and wakefulness, is minimal (Bouret & Sara, 2010). At onset of stress stimulus, a variety of physiological actions in the sympathetic nervous system occur (Bruce, 2013). The preganglionic sympathetic nerves release acetylcholine which triggers a surge of adrenaline and norepinephrine throughout the body from the medulla of the adrenal glands (Psychologist World, 2017). As combat and escape are unacceptable responses to performance situations with an audience, or towards an audition or competition jury, the body must find an alternative outlet for the physiological reactions of the nervous system to performance situations.

The abundance of released catecholamine hormones creates immediate symptoms (Psychologist World, 2017). Performers would experience an increased heart rate which would lead to heart palpitations as the organs and muscles are supplied with extra oxygen (Bruce, 2013). Increased activity in the lungs, combined with heart activity and palpitations, would create the sensation of breathlessness, something specifically disadvantageous to woodwind players, including flutists. The sensation of ‘butterflies’ in the stomach is caused by the stress response shutting down digestive processes. Liquids used to produce saliva and other body fluids are redirected to the bloodstream causing a dry mouth, while the activation of the body’s cooling mechanism results in excess sweat of the palms and forehead (Bruce, 2013). Individuals may also experience alternating sharpened and blurry vision, shaky fingers, arms and knees, tense muscles and stiff body movement, nausea, dizziness, trembling, diarrhoea, increased urination frequency, fatigue (Bruce, 2013) (Psychologist World, 2017).

There are many contributing factors that can trigger the severe mental and physiological responses of performance anxiety. These can include doubt over ability, fear of losing control, doubt over practise and performance preparation, exhaustion, anticipated negative reaction from audience, fear of slips in memory, concentration or reading errors, concerns over not being heard or seen properly, anticipation of equipment malfunction, and an overall anxiety of logistical matters of the performance event (Bruce, 2013). To eliminate irrational responses to these stress situations, it is vital that musicians seek to identify and understand what causes their own performance anxiety and to develop appropriate methods of training and conditioning the brain to act in a more positive and controlled manner (Bruce, 2013).

### **3.2. PLAYING RELATED FATIGUE**

Fatigue is a playing-related issue for professional flute players and has been recognised most notably to affect the embouchure (Lewis, 2005) and hands (Miyazawa Incorporated , 2015) of the performer. A 2010 study undertaken by E.J. Drinkwater and C.J. Klopper sought to investigate the fatigue experienced as a result the physical demands of the performance of wind instruments and how it can influence performance quality. This study is valuable as it examines the physical demands and fatigue issues unique to wind instruments and therefore flute performance.

Ten participants were required to prepare a performance consisting of 10 minutes of repertoire that was to be played three times consecutively with short pauses between each repetition. Before the performance and between each repetition, the researches collected data on the performer's heart rate, respiratory rate, blood pressure, blood lactate concentration, and ratings of the performer's perceived exertion and anxiety. Audio recordings were made of the performances were recorded and were later screened for errors in performance. The reliability of the study was enhanced with a standard error of measure of fifteen repeat performances.

Once the performance began all markers of physical stress increased by a moderate to large amount (4.6 to 62.2%) and there was a significant decrease in errors (21%); however, in each successive performance the readings for heart rate, respiration, and perceived exertion continued to rise by a small to large amount (4.9 to 23.5%) and after the second performance there was a significant, large decrease of accuracy (70.4%). The researchers surmised that,

while the initial increase in physiological stress and decrease in errors is possibly due to 'warming up', the subsequent performance results indicating increase of physical stress and decrease in performance quality suggest that significant fatigue occurs after each successive performance (Drinkwater & Kloppe, 2010).

In the conclusion of the study it was recommended that musicians consider the relevance of physical fitness in maintaining endurance and performance quality over the duration of a performance (Drinkwater & Kloppe, 2010). Other sources confirm the importance of physical conditioning in combating fatigue and resulting exhaustion and overuse symptoms, emphasising the importance of stretching and relaxing (Miyazawa Incorporated, 2015) and being mindful during practise and performance (Lewis, 2005).

### **3.3. AUDITION TRAINING**

Auditioning for positions in professional orchestras is a particularly unique rite-of-passage in the life of most professional flutists, one that contains its own challenges and demands specialised training. Most education and training organisations for flutists include some component of audition training - the skills learned in the training are vital for creating a career in professional orchestra, and transfer to some degree for other auditions for chamber and contemporary music ensembles, hearings for Professorships and lecturing positions at universities and conservatories, and for competitions to establish oneself as a soloist.

Auditions vary between orchestras often depending on the size of the orchestra, the management team and the country of the orchestra; however, there are some similarities between them. After advertising and audition and receiving applications, an audition committee must decide which applicants to invite. This often depends on the applicants resume, reputation, performance experience and education history (Bruce, 2013).

Most auditions require candidates to present over a number of rounds at least the first movement exposition of one of two Concertos for flute by Wolfgang Amadeus Mozart with or without piano accompaniment, as well as several excerpts of particularly challenging solos and tuttis from the orchestra literature. Depending on which position the audition is for, the committee could also require the candidate to perform the second movement of a Vivaldi piccolo Concerto as well as excerpts for piccolo. Other auditions can ask for more

movements from the Mozart and Vivaldi Concertos, as well as demanding virtuoso pieces from the solo literature including works by Jacques Ibert, Carl Nielsen, Henri Dutilleux, Johann Sebastian Bach and Lowell Liebermann etcetera. There may also be sight-reading required and/or playing chamber music or ensemble sections with other members of the orchestra.

A typical audition would take part over one day with or without a pre-screening round the day before or by recording. Depending on the audition, the jury can consist of principals and tutti members of the orchestra as well as conductors, concertmasters and members of the orchestra's artistic committee. Rejected candidates are eliminated over anywhere between two to four or five rounds. One or more rounds can be performed behind a screen as to eliminate preferential treatment or prejudices from the jury, and further rounds are performed in front of the jury or the entire orchestra.

After a period of extensive preparation, the candidate must show extreme feats of concentration and stamina, performing some of the most demanding and challenging literature, with candidates only having a few minutes to impress the audition jury with the required repertoire to be eliminated or pass to the next round. Juries will scrutinise candidates on a number of fundamental and artistic qualities including technical faculty, rhythm, intonation, sound quality, articulation, dynamics, vibrato, rubato, accuracy, breathing, phrasing and whether the performance was stylistically accurate (Baxtresser, 2008).

The unnatural performative experience presents its own set of challenges as compared to performing a solo recital, or with an orchestra or ensemble (Bruce, 2013). A solo recital or ensemble concert is a shared bonding experience between performers and their audience, where the audience is emotionally invested in the positive experience of the concert. Conversely the audition is essentially solitary and competitive in nature – the idea is for a flutist to present their abilities, and for the committee to select the best candidate for the position (Bruce, 2013).

A fundamental truth of the orchestra audition is that there are no certainties. A flutist could practise any long period of hours a day over an extended period of time and commit to any extensive mental and physical training regime without any guarantee of success on the day of

the audition. Success with one audition does not suggest that the flutist would be successful with an audition with another orchestra – the audition is not about the individual, rather what the audition jury is searching for (Bruce, 2013). Like an actor is hired when they are the right fit for a certain role, so too are musicians selected if they are the right fit for the vacant particular role in the orchestra. The audition is a necessary risk in the career of orchestral musicians, but without taking the risk success is almost certainly unattainable (Bruce, 2013).

Jeanne Baxtresser is a leading American flute Pedagogue and Orchestral Flutist, and has much experience in flute auditions in her own preparation for successful orchestra auditions, her role as professor preparing young flutists, and from the position of jury member. She believes that the world of auditioning is an integral part of the career of any serious flutist, and that the experience of an audition can be, “...positive, challenging and exhilarating.” To achieve peak performance for audition, Baxtresser believes that:

...the body must be totally disciplined and the mind completely focused so unconscious creativity and spontaneous inspiration can become magical music making. For this extraordinary experience to occur one must apply tremendous commitment, preparation, and dedication to numerous and specific goals (Baxtresser, 2008).

Outside of personal preparation and practise of the required solo and orchestra literature, mock auditions and recording sessions, Baxtresser gives a number of recommendations as to how a flutist can properly prepare for success at an audition. As the body is an integral part in the process of music-making, the first recommendation is for a flutist to follow a healthy diet and a program of fitness. The author suggests flutists follow a healthy diet and drink plenty of water to combat wanning energy levels and dehydration that are inevitable when dealing with high stress situations. Furthermore, by combining exercise with practise, performance quality and endurance will increase. Aerobic fitness can improve the body's ability to use oxygen effectively thus improving the flutists breathing. A higher level of fitness will make it possible to withstand more stresses, including the stress of travel and inactivity that can occur directly leading up to an audition (Baxtresser, 2008).

Not unlike elite-level professionals like actors and athletes, Baxtresser suggests flutists to study and train mental techniques to help perform with “freedom, easy and enjoyment”



(Baxtresser, 2008). Books, methods and trainers specialising in sports psychology, positive performance visualisation, meditation and others forms can cultivate mental hygiene and elite psychological conditioning required for successful professional auditions (Baxtresser, 2008).

### **3.4. INJURIES AND MUSCULOSKELETAL DISORDERS**

Many flute players will experience playing-related pain for varying durations at some point in their playing career. Many studies document the prevalence of playing-related musculoskeletal disorders (PRMDs) unique to flutists, where many of the common symptoms include pain typically in the neck, middle/upper back, shoulders, wrists and hands (Lonsdale, Laakso, & Tomlinson, 2014). Although the prevalence of PRMDs have been well documented for several decades, awareness of and solutions addressing these conditions are generally under-represented in flute pedagogical literature. Playing posture and the positioning of the hands are referenced in relation to their impact on sound, intonation and flute technique, and that the flutist should play relaxed and comfortably. While two leading pedagogues Michel Debost (Debost, 2002) and Paul Edmund Davies (Edmund-Davies, 2008) make reference to flute-playing and the potential for injuries, most authors and pedagogues often neglect the impact of the posture and positioning on the physiology of the flutist, or the consequences of playing with ineffective or incorrect posture (Lonsdale, Laakso, & Tomlinson, 2014).

There are many factors that can contribute to the experience of PRMD's including postural flaws, physical and psychological characteristics, inefficient or incorrect technique, fatigue, intensity and type of practise, discrepancies between instrument size and physical stature, stress, lack of conditioning and lifestyle choices (Lonsdale, Laakso, & Tomlinson, 2014). There is also a connection between the asymmetrical and raised arm position required to play the flute and the likelihood of experiencing upper body musculoskeletal conditions specifically (Lonsdale, Laakso, & Tomlinson, 2014).

There are a plethora of recommendations for the management and prevention of PRMDs in various Musicians' health publications, however due to the unique nature of the body's relations to the instrument in flute playing compared to other orchestral instruments and specifically other woodwind instruments, it is important to identify the unique issues that deserve specific attention and study. The flutist plays in a stationary position holding the flute

unilaterally for extended periods of time, while being exposed to greater loads, as compared to other instrumentalists, from gravitational forces due to elevation of the arms. As the flute is an aerophone there is no reed involved in sound production, therefore there is less resistance and pressure in the embouchure and generally a greater movement of air (Lonsdale, Laakso, & Tomlinson, 2014).

A recent study by Karen Lonsdale sought to discuss the issues of musculoskeletal disorders in flutists, exploring the ways in which practicing habits, education, lifestyle, positioning, gender and playing background can contribute to playing related medical disorders in flutists. This study was important as it addressed the lack of data pertaining to flute-specific PRMDs and included perspectives from around the world, therefore establishing a balanced perspective of flute-related PRMDs internationally. Lonsdale's study clearly outlines the extent of PRMDs in the flute community - of the 408 responses that were included in the survey, 26.7% were currently experiencing flute playing related pain or discomfort. Half (49.7%) of the respondents reported being distracted by pain and discomfort while playing, and half (50.0%) had also stated that pain and discomfort often decided how long they would practise for. Due to pain and discomfort a quarter of respondents (25.8%) had taken an extended period of time without playing the flute, and a further quarter (27.2%) reported that on recommendations of medical or health practitioners they were forced to make specific changes to their flute playing position to avoid playing related injuries (Lonsdale, Laakso, & Tomlinson, 2014).

There were a number of reported factors that respondents believed contributed to their PRMDs - the most popular included tiredness and/or fatigue (54.5%), insufficient breaks (46.5%) and stress and/or worry (41.5%). Other significant contributing factors included poor posture in other activities including computing, not stretching (36.0%), playing in cold spaces (30.2%), lack of exercise (28.3%), poor neck positioning (26.2%), forward-rolling shoulders (25.2%), and performance anxiety (24.6%). The respondents also reported a number of medical conditions that affected their playing including anxiety (16.0%), carpal tunnel syndrome (8.6%), depression (17.9%), hyper mobility (9.3%), tendinitis (16.0%), scoliosis (8.3%), and temporomandibular joint syndrome (11.4%) (Lonsdale, Laakso, & Tomlinson, 2014).

Flutists experiencing PRMDs consulted a variety of medical practitioners when treating their pain symptoms - around one quarter of the included respondents had consulted massage therapists, physiotherapists, and medical doctors including specialists, and 18% said they had consulted with a chiropractor. More than half of the respondents had resorted to various medications to relieve playing related pain, including painkillers, non-steroidal anti-inflammatory medications, anti-anxiety medications, anti-depressant medication, oral steroids, steroid injections, muscle relaxant drugs, anaesthetic injections, narcotic analgesics, beta-blockers, arthritis cream and naturopathic and herbal treatments (Lonsdale, Laakso, & Tomlinson, 2014).

Lonsdale's research revealed a number of existing strategies that exist in the flute community for preventing and treating PRMDs. Over half of the interviewed players identified sufficient rest as a factor in staying free of pain or discomfort while the majority (65.2%) said that good posture and playing position was the most successful strategy for preventing PRMDs. Other strategies included (Lonsdale, Laakso, & Tomlinson, 2014):

- massage (45.9%)
- stretching (45.4%)
- freedom of movement while playing (39.6%)
- ability to relax or deal with stress (38.7%)
- being fit or exercising (38.0%)
- feeling happy/satisfied/positive/confident (32.6%),
- good posture in non-flute playing activities (31.6%)
- good teaching (30.7%)
- Alexander technique (26.2%)
- use of a heat pack (26.2%)

- various types of strength training (19.1%).

The results were inconclusive as to whether regular aerobic activities or resistance training provide a significant method of treating existing discomfort or pain; activities including walking, running, cycling or swimming are not significantly effective in treating existing symptoms, and the impact of strength training on playing related pain or discomfort was found to be slight. The prevailing indication of the research however was the need for instruction in good posture, alignment and playing position to prevent the development of future PRMDs which is only infrequently addressed in current education with posture being emphasised by only 30.9% of private flute teachers, 49.3% of University flute professors and 18.6% of School band program teachers (Lonsdale, Laakso, & Tomlinson, 2014).

## **4. EXISTING RESEARCH ON THE EFFECT OF YOGA**

### **4.1. SENSORY APARATUSES**

Primary external activities such as sports, acting and playing a musical instrument are complex exercises, requiring accurate coordination of sensory information and feedback with the neuro-muscular systems of the body (Hodges, 1993). In performance, the brain requires accurate input information with instant feedback from the senses including the kinaesthetic, auditory and visual senses to accurately coordinate movements and implement actions. External phenomena including sights, sounds and feelings are often confused by inaccurate perceptions arising from internal dialogue and imagined sights or feelings. This results in a diminished quality of the external reception and therefore diminished performance quality and efficiency (Hodges, 1993).

The sensory apparatus consists of the external senses including vision, audition, kinesthesia, olfaction and touch, and then the internal perception of these senses. The function of the external senses are to provide information about the physical environment, while the internal senses provide impulses for motivation, evaluation, visual instruction and creativity. The more exacting and refined the senses are, and the more precise the communication between external and internal, the better the resulting performance will be (Hodges, 1993). By isolating and developing the sensory awareness and by eliminating any distortions and interference that interrupt existing sensory input channels further, it is possible to improve coordination and therefore performance (Hodges, 1993).

Sensory behavioural flexibility is the ability to control particular sensory modes or combination of sensory modes that are engaged at any particular moment, and is the key to improved performance. In his book 'Sports Mind – An Athletes Guide to Superior Performance through Mental and Emotional Training' (1993), Jeffery Hodges recommends a number of sensory exercises that are integral for developing sensory awareness and effective sensory behavioural flexibility for primary external activities. The exercises include approaches to meditation, mindfulness and awareness exercises to consciously engage the external senses including sight, sound, smell, taste and physical sensation. Furthermore, he recommends exercises to isolate the perception of internal awareness including imagining, listening within, internal feeling, internal smell and internal taste (Hodges, 1993).

The nervous system cannot differentiate a real experience from a strongly imagined experience and will act upon sensory input whether real or imagined – perception and therefore performance is affected by thoughts, feelings and performance-related anxieties. Hodges recommends warming-up exercises not just for the body but also for the emotional and mental aspect of performance, “...effective warm up should involve more than just warming up the physical body – if you are to perform to the best of your ability, you must also be emotionally and mentally prepared” (Hodges, 1993). The exercises include a ‘Developing Body Awareness Exercise’ based on mindfulness and body scanning exercises, Emotional and Mental Awareness Exercise, a ‘Distractions Exercise’ and recommends various relaxation exercises (Hodges, 1993).

In his book ‘Kokoro Yoga – Maximise Your Human Potential and Develop the Spirit of a Warrior’ (2016) Mark Divine argues that peak performance and accelerated growth comes from integrated training, i.e. training that incorporates performance aspects physically, mentally, morally, emotionally, intuitionally, and spiritually (Divine, 2016). Divine argues that Yoga is the perfect integrated somatic training – by following strategies sourced from the ‘Eight Limbs of Yoga’ it is possible to combine the physical, mental and emotional aspects of training required to produce effective results (Divine, 2016).

#### **4.2. NEUROLOGICAL ISSUES AND INTERVENTION**

Music-related performance anxiety is “...the experience of marked and persistent anxious apprehension related to musical performance that has arisen through specific anxiety conditioning experiences and which is manifested through combinations of affective, cognitive, somatic and behavioural symptoms” (Stern, Khalsa, & Hofmann, 2012). At a professional level, the pressures placed on a musician during performance and training can be extreme – for some, Music Performance Anxiety (MPA) can be an energising and optimising agent, while for others it can negatively affect performance quality, interfering with a musician’s health and well-being and in extreme cases even end a career in performance (Matei & Ginsborg, 2017). It is a widespread problem with reports of 59-70% experiencing some form of MPA, and with 15%-25% experiencing persistent and severe forms of MPA (Stern, Khalsa, & Hofmann, 2012).

Cognitive Behavioural Therapy, and chemical interventions including Beta-blockers have been used in the past to treat MPA, with studies showing some success and improvements in some aspects of performance quality (Stern, Khalsa, & Hofmann, 2012). Many musicians experiencing MPA do not resort to solutions through psychological counselling – an early study from 1987 found that only 25% of musicians experiencing a severe form of stage fright reported trying psychological counselling (Stern, Khalsa, & Hofmann, 2012). Yoga has been described as an attractive therapeutic option for treating general anxiety disorders, with studies in non-music settings finding that a Yoga practice greatly decreased anxiety levels compared to a walking intervention, suggesting that it could also achieve the same results for musicians as an effective treatment for MPA (Kirkwood, Rampes, & Tuffrey, 2005).

A controlled study on the effectiveness of Yoga in treating MPA was published in 2006 by S.B.S Khalsa – a group of ten elite adult musicians studying at the Tanglewood Music Centre in Massachusetts, U.S.A were asked to participate in an eight-week intensive Yoga lifestyle program, facilitated by the Kripalu Centre for Yoga and Health. Yoga classes were made available seven days a week and meditation classes five days per week, with Participants typically attending a total of three to five classes a week. An intensive Yoga and discussion group was also included once weekly. The results of the study reported a statistically significant improvement in self-reported performance anxiety in both solo-settings and in mood for the Yoga-practicing musicians when compared to the control group (Khalsa & Cope, Effects of a yoga lifestyle intervention on performance-related characteristics of musicians: a preliminary study, 2006).

Khalsa published a second Tanglewood study in 2009 using a larger sample of thirty participants and fifteen controls, including a follow-up one year later. Of the sample selection fifteen undertook a complete Yoga lifestyle intervention while the other fifteen received only Yoga and meditation classes, with all sample participants attending at least three classes per week. The results confirmed the findings of the 2006 study, with reductions in anxiety regarding solo performance being maintained till the follow-up one year later (Khalsa, Shorter, & Cope, Yoga ameliorates performance anxiety and mood disturbance in young professional musicians, 2009).

A third study sought to expand upon the Tanglewood studies by examining whether Yoga could be an effective intervention for MPA in music Conservatory students. Of the 500

students studying at the Boston Conservatory, twenty-four chose to participate in a less-intensive Yoga program than that at the Tanglewood Centre, a program that would be more achievable to the average student. The Yoga classes were in the classical Hatha Yoga tradition including postures, breathing exercises and meditation, and were given by a Yoga instructor with previous experience teaching musicians from the Kripalu Centre. Although under different circumstances and intensity than the original two studies, the researchers hypothesised that the student musicians would report improvements in MPA, general anxiety and tension and mood that would be sustained till the follow-up period one year later (Stern, Khalsa, & Hofmann, 2012).

The researchers utilised a broad variety of reporting methods in the study to best ascertain the scope of the effect of the Yoga intervention on the Students; these methods included a Performance Anxiety Questionnaire (PAQ), the Kenny Music Performance Anxiety Inventory Performance Anxiety Questionnaire (PAQ), Kenny Music Performance Anxiety Inventory (K-MPAI), Profile of Mood States Brief form (POMS-Brief), State-Trait Anxiety Inventory (STAI-T), a home practise log, a Yoga Program Evaluation Questionnaire and a Yoga Program Follow-Up Questionnaire (Stern, Khalsa, & Hofmann, 2012).

The results of the study suggested a positive impact of Yoga on the young musicians, with participant results on the PAQ solo performance subscale and K-MPAI showing a large decrease in MPA. Participants mean scores averaged 91.35% in response to the general benefit of the intervention, while responses regarding music related improvements specifically ranged from 67.94 to 83.82 %. Thirteen of the participants proved additional positive comments including references to improvements in focus and breathing, a calmer mood, and a positive experience in general.

Additionally, eight of the nine students that completed the follow-up measures at seven to fourteen months commented that they continued to actively practice Yoga and meditation. Of those that continued their K-MPAI scores suggested not only a sustained benefit of Yoga, but a trend towards continuing improvement. The summary of the study indicates Yoga and meditation as a promising way of treating student musicians experiencing music-related performance anxiety, with researchers suggesting the intervention as an effective and economical way of supplementing existing methods to treat and educate students about performance anxiety in music schools.



## 5. METHODOLOGY

The purpose of the research was to ascertain the scope of the influence of Yoga on flute performance. By receiving a first-hand account of the different ways Yoga has an effect on flute performance, recommendations can be made as to its inclusion as an effective tool to train for success and health in a career in flute performance with emphasis on a number of flute performance related areas including pre-performance warm up, flute practice, auditions, competitions, health and injury prevention and general conditioning.

The Thesis departure point was conceived from the existing research that exists on Yoga, and the ways it can intercept with health and performance in primary external activities including musicians, and more specifically flutists. As the efficacy of Yoga is quite ambiguous, relying heavily on the perceived experience or phenomenology of the practitioner, it was decided that qualitative data would be the best method of data collection. Additionally, qualitative data collection would allow for direct, first-hand accounts by experienced practitioners of success and experiences of the application of Yoga in professional practice.

A number of potential interview candidates were contacted, asking of their interest in participating in research on the possible effect of Yoga on flute performance. Interviews were said to last anywhere between ten and twenty minutes. Interviews could be undertaken in person, which would be arranged and subject to availability of both interviewer and interviewee - or over video call through Facebook or Skype - which would then be recorded for transcribing at a later date. Candidates that were contacted were within the professional contact circle of the researcher, and were selected for their extensive professional flute performance and successful teaching portfolio, as well as for their known experience and practice of Yoga. A significant number responded, and six candidates were selected to be interviewed. Of those candidates that were selected, three were rejected at a later date due to scheduling conflicts within the given interview time frame.

Participating in the interviews were Sally Walker (Walker, Sally Walker Biography , 2019), Prof. Gisela Mashayekhi-Beer (Mashayekhi-Beer, Gisela Mashayekhi-Beer Flute, 2019), and Hannah Reardon Smith (Smith, 2019). Interview participants met the criteria for the research, with evident experience as flutists in a variety of professional flute performance areas and specialisations, in a variety of teaching contexts, and also with their familiarity and

aptitude for Yoga. Of the interview participants, Walker and Prof. Mashayekhi-Beer could be considered as established artists and Yoga practitioners, and Reardon Smith as an emerging artist and Yoga practitioner.

The interviews followed a general, semi-structured format which was decided to be the best method of obtaining the most detailed information (see Appendix A). Interview questions were constructed based on the variety of flute-related issues raised in the existing research. These questions were then used as conversation starters on different topic areas. Due to their semi-structured nature, the interviews were quite flexible, allowing the interviewee to direct the conversation in whichever way they saw fit. For this reason, not every topic was addressed consistently between the three interviews and some responses were not directly on topic. However, this allowed for greater focus and depth in the responses, with answers reflecting a greater emphasis on the interviewee's own perceptions, and experience in professional practice. Furthermore, any recurring and/or complimentary themes, trends, and any inclusions and exclusions of information in the responses between the three interviewees could be better distinguished, allowing for effective conclusions to the research.

As interviewees were located in various international locations, interviews had to be organised according to the availability of the researcher to travel to the location or, when a live interview was not a viable possibility, the interview could be undertaken through Facebook or Skype video calling. Availability was restricted due to performance and work commitments of researcher and interviewees, and video calling interviews had to be organised with respect to time-zone differences. Another issue that had to be considered was that one interview participant, Prof. Mashayekhi-Beer, was not native speaker of English. While the researcher has extensive experience of professional flute performance and Yoga practice, bias was reduced by keeping commenting and responses to the interviewee during the interview minimal, or neutral when absolutely necessary so as to not interfere with direction of thought.

The interview with Ms. Walker went for thirteen minutes and six seconds and occurred in person on the 13<sup>th</sup> December 2017 in Newcastle, Australia during a holiday trip to researcher's native country (see Appendix B). The interview with Prof. Mashayekhi-Beer went for one hour, sixteen minutes and forty-three seconds and was undertaken in person on the 12<sup>th</sup> February 2019 in a café in Vienna, Austria (see Appendix C) and the interview with

Ms. Reardon Smith went for thirty minutes and thirty-six seconds and occurred via Facebook video calling between Passau, Germany and Brisbane, Australia at 22:30 Central European time (see Appendix D). All Interviews were recorded via the Voice Memo application on an iPhone 6 with a RØDE 'VideoMic Me' microphone and then transcribed at a later date. Interview participants were given a copy of the questions prior to the interviews, and permission to record the interviews for the purpose of transcribing was granted by the interview participant both when organising the interview, and directly before beginning the interview. In the case of the interview with Prof. Mashayekhi-Beer, the transcription is stopped around the thirty minute mark, as the conversation moved off topic.

The first step in treating the research results was to transcribe the interviews. While the interview with Ms. Walker was straightforward, in the other two interviews the interviewee changed subject or went on an unrelated tangent while recording. These topics were not important or relevant to the research and were disregarded during the process of transcribing. After the interviews were transcribed, the qualitative data was analysed through a systematic process of organising and coding according to the various common themes as suggested by the existing research that helped produce the interview questions. This was most effective to ascertain the clear subject themes that would become reoccurring trends in the responses throughout the interview. It also reflected the interviewees own emphasis, and the significance of those themes to the subject, their interconnectivity, and the scope of the perceived impact of Yoga on variety of flute-playing related issues.

## 6. RESULTS

### 6.1. Yoga practices

The interviewees were asked to describe their Yoga practice – what form/s of Yoga they practice, how they came to Yoga and the frequency of practice. It was found that each of the interviewees practice different forms of Yoga to each other. Furthermore, the interviewees often create their practice by combining elements from different traditions of Yoga. All three rely on a combination of primarily home Yoga practice with classes in a Yoga studio, with both Mashayekhi-Beer and Reardon Smith mentioning the use of Yoga instruction recordings from videos and YouTube for their home practice. All three practice Postures (Asanas) as well as elements from Pranayama and Meditation. Mashayekhi-Beer emphasised the importance of her life experiences in shaping her current Yoga practice, and how it further influences her Yoga studio and flutes teaching.

Walker mentioned that her practice is quite “sporadic”, with regularity being subject to touring schedules. Her Yoga practice is occurring mostly at home, first thing in the day, featuring sun salutations, breathing exercises and basic gentle stretching. This is complimented with classes at the Yoga Loft (Yoga Loft , 2016) in Newcastle, Australia with practices including Vinyasa flow [Ashtanga/Power Yoga] and Yin Yoga styles with extra workshops with guests. Walker drew particular attention to the importance of Yin Yoga in her practice, “Yin is restorative, where you hold a pose for five minutes, and that’s working on the deep tissue, and you feel maybe it’s not doing anything, but you feel calmer – but often the next day you can feel very stretched, in those muscles” (Walker, 2017).

The first contact with Yoga for Mashayekhi-Beer came from her mother; as well as practicing Yoga her mother was a professional Flutist, having studied in Zurich, worked with orchestra in Passau, Germany and was the first teacher of Wolfgang Schultz, celebrated former Principal Flute of the Vienna Philharmonic. From the age of 25 Gisela practiced Yoga informally, studying from books and videos – further contact came from prenatal Yoga classes during her pregnancy. The first serious contact with Yoga came from her therapist, who recommended it as a therapy following a burn-out:

One question to come out of the Burn-out, was what you always wanted to do, but never did – because you have no time. The first thing was Yoga... I came back to Vienna, and then I went into a shop, and then I saw there a new Yoga studio. I called there, and then this was my really, really great teacher. I started to do Yoga very regularly and this helped to come out of this burnout (Mashayekhi-Beer, 2019).

Furthermore, Yoga was used as a therapy to treat her playing-related injury, focal dystonia:

Admittedly, I didn't learn enough - I was very quickly back to my old life... I [was teaching in] Vienna University, and I had Linz [University], and I had Eisenstadt [Conservatorium]...concerts.... so, the next problem came – Dystonia. And then you learn... and with this thing that helped, the Yoga helped me to survive (Mashayekhi-Beer, 2019).

Mashayekhi-Beer practices a combination of Hatha and Ana Forrest Yoga, including also elements from Shamanism and Buddhism. After receiving advice from the Yoga teacher who helped her during her burn-out, Mashayekhi-Beer completed professional Yoga teacher training. She is now an established Yoga teacher, running a studio with a focus on Yoga for flutists, musicians as well as non-musicians. It was made clear the importance of her practices as both a Yoga teacher and a flute teacher, how they connect:

She [Yoga teacher] was encouraging me to be a Yoga teacher... I thought ok I will try it, but for myself, only to go a little bit deeper into everything, so this approach was so good for me, so interesting... I saw for myself not something very new – I felt very comfortable the whole time, also because I am teaching my whole life already, I think this was also very helpful. And for me it was the special thing that – ok, this is something I feel comfortable with, but it is very different to teaching flute, because it is nothing with perfectionism... So, to be in this very other way to teach, made a big freedom as well with the flute teaching – so it went together in a way that I didn't realize in the beginning. And then it got more and more, and so I thought – wow, this is something that every musician or every flutist should do. And my first idea was to teach Yoga for Musicians (Mashayekhi-Beer, 2019).

Like Mashayekhi, Reardon Smith was introduced to Yoga as a therapy, initially combining Yoga with Pilates to treat a calcified shoulder muscle as a result of a repetitive-use injury and poor posture. After a period of time working with Pilates under the guidance of a Physiotherapist, Reardon Smith decided that the treatment was too limited and that Yoga therapy was both more successful and more enjoyable. She practiced at the Yoga Den in Brisbane, Australia where her most significant teachers were Kate Pell and Dan Alder who teach a mixture of elements from Iyengar Yoga and Hatha Yoga. Varying throughout her life, Reardon Smith's current Yoga practice is mainly a home practice, after her Yoga teacher moved away from her city. She draws heavily on Iyengar Yoga, practices also breathing exercises and meditation, visits various local Yoga studios, and uses instructional YouTube videos. Reardon Smith has also completed 'Level 1' (Foundational) Yoga Teacher training as an approach towards injury recovery and prevention, but also to incorporate elements into flute teaching for the potential of establishing a Yoga studio in the future. (Reardon Smith, 2019).

Both Walker and Mashayekhi-Beer stated that their schedules often interfere with their ability to maintain a regular Yoga practice. Walker said that she will practice on average around three times a week, however noted that in the past she has participated in the 40 Day Yoga Challenge created by Power Yoga founder Baron Baptise (Yoga Loft , 2016) which 40 days of a consistent daily Yoga practice and lifestyle intervention, that is, "...much more intensive, and you can get a lot out of that..." (Walker, 2017). When questioned about the frequency of practicing Yoga, Mashayekhi-Beer stated that two to three times a week being optimal for her, with one day a week being not enough, and experiences frustration when having not practiced Yoga after three days consecutively. Reardon Smith practices around four to five times per week, sometimes also upwards of seven days a week. She also maintains a separate 30 minutes meditation practice first thing in the morning, practicing four to five times a week.

## 6.2. Impact of Yoga on the Flute

Interviewees gave strong affirmative responses when questioned if a Yoga practice can influence flute performance, with all three interviewees stating that Yoga can make a positive impact on flute performance. Before being asked specific questions, the interviewees were asked as to what they thought were generally the most significant areas in flute performance that were impacted by Yoga practice, which were:

**Table 6.1. Initial responses.**

<b>FLUTE PERFORMANCE AREAS</b>	<b>NUMBER OF INITIAL RESPONSES</b>	<b>INTERVIEWEE</b>
Posture	2	Walker, Mashayekhi-Beer
Breathing	2	Walker, Mashayekhi-Beer
Psychological Benefits	2	Walker, Mashayekhi-Beer
Body Awareness	1	Mashayekhi-Beer
Injury Prevention	1	Reardon Smith

The three most common initial responses were posture, breathing, and psychological benefits. When questioned, Walker mentioned these three areas and suggested that the emphasis on breathing, the different ways of breathing and focus on deep breathing were ‘really useful’ for flute. Furthermore, she suggested that the Yogic teaching of “losing yourself and losing your ego” was ‘very helpful’ as an approach to performance from a psychological perspective. An additional factor that Walker thought was also very important to mention which can also contribute to success in Flute performance was the positive environment with which one is exposed to when practicing Yoga in a studio:

...through Yoga you meet a community of people wanting to improve themselves, and I think that's a really great group of people to be around, just to try to think 'what are the ways you are trying to explore, being your fullest sense, full of self, or you most best version of yourself, and then you have other people supporting you on that journey (Walker, 2017).

In her initial response, Mashayekhi-Beer stated that, "Yoga influences the flute in many, many ways". The same three subject areas as Walker were raised – posture, breathing, and psychological benefits, while also drawing attention to body awareness. Emphasis was placed on breathing, with Mashayekhi-Beer claiming that through Yoga it is possible to discover a new relationship with your own breathing. Attention was also drawn to the importance and connection between breathing and an awareness of the actions occurring inside the body:

...You can't see these things like a (violin) bow, you have to get a good feeling for what is inside, how I feel the breathing and how I feel the diaphragm especially, because we are only working with the diaphragm Sound starts here [diaphragm] to know the feeling, what is the diaphragm doing, where it's going, how I work with the diaphragm..." (Mashayekhi-Beer, 2019).

Regarding body awareness, Mashayekhi-Beer also stated that Yoga can also be used as training for flutists' stage presence, how to walk and present oneself onstage which she regarded as 'very important'. She claims that Yoga has psychological benefits, stating that is 'helps amazing[ly]' for nerves when preparing for auditions and concerts.

Injury prevention and recovery was the most significant impact of Yoga on flute performance for Reardon Smith in her initial response, stating that it was the 'main reason' why she started practicing Yoga. While this was the most succinct response of all three interviewees, Reardon Smith also stated later in the interview that her that the combination of stretching, strengthening and breathing were important for her, and were useful for flute playing.



### *6.2.1. Posture and injury prevention*

Posture was believed by all interviewees to be impacted by Yoga practice, with Walker and Mashayekhi-Beer stating directly that it has a positive impact on the way you hold yourself when playing the Flute. While all interviewees believed that Yoga positively impacts Flutist's posture and prevents injury, Reardon Smith believed it to be the most significant issue concerning Yoga's impact on flute performance. Having suffered a flute playing-related posture and repetitive use injury, Reardon Smith was initially treated with a combined therapy of Pilates including the use of Pilates-machines supervised by a Physiotherapist, and Yoga. While the Pilates strengthened her core and stabilised her posture, she feels that the Yoga intervention achieved the same results, with the addition of flexibility which was both more useful and generally more enjoyable.

So that she could better understand and identify the best postures to treat any pain and specific problems that emerged with her Flute performance, Reardon Smith studied Yoga intensively through fundamental-level Yoga teacher training. Through this training, she was also able to use Yoga as a method for reducing the potential for, and preventing any future playing related injuries in both herself and her flute students. After two to three days consecutively without Yoga, Reardon Smith feels that she becomes cautious of the potential for injury – however since beginning a regular Yoga practice she hasn't suffered any playing-related injuries.

The connection between Yoga and Flute playing-related injuries was also raised by Masheyekhi-Beer, who uses Yoga as a therapy to treat her focal dystonia which currently affects her ability to play the flute. Walker stated that by building muscular strength for endurance, and also by stretching before flute practice, Yoga can prevent potential injuries arising by teaching you to use the body in an efficient and sensible way. Reardon Smith also believes that Yoga can be significant in impacting Flute posture and injury prevention, is the way it addresses and strengthens imbalances in the body. The playing position of the flute puts most of the load on one side of the body, is one of the most significant concerns when discussing posture and injury in flute playing. In Yoga, all practiced postures are repeated and mirrored from one side of the body to the other. Practitioners are guided to observe the differences on each side, which in the flute player's body can be noticeable – Reardon Smith suggests that Yoga can be used to correct the imbalances.

### 6.2.2. *Fatigue and stamina*

Understanding limitations was a consistent theme between interviewees with regard to fatigue and stamina in flute performance, claiming that Yoga is a tool that can be used to discover a flutist's physical and also mental boundaries and limitations. Walker focussed on the process in Yoga of self-examining and respecting physical limitations:

Perhaps because in Yoga you are always asking yourself about your limits. You know how they say, choose what's right for you on the day and in the moment, if you need to go into Child's Pose, or if you need something more active, the same I think with flute playing then to notices just how you are feeling - yeah, if you need to shift your seating position, or do you need to stand up for a bit, or move, or have a break - your body is starting to talk to you (Walker, 2017).

Mashayekhi-Beer focussed on using Yoga to aware of a Yogi's source of 'power', using training and conditioning to test and push the limits of that power:

In my lessons, I go really into power. So you really feel, aware, from where can I get my power... This is our *Kraftwerk*. I have to realize where can I, how can I get the power from here, you know? So, it's the training, and also conditioning, and also to go a little bit on the limits, to feel your limits – Ok Can I go a little bit more? So, it's the same with the flute, we think ok here is my limit? ... you have to break the limits, to reach the point where it's good for you (Mashayekhi-Beer, 2019).

Testing and pushing of the body's limits were also mentioned by Reardon Smith – she believes that breathing exercises have an impact on breath stamina in flute performance. She uses breathing exercises to train the ribcage muscles and breathing system to be comfortable with releasing different volumes of air at different speeds. This is useful for training circular breathing and for sustaining long phrases. She drew attention to a lack of dynamic movement in flutists, who have a tendency to only practice flute and no exercise, as a contributing factor in ribcage tightness and therefore lack of breath stamina. Stretching, strengthening, and breathing exercises in Yoga were recommended to move the muscles around the ribcage to develop stamina for flute performance. An additional comment was made by Walker, stating

that she experiences less fatigue while playing the flute, when maintaining a Yoga practice, due to good posture and using the body efficiently.

### *6.2.3. Mental training and concentration*

Yoga has conditioned Reardon Smith to concentrate while experiencing difficulty in flute performance. Her flute performance includes practice, preparing and performing contemporary art music, especially ‘New Complexity’ which often features often very fast, detailed and difficult passages. During her Yoga practice, she expressed that while there are some asanas that are easy and comfortable to practice, there are others that are a struggle, especially those involving the hips. During moments of difficulty she will receive messages to escape the pose – Yoga teaches to resist these messages, stay in the moment of discomfort and to maintain breathing and meditative composure. Reardon Smith applies this skill to flute practice, to recognise when frustration arises and to be able to concentrate and play longer in a productive and mindful way.

Walker claimed that the Yogic teaching of ‘letting go’ is a useful mental training tool for Flutists. Letting go of attachment, especially to negativity and to the ego, can help a Flutist not take themselves self too seriously while still taking the music seriously, and will help, “get you in touch with your body and soul”, and stated that this approach is ‘very helpful’ for flutists. Masheyekhi-Beer emphasised the use of Yoga for training concentration, stating that it ‘helps amazing[ly]’ for Flutists experiencing nerves in performance.

### *6.2.4. Performance anxiety*

In the heightened state before performance, a flutist will experience anxiousness while the body releases cortisol, affecting the body by tightening muscles. Yoga has helped with Walker’s performance anxiety and also that of her students, by ‘decompressing’ the tensions both physically and mentally. She also stated that it is possible for flutists to develop self-confidence through the actions of Yoga, conditioning them to be ‘tall and proud’ as many of the postures are about having strength and courage. Reardon Smith said she relies on ‘breath-work’ and said that Yoga practices that are targeted at anxiety in general can be helpful, especially postures that are about ‘grounding’ and posture. Both Reardon Smith and Mashayekhi-Beer emphasised the importance of a pre-performance routine including

breathing and stretching as an effective way of dealing with performance anxiety, with Mashayekhi-Beer commenting on celebrated concert violinist, pedagogue and Yogi Yehudi Menuhin's pre-performance tradition of a headstand.

#### 6.2.5. *Senses and awareness*

Stillness in Yoga practice was commented on by both Walker and Reardon Smith as being important for developing the senses and awareness useful for flute performance. While Walker finds Savasana useful for developing body awareness, Reardon Smith emphasised meditation, mindfulness and observing the breath during Yoga practice important for connecting with the subtle sensations in the body. Senses and awareness can be developed especially:

...with a meditative practice, and particularly with a more mindfulness observing the breath meditation. I do quite a bit of just observing the sensation of the breath hitting the upper lip, as I breath through my nose, which is a very subtle feeling, or just around the edges of nostrils - just staying with that subtle feeling (Reardon Smith, 2019).

Furthermore, she stated that being observant of sound during Yoga practice as a useful way of training the ear and developing aural concentration, a skill especially important for live performance.

#### 6.2.6. *Auditions and Competitions*

Mashayekhi-Beer and Walker believe that Yoga is useful in preparing for auditions and competitions, with both raising significant issues on the subject. While both agreed that it helps with Performance anxiety and nerves, Mashayekhi-Beer emphasised that Yoga is a good method of finding power and training concentration. Walker stated that a regular Yoga practice is 'really useful' leading up to auditions and competitions, and detailed the importance of Yoga in helping maintain balance:

When you give yourself the time to sit in a Yoga class rather than frenetically practise, just exercising balance in your life – and it's so easy to lose balance before a competition

or an audition and just become very, very single-minded about it. And as we all know, you can only control how you play in an audition, you can't control the outcome – you then can become very despondent if the outcome isn't what you wanted it to be. and also telling yourself, by doing another activity in the day, your flute practise isn't just 'everything' (Walker, 2017).

### **6.3. Importance of Yogic Philosophy**

When questioned about the importance of devotional Yoga the interviewees inferred that while interesting and generally value-adding, it was not the most important aspect of Yoga for flute playing. On this subject the interviewees focussed mainly on common Yogic philosophy, with some mentioning an intersection with Eastern spirituality and esoteric practices. Walker inferred that there could be useful implications for Flute performance from studying Yogic Philosophy, including practices such as not-overestimating yourself, respecting your body, respecting your limits, and being kind to yourself. Reardon Smith stated that it depended on the individual as to whether devotional Yoga was important – however she stressed that Yoga is not just a form of exercise. Exploring the spiritual side of Yoga is an essential part of any serious practice of Yoga, partly out of respect for the culture from which it comes, and may potentially have unexpected benefits for Flute playing. She stated that through Yoga she was introduced to Hinduism and Indian Buddhism, and along with Yoga and meditation, were very important for her spirituality and mental health. Masheyekhi-Beer also mentioned a connection between Yoga and Buddhism, adding also Shamanism, the study and integration of which affects her depth of experience.

### **6.4. Recommending Yoga to Students and Colleagues**

Yoga was recommended to their flute students by the interviewees, with all three claiming to have seen success and benefit in those students that practice Yoga. Reardon Smith stated that studying Yoga Teacher training meant that Yoga could become present in her flute teaching, being able to suggest Yoga postures to her students to address particular physical problems. These can also be incorporated into flute practice sessions without the student having to commit to a complete Yoga practice. For some of Walker's students, practicing Yoga has extended into other trajectories of cultural exploration and self-improvement which has

positively affected their flute performance. It was noted that students had more respect for their bodies, eating more carefully and becoming vegetarian/vegan, respecting their own limits especially when it comes to practice, more self-confidence, and helped with their performance anxiety.

Walker mentioned however that she has had not much success with recommending Yoga to her colleagues at the University despite the many benefits for Music Academics who perform and have postural issues from sitting most of the day, due to a lack of priority placed by them on practicing Yoga. Mashayekhi-Beer also spoke of a lack of understanding for the esoteric nature of Yoga, many of which begin practicing Yoga for a short period and stop. Some students also expressed a lack of time, or that by committing to a consistent Yoga practice it would spread their energy and attention between too many things. However, she reiterated her belief of the importance Yoga to Flute performance:

It's a very important thing for me in my life, and for my students, and so I really like to talk about this, and I think people should know more about this... especially music students... I was the same, so I can understand... (Mashayekhi-Beer, ao.Univ.Prof., 2019).

Recommended by the interviewees was the inclusion of a short but effective Yoga practice into the regular schedule of a flutist. Mashayekhi-Beer suggested to her students to take 30 minutes from their Flute practicing schedule and devote it to a simple Yoga practice that they could '*Einbauen in der Alltag*' [incorporate into everyday life] without causing injury. She suggested exercises including Savasana, easy breathing exercises, feeling into the body, as well as simple stretches like Cat and Cow Pose. Reardon Smith concurred with this idea, recommending a 20-minute Yoga practice targeted towards flute playing and the flute body that could be practiced a couple of times a week for noticeable results, with further potential to add postures that could help target more specific problems as they occur.

#### *6.4.1. Recommendations of Asanas for Flute Players*

While all three interviewees recommended a variety of Yoga postures that can impact Flute playing-related issues, Reardon Smith stated that there generally aren't postures that are universally good for flute performance. However, both Mashayekhi-Beer and Reardon Smith emphasised the importance of postures in treating specific problems experienced by the flutist. Reardon Smith said that after identifying personal weaknesses, particular postures could be used to address those weaknesses. Masheyekhi-Beer confirmed, referring to some common general issues for flutists and their corresponding Yoga solutions, including stiffness and strength in the body requiring stretching; and too much flexibility, weak energy and collapsing the body requiring strengthening and energy building postures. The following table is a list of postures mentioned through interviews including by whom the suggestions were made, and the justifications for why they were made. Recommendations ranged in specificity with some suggesting exact poses, while others suggesting general postures to target specific areas of the body affected by flute playing (see next page):

**Table 6.2. Postures recommended for flute players.**

POSTURE	INTERVIEWEE	REASON
Back arches, back bends, including Dancer's pose	Walker	Compensating for overutilized and overstretched back muscles caused by shoulder caging and hunching in flute playing
Savasana	Walker	For body awareness, especially in shoulders, checking body alignment
Warrior pose	Masheyekhi-Beer	Developing strength to address nerves and performance anxiety
Downward Dog	Reardon Smith	Strengthening back muscles especially upper back and also corset muscles, releasing tension in lower back and hips muscles, general whole body stretch, addressing nervous system in spine, arms above head, inversion.  Emphasises correct technique, rolling shoulders away from ears, tightening around rib cage.
Side stretches	Reardon Smith	Recommended to those who stand a lot while playing the flute
Hip releases	Reardon Smith	Also recommended to those who stand a lot while playing the flute
Stretching Pectoral muscles	Reardon Smith	Compensating for slouching during flute playing
Bridge pose, Supported Bridge pose	Reardon Smith	Rolling out shoulders and strengthening back muscles utilised during flute playing
Chataranga	Reardon Smith	Targets weak biceps and rolling the shoulders forward



**Table 6.2 (continued). Postures recommended for flute players.**

POSTURE	INTERVIEWEE	REASON
Locust Pose, including variations: <ul style="list-style-type: none"> <li>- Lifting legs</li> <li>- Lifting torso and arm</li> <li>- Lifting torso, arms and legs</li> </ul>	Reardon Smith	Postures involving resting on stomach and not using your hands to press up, strengthens back ‘core’ muscles, also helps to stay physically ‘open’
Tadasana	Masheyekhi-Beer	For grounding, standing balance, visualisation of alignment with flute
Cat and Cow Pose	Masheyekhi-Beer	Simple and effective for the Flutist’s body, low potential for injury

Mashayekhi-Beer and Reardon Smith drew attention to issues in Yoga to be mindful of or things to avoid due to the potential to cause injury that could impact flute playing. The neck, the spine and the knees were three places in the body that Mashayekhi-Beer said were quite dangerous for potential injury, especially for beginning Yoga students. Proper technique, and being conscious of and not pushing borders was emphasised by Reardon Smith, and said that it is very easy to cause injury in the wrists and hands in Yoga that can affect flute playing. Being mindful of the wrists, and weight-bearing in the hands especially when beginning Yoga is important, as wrist injuries are problematic for flute playing. Avoid putting too much pressure on the wrists, and hand stands and inversions should only be performed after building up sufficient strength, “I have really skinny wrists for the rest of my body weight, so I’m quite cautious about weight-bearing on my hands.” (Reardon Smith, 2019).

Hyper-extension in the joints especially in the elbows was another issue, suggesting arm balancing postures to be performed directly on the elbows instead of the hands, which would avoid pressure in the elbows and would help stabilise the shoulders. She cautioned on

pushing past thresholds during stretching, being conscious of the differences between normal stretching action, movement limitations of bone on bone or, “where things just won’t stretch that way” (Reardon Smith, 2019). Furthermore, Reardon Smith did not recommend hot Yoga and Bikram Yoga claiming that due to the heat of the class it is very easy to over-stretch and cause injury.

#### *6.4.2. Recommendation of Pranayama for Flute Players*

Pranayama was believed by all three interviewees to have great impact on Flute performance, with Walker stating that the emphasis in Yoga on breathing, deep breathing, and different ways of breathing to be very useful for flute players. Two specific Pranayama exercises were recommended in the interviews, with Mashayekhi-Beer recommending the practice of Kabalabati, and together with Walker the Alternate Nostril Breathing exercise. Mashayekhi-Beer emphasised the importance of being creative with breathing exercises, combining and creating exercises to address problems in the students and as a method of returning to an uninhibited and natural way of breathing. Some students develop unnatural breathing habits, overthinking the breathing mechanism, breathing too high in the body, others unable to retain breath, “So yes, A lot of breathing exercises but, but in my own way, creative. But also, to see what is happening when the people are breathing. So, I watch, I observe, and then I say, now we need this, now we need that.” (Mashayekhi-Beer, 2019). Reardon Smith echoed the need to be creative when it comes to breathing exercises, combining traditional Pranayama exercises with breathing exercises from other traditions, and mentioned specific exercises from the esteemed American Shakuhachi player Riley Lee who has recorded popular Yoga Meditation music (Lee, 2000).

#### *6.4.3. Recommended Frequency of Yoga for Flute Players*

It was recommended to practice Yoga as frequently as possible – however all interviewees recognised from their own Yoga practice that it is often not possible to commit so much time due to busy schedules. Walker stated that the actual frequency of Yoga should be decided by the individual and their needs, but added that incorporating a small Yoga practice into each day can make a ‘big, positive impact’ and has been of ‘enormous benefit’. One day a week was said to be not enough, but was still recommended as the minimum with Mashayekhi-

Beer claiming that it was possible for the mental benefits of Yoga to develop in that time. Reardon Smith agreed saying that it was possible to gain some effects from practicing Yoga once in a week. She also stated that every Yoga practice will still have some benefit for flute performance and that it wasn't necessary to practice Yoga five to seven times a week to get any benefit. Both Mashayekhi-Beer and Reardon Smith stated the optimal frequency of Yoga to be two to three times a week, believing that was the frequency required to develop a 'good feeling' in the body (Mashayekhi-Beer, 2019), and for 'real' injury prevention (Reardon Smith, 2019).

## 7. DISCUSSION

The results of the research confirm the hypothesis that Yoga practice can impact flute performance. It was found that a Yoga practice can positively impact flute performance with regards to posture and injury prevention, playing fatigue and stamina, mental training and concentration, developing senses and awareness, Performance Anxiety, and audition and competition preparation. For this reason, it can be used as one approach as a method for training and conditioning for success in flute performance, and also a method of prevention and treatment for playing-related psychological and physical problems and issues. This is important, as the existing research detailed a need for such an activity and intervention, that would have benefits for issues specific to Flute performance.

Focus on posture and alignment in Yoga can prevent the development of playing-related injuries. Lonsdale, Laakso and Tomlinson indicated the need for proper instruction in good posture, alignment and playing position for flute players in their 2014 research to prevent development of musculoskeletal disorders. Yoga directly addresses this, with the research also suggesting that it can also be used for treatment and rehabilitation of already existing playing-related injuries. Furthermore, Yoga can be an effective intervention to train stamina in performance and treat playing-related fatigue. The physical fitness required to maintain endurance and performance quality, as well as the physical conditioning needed to combat fatigue, exhaustion and overuse symptoms (Drinkwater & Kloppe, 2010) are all part of the training during Yoga practice, as is the physical conditioning through stretching, relaxing (Miyazawa Incorporated, 2015) and mindfulness (Lewis, 2005) emphasised by other sources.

The mental training and concentration required for peak flute performance especially in auditions and competitions are trained in Yoga. Baxtresser emphasised practicing meditation and mindfulness, to develop the mental hygiene, focus and elite psychological conditioning required for a successful professional audition, both of which are key elements of a Yoga practice (Baxtresser, 2008); Yoga was recommended by the research as an effective tool to train concentration for auditions and competitions, most significantly for the positive effect on performance anxiety and nerves. Body discipline was also referred to by Baxtresser as necessary for peak performance and endurance in auditions, especially through physical exercise and diet (Baxtresser, 2008); the research confirms to use of Yoga as a method for

disciplining the body for auditions and competitions, with mindfulness of diet also being a possible lifestyle outcome of a Yoga practice.

The psychological benefits of Yoga were addressed as significant early in the research, with Yoga also being suggested as an intervention for Performance Anxiety. Bruce recommended developing a method of training and conditioning the brain for treating performance anxiety - after identifying and understanding the cause of performance anxiety, it would allow an individual to act in a more positive and controlled manner and eliminate the irrational responses experienced in stress situations, especially performance (Bruce, 2013). The research gives evidence of Yoga as being an effective and successful tool in treating the psychological and physiological elements experienced in Performance Anxiety.

While not as thoroughly discussed when compared to the other issues, the research does confirm that a Yoga practice can be used to develop of senses and awareness for flute performance. Hodges suggests mediation, mindfulness and awareness exercises for developing Sensory Behavioural Flexibility for improved performance, as well as mindfulness and body awareness exercises to prepare the individual both emotionally and mentally, for the thoughts, feelings and performance-related anxieties that affect the nervous system during performance (Hodges, 1993). Furthermore, Divine confirms the mental and emotional effect of Yoga for performance, describing it as the perfect method for integrated training, combining the mental, emotional, moral, spiritual and physical elements necessary for accelerated growth and improved performance (Divine, 2016).

Clear parallels can be drawn between the exercises suggested by Hodges and Divine and those exercises undertaken in a Yoga practice, the positive affect of which on flute performance being documented consistently throughout the research. Additionally, the recommendation by Hodges for warm-up exercises to prepare the individual physically, mentally and emotionally before performance (Hodges, 1993), was confirmed by the research which emphasised the efficacy of a Yoga-based pre-performance routine.

Though important to the life of a Yoga practitioner, the research suggested that Yogic Philosophy was not as important an issue for flute performance when compared to other aspects of Yoga. While mentioning many elements of the 'Eight Limbs of Yoga' of Ashtanga Yoga, it was not specifically referred to in the research, compared to Divine who

mentions it as being core to a Yoga practice for improving performance. The researcher suggests that a greater understanding and conscious application of elements from the Eight Limbs of Yoga could positively impact flute performance.

Both Walker and Reardon Smith stated that in some instances any physical exercise can have benefit for Flute performance, but confirmed later that is the unique elements in Yoga that make it the most effective method. Forms of Yoga mentioned by the research included Hatha, Iyengar, Ashtanga, and Yin Yoga, while Bikram and hot Yoga were mentioned explicitly as being not good for flute performance for their potential you cause damage or exacerbate playing-related injuries. This could suggest that there are more attractive or effective forms of Yoga for flutists than others, which could affect recommendations to Flutists for particular Yoga styles and studios.

By interviewing three Yoga-practicing professional Flutists, the strength and validity of the research was confirmed. Interviewees ranged from emerging and established artists allowing for a wide age demographic, with interviewees having tertiary level flute teaching experience, and extensive international performance experience including orchestra, solo, chamber music, Contemporary Art music and non-idiomatic improvisation. While Walker is an experienced performer of the Traverso and historical instruments, the effect of Yoga on her performance on these flutes wasn't explicitly mentioned. Furthermore, omitted from the research were the experiences of Jazz flutists, and flutists from outside of the Western Art music tradition including folk flutists from Asia, Americas, the Pacific etc. Further limitations to the research include that the researcher has extensive professional experience with Yoga and flute performance, and that the interviewees were selected from within the professional circle of he researcher. Future research could focus on Yoga's impact on performance of flutes from these other traditions, and with a wider research sample, but it is predicted that the results will be similar if not the same.

This research relied on a qualitative data collection method, however future research using a quantitative method would be also valuable for measuring the impact of Yoga practice on flute performance. One suggested possibility for future research could be to recreate the research projects, or something similar, undertaken by Khalsa and associates at the Tanglewood Music Centre, Massachusetts in 2006, 2009 and 2012. Measuring the effects of

a Yoga Lifestyle program in musicians and music students in general, the study would be focussed on Flute players specifically.

## **8. CONCLUSION**

The most important result of this research is the recommendation of a Yoga practice that might help Flutists, however does not claim to be the only possible method, and does not take in to account other possible circumstances. The research suggests the inclusion of a short but frequent Yoga practice for maximal benefit to flute performance as detailed in the research, including simple stretching, breathing and meditation exercises with reduced potential for injury. It can also recommend including specific postures and breathing exercises that focus on common problems experienced in flute-playing individual's body, on issues and problems specific to flute performance, and any other problems the individual might be experiencing.

A Yoga practise specifically tailored to Flutists can be recommended to flutists studying at school and tertiary level, particularly as a method for improving performance quality in auditions and competitions, and can recommend potential inclusion into study curriculums at Universities, Conservatories and Orchestra Academies. The research also recommends the inclusion as a potential therapy for flutists suffering from playing related injuries or performance anxiety, especially when combined with the advice of medical practitioners. For the safety of the Flutist and in the interest of injury prevention, the researcher recommends the supervision of an experienced Yogi particularly one aware of problems and issues experienced in flute performance.

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## 10.APPENDIX A. INTERVIEW QUESTIONNAIRE

- ❖ How would you describe your Yoga practise?
  - Studio + Style, where trained
  - Emphasis on Yoga postures, breathing and/or meditation
  - Frequency, for how long been practicing
- ❖ Do you think that **Yoga can impact flute performance?** Also, specifically with regards to:
  - Posture and injury prevention
  - Fatigue and Stamina
  - Mental Training and Concentration
  - Heightening/isolating senses and awareness
  - Performance Anxiety
  - Audition and Competition preparation
- ❖ Are there any **specific postures** (asanas) or **breathing exercises** (pranayama) that impact flute performance directly?
- ❖ **How often** do you think you should practise to have benefits?
- ❖ Would you recommend Yoga to other flute players, students, colleagues?
- ❖ Are there forms of Yoga you **wouldn't** recommend? Or certain postures? Why?
- ❖ Do you think it is important for Flutists to understand **Devotional Yoga** /Buddhism/Yogic Holy Texts?

**11.APPENDIX B. INTERVIEW SALLY WALKER**

13.12.2017 Transcript of live interview made live in Newcastle (Australia)

LH: Hi Sally.

SW: Hi Latham.

LH: Thank you for agreeing to have an interview with me for my Thesis.

SW: It's the 13<sup>th</sup> of December.

LH: On a sunny beach in Newcastle, summer. Great, first of all, I would like to ask you – How would you describe your Yoga practise?

SW: Well, unfortunately it's a little sporadic at the moment because of my life, changing in terms of how busy it is while I'm touring, when I'm at home, so I'd like to be honest with you and say it's not happening as regularly as I would like to (laughs). When I have proper time I usually start of the day with a routine with my mat at home. Sun salutations, things like that, some breathing, basic gentle stretching and then later in the day I do a more rigorous routine like a Vinyasa, and that's where I enjoy going to a class, like I will go tonight to the Yoga Loft here.

LH: The Yoga Loft in Newcastle?

SW: Yeah, which it's really good for both the Vinyasa classes and the Yin, and they offer odd workshops with guests and that kind of thing too.

LH: Yin Yoga, you were talking about?

SW: Yeah so Yin is restorative, where you hold a pose for five minutes, and that's working on the deep tissue, and you feel maybe it's not doing anything, but you feel calmer – but often the next day you can feel very stretched, in those muscles.

LH: Ok. So, your frequency is sort of, normally daily or?

SW: Oh look, normally doing a class would be three times a week, sometimes I do things like the Forty Day Yoga Challenge which is every day. So that's a much more intensive, and you can get a lot out of that.

LH: Ok. So, the obvious question is – do you think that Yoga and positively impact Flute Performance. Start right at the top [laughs]

SW: (laughs). Yes, absolutely. I do – I know it to have positively impacted my own. Firstly, in terms of posture, how you hold yourself. Secondly, the emphasis on breathing, and deep breathing, different ways of breathing, is really useful. And thirdly, I think from a psychological point of view, because Yoga is teaching about losing yourself and losing your ego - that's very helpful as an approach towards performance.

LH: Ok

SW: So, you feel very in touch with your body and your soul, but you also feel you don't take yourself too seriously – I think it's good to take the music seriously, but not take yourself seriously.

LH: Exactly yeah. Ok well that sort of answers quite a few questions, because I wanted to talk to you about, specifically injury prevention.

SW: Ah yes. Well I guess with injury prevention, if you have a lot of muscular strength you can have more endurance, and then if you are stretching before and after practise, which I certainly do do, you're also preventing potential injury – by just being, by using your body in a really efficient and sensible way.

LH: Ok. For fatigue as well? I guess that is like, just general conditioning?

SW: I think, I experience less fatigue when I'm practicing Yoga, perhaps because my posture is good. Perhaps because in Yoga you are always asking yourself about your limits. You know how they say, choose what's right for you on the day and in the moment, if you need to

go into Child's Pose, or if you need something more active, the same I think with flute playing then to notices just how you are feeling -

LH: -in the day.

SW: -yeah, if you need to shift your seating position, or do you need to stand up for a bit, or move, or have a break - your body is starting to talk to you.

LH: Ok, great. Specifically, for auditions and competitions, that sort of elite level of training. Do you think that Yoga positively impacts that as well?

SW: Yeah that's where I think if you can keep a regular (Yoga) practise, it's really useful. Firstly because, when you're in a heightened state before a competition or audition, you're feeling anxious so you're releasing more cortisol and so forth, and that affects your body by tightening up of muscles, and you mightn't even be aware it's happening. So, this (Yoga) just decompresses that tension, physically; and also, mentally – even when you give yourself the time to sit in a Yoga class rather than frenetically practise, just exercising balance in your life – and it's so easy to lose balance before a competition or an audition and just become very, very single-minded about it. And as we all know, you can only control how you play in an audition, you can't control the outcome – you then can become very despondent if the outcome isn't what you wanted it to be.

LH: So that's the whole 'letting go of ego' as well?

SW: - and again, and also telling yourself, by doing another activity in the day, your flute practise isn't just 'everything'.

LH: Sure! Yeah, there's more to life than just flute (laughs).

SW: But do you know, just intellectually, it can really feel like life and death – it's a bit ridiculous.

LH: It's just a flute.

SW: We've all been there, in that mind-set. Yes.

LH: Wow, that's fantastic. Specifically, postures, breathing exercises, that you do, or you think specifically goes with flute performance?

SW: Look yeah, I'll tell you what I think is really good. Because with flute, we tend to want to cage our shoulders and hunch forward and tighten the chest muscles, and then over-

LH: Compensate?

SW: Over-utilise, or over-stretch the back muscles and getting curved. I think really good are any back arches, back bends, any of those positions. Or when you take your leg in one hand and put your arm over your head to do that (dancers pose).

LH: Ah yeah, so a lot of back bends.

SW: Yes, I think those postures are really good. I think Savasana after you've been working really hard is really good, just to see if your shoulder blades are even, or if one kind of coming up.

LH: Ah ok.

SW: The right one might be coming a bit forward.

LH: Ah so really getting inside your body, body awareness.

SW: Yeah.

LH: Yeah. And breathing exercises? Like this Pranayama, do you think this is positive for flute, or?

SW: I think it is. I think just remind yourself just to use both nostrils independently, because we tend to utilise one or the other, and just try and come back to 'hang on, let's try and even this out'.

LH: Yeah sure, bring it back to neutral.



SW: Yes.

LH: How often or regularly to you think a practise has to be, to get the benefits. Is it once a week or is it every day, or?

SW: Look I think any person that practises Yoga probably would give you a different answer on that and say it's really up to individual. I would have to say, for me, when I've practised Yoga every day it has been of an enormous benefit, especially when you do it first thing because you are stretching out from the night.

LH: Exactly.

SW: And even just doing say, the active class in the early evening or late afternoon and then having a settling down or short meditation before you sleep can really help, help your sleep, I think.

LH: Yep, fantastic. Would you recommend Yoga to students, other flute players, colleagues, other musicians?

SW: Yeah look, you know I recommend it to my students, and for some of them it's really helped with their performance anxiety, I've noticed.

LH: - well you started me off on my Yoga journey, actually [laughs]

SW: Yeah, I was very proud to hear that, you sort of forget these things. And then you know for some of them it transpires into – well with one person, she's gone completely vegan, it's sort of become a lifestyle thing. It takes on a lot more importance, depending on the style you're doing. Well she studied, she also went to an ashram in India in January and did Yoga there, in addition to traditional flute playing, the *Venu*, that could be someone else you could really interview for this, would be very interesting, a good person to interview. So, when I get a lot of up-tight students, I try to ask them to –

LH: - Push them in that direction.

SW: Yeah, because I know the anxieties in their mind, but it's also in their body, and what's in their body is in their mind. So, both of those things, they sort of kind of unravel in this way. And also, people develop self-confidence just through the actions of Yoga, a lot of the poses are about having courage and on some subliminal level helps them to be tall and be proud.

LH: Sure, the external environment influences the internal environment

SW: Yeah. People then really start to, on the whole, more respect for their bodies, eat more carefully, and I've noticed respecting their own limits as well, learning to practice over a longer period of time, not just cramming it all in and hoping it will all work out, that sort of thing. And colleagues – I haven't had much luck with that, they don't tend to listen to me that way. Of course, I would, you know especially music academics time are sitting a lot. And often you find it is a case that you get someone to go to one class, they love it, they say they will go all the time, but then it comes to committing to it, being a priority.

LH: I mean that's with many things, not just Yoga. That's life.

SW: That's right. Yeah, a little bit of Yoga each day will make a big, positive impact.

LH: My final question is about devotional Yoga, I mean there's a lot of writing about asana and movement, and then pranayama and the breathing, but I mean there's a lot combining with Buddhism, eight paths of Yoga; have you ever heard about this?

SW: Yeah, I have, I have – that's something that's explored in the 40-day challenge. You can have a look at that in the book. I think that's something I'd like to explore more when I have time to go into really deeply. I think that would be very satisfying, to study something on a philosophical level along with living your lessons with your body. Just things like not overestimating yourself – 'Should I do this pose just to prove it to myself or someone else' – no, you should respect your body, and respect your limits, and those sorts of lessons stay with you during the day, being kind to yourself, therefore transpires to being kinder to others. I must say I love the devotional Yoga music. When they play that at the end in the Savasana. I really want to talk to the teachers when they put on the 'doof-doof' music at the end –

LH: Oh god.

SW: - it gets your nervous system ignited.

LH: You can't turn off.

SW: Yeah when you come from a Music background, you know the sort of music that's going to slow down your heart, or get it invigorated. And so, as you know I'm on tour often, I will take my Yoga mat with me – but then I'll find the music will help me when I don't have a teacher, I find the music helps you to pace the session, and for example in Vinyasa, no, it starts with an A...

LH: Ashtanga?

SW: Ashtanga. Thank you! They often have live musicians for a session.

LH: Oh really?

SW: Yeah, they have sort of Kirtan style music, and the teachers will do the more advanced poses, it's just very gentle.

LH: That sounds fantastic!

SW: Yeah, that's really nice. I love that, it's great. And also through Yoga you meet a community of people wanting to improve themselves, and I think that's a really great group of people to be around, just to try to think 'what are the ways you are trying to explore, being your fullest sense, full of self, or you most best version of yourself, and then you have other people supporting you on that journey.

LH: And that transfers directly onto the career as well, with the flute performance, directly.

SW: That's right, exactly, yeah. So, you know if you take a mat on tour, and you have some basic training, and you have some music, you can make a real nice atmosphere for yourself!

LH: Yeah, really chill out.

SW: Yeah [laughs].

LH: Yeah fantastic. So, thank you interviewee, the first interview.

## **12.APPENDIX C. INTERVIEW PROFESSOR GISELA MASHEYEHKI-BEER**

Transcript of Interview made 12.02.2019 live in Vienna (Austria)

L: Thank you so much for agreeing to meet with me today, that's very kind of you! Firstly, I'd like to jump right in there – how would you describe your Yoga practice? Studio, style, wherever you want to start.

G: Ok, I had lessons for a long time, lessons in a small studio, she was teaching Hatha Yoga with Forrest Yoga – influenced a little from this Forrest Yoga.

L: Forrest Yoga?

G: Ana Forrest – do you know her? She was a very great, she IS a very great Yogini, a little bit shamanic, a very beautiful person. So, this was the mixture I was working with for a very long time, and in this time, I only did Yoga one time per week in the studio, I tried to do it at home, but it never really worked. Then OK I had an illness, and it's very impacting my life, it's a focal dystonia, and in this time my situation was very, very bad. So, Yoga was really helping me. For me, the thing to survive. And this Yoga teacher, she was very-

PAUSE FOR COFFEE

G: -yes, she was encouraging me to be a Yoga teacher – and I was laughing. I didn't think about being a Yoga teacher. But it stayed in my mind all the time, and then I thought ok I will try it, but for myself, only to go a little bit deeper into everything, so this approach was so good for me, so interesting and everything. So, for the exam at the end, I had to practice a little bit. So, I asked different friends of mine, "Can I practice with you, to do a Yoga lesson" - and everybody who had a Yoga lesson came to me and said "ok if you do it, we will come to the group". So, I did the exam in July, and in October I started already with my Yoga course!

L: And you already had Kunden!

G: Yes! And I saw for myself not something very new – I felt very comfortable the whole time, also because I am teaching my whole life already, I think this was also very helpful. And for me it was the special thing that – ok, this is something I feel comfortable with, but it is very different to teaching flute, because it is nothing with perfectionism -

L: It's the opposite, it's letting go of that –

G: Ja, ja. So, to be in this very other way to teach, made a big freedom as well with the flute teaching – so it went together in a way that I didn't realize in the beginning. And then it got more and more, and so I thought – wow, this is something that every musician or every flutist should do. And my first idea was to teach Yoga for Musicians. Ok now it has developed a bit over and now it's not only this. Now is the first time I do a course –

L: Yes, its very interesting to me, I hope I can get the time off (from work) to apply-

G: Yes? For me it is also a thing I am excited to do this. I thought, ok its quite hard, Yoga in the morning, flue, Yoga, for 4 days –

L: So, lots of coffee!

G: Yes – but I am really looking forward to this, as I see the connection -

L: On so many different levels... you see the connection between flute and Yoga?

G: Yes. Yes.

L: That's the next question I want to ask you – There are a couple of specific things I am talking about in my Thesis – are there any specifics, flute and Yoga, where they meet, can Yoga impact flute?

G: Yoga influences the flute in many, many ways. It's how you stand, how you breathe, how you feel all the things that are happening inside the body, because you can't see these things like a (violin) bow, you have to get a good feeling for what is inside, how I feel the breathing and how I feel the diaphragm especially, because we are only working with the diaphragm, or we should only be working with the diaphragm with the flute, many things here

(Embouchure/Ansatz) I don't like to be with the concentration all the time here. Sound starts here (diaphragm). So, we have to know the feeling, what is the diaphragm doing, where it's going, how I work with the diaphragm, yes, how I work with these muscles. It is a training also – how you go to the stage, how you walk. This is very important, how you go onto the stage, what we are giving to the people, some people are like this (weak), like this –

L: Presence?

G: Presence – but also open, friendly, with the concentration, all the things – so many, many different things. Of course, breathing, breathing – you discover your own breathing in another way when you do Yoga. And the mental things of course – you're preparing for auditions or concerts, you have problems to be nervous and everything, this helps amazing, you know. Menuhin did his –

L: Standing on the head-

G: Ja, ja (laughs) Before the concert! So, we know all these things – but you always think, Ah I have no time, I have to practice, I have to work blah blah blah. I see it with the students sometimes, they say they have no time for this. I say, ok, take half an hour from you practicing, and take it for here (Yoga) – you win a lot from this. I know this from myself because I was a flutist like this, I didn't have time for anything. Because I was only practicing. And this is one way...

L: (laughs) So you've mentioned mental training, posture, *Probespiele* (auditions)

G: Breathing.

L: The awareness and everything like this. Performance anxiety, competitions. With fatigue and stamina, do you think there is conditioning from Yoga or anything like this?

G: Also – of course. In my lessons, I go really into power. So, you really feel, aware, from where can I get my power. From here, or from here? So, feel really the point. This is our Kraftwerk. I have to realize where can I, how can I get the power from here, you know? So, it's the training, and also conditioning, and also to go a little bit on the limits, to feel your limits – Ok Can I go a little bit more? Yeah. So, it's the same with the flute, we think ok here

is my limit? No – perhaps it's here, or here. So, you have to break the limits, to reach the point where it's good for you.

L: Are there any specific postures, or breathing exercises that you would recommend to flute players?

G: Breathing exercises, yes of course. I have to say, it's not the thing that I take special pranayama exercises from Yoga, kabalabati, *Whechsel Atmung* (alternate nostril breathing), I do it. But sometimes... its for everyone to discover more the natural breathing. We (flutists) are always thinking, I have to breathe, I have to breathe, I am so active, and sometimes the breathing gets somewhat unnatural though this. How does it feel. This is my really natural breathing, as it was when I was a baby. To discover this, and then to work with this again. So, I have to be a little bit creative, and every body is also a little bit different. So, there are students that are only breathing here and cannot hold it. There are many, many students only breathing here, cramming. So, to free all the body, so that you give the student the feeling that your body is your instrument, not what you are holding here in your hands. I told this in a lesson when I was teaching in Muramatsu (flute maker) in Japan. And I said the body is your instrument, the flute is not the point-

L: Oh oh! There goes your sponsors!

G: Of course, of course the flute is also important!

L: You're playing a Muramatsu as well? So that's dangerous.

G: (Laughs) So yes, A lot of breathing exercises but, but in my own way, creative. But also, to see what is happening when the people are breathing. So, I watch, I observe, and then I say, now we need this, now we need that. Postures? I would say it also depends on what problems the student has. So, if the student is always very nervous, has problems to go on stage, of course – Warrior (pose).

L: Ok, strength.



G: Yes, yes strength, to stand here, and yes. Other students need more the flexibility, ja? They are very stiff when they go on stage, so I wouldn't work more with flows, and not such long standing postures. So, these things, and also it depends on what the student needs.

L: I hadn't thought about it like that before, that's very fascinating. Being stiff, so needing the flexibility. It makes complete sense.

G: Yes, there are many students, they are so flexible, but they are collapsing. You have to bring them in this point where, ok where is the centre of my body, and here the power coming, so here I can be flexible – but I am open, I am not closed – it is always coming from here. And then I have students that cannot stand still. And others are so, so strong, and so stiff, so you have to get them into stretching.

L: Ok, cool! You've answered my next question – would you recommend Yoga to flute players – students, colleagues. Evidently – that's your thing!

G: Yes, I do, I do.

L: How often do you think you should practice, to get the benefits of Yoga?

G: So, one time in the week is not enough. I saw it for myself, its good if you have this and I say also to the students If you only have this 1 time a week, so come and do it. Because also the mental things can develop within the week. But to get in this good feeling of your body, you should do it 2 – 3 times a week. I also cannot do it every day – I am teaching, Tuesday, Wednesday all day long, so these two days I cannot do anything. But I feel, I get a desire, if it's too long (laughs) if its 3 days with nothing, the I feel like "Arghh!". I tell my students, sometimes it's enough only to lie down on your mat –

L: (agrees) Savasana.

G: - breathe a little bit, feel into your body, then perhaps you stretch a little bit, go in cat cow, it's so easy to do, you can't do anything wrong. Because many students also at the beginning, they are afraid they can do something wrong, and then it gets worse. Then I say, yes you have to be careful with many things, because I know problems when I go in other Yoga classes, I am watching, and the teachers aren't really looking, because there are too many. And then I

say, oh my god, I should say something, but I cannot. Yes - you can do things wrong, especially with your neck, especially with your spine, so these two places are very dangerous. Knees, something also. So, you really have to take care. So, I say, do the very easy things, you cannot do anything wrong - sometimes it is enough. Also, when you start to play (flute) standing in *tadasana*, feel the earthing, feel how you stand, and then imagine you take the flute from somewhere here (above) – because if you take the flute from here (below), its “ugh” (heavy).

L: It's heavy.

G: Ja. Yeah, so easy thing to do, *Einbauen in der Alltag*.

L: Yeah, great! This is a footnote question - do you think it's important for flute players to understand devotional Yoga and Buddhism, and the holy Yoga texts and dharma and things like this?

G: No, I don't think it's very important to play the flute – but it's very important (laughs).

L: (laughs) For life!

G: So, my Yoga lesson have always one topic I am talking about. It can be something very easy, so - how it is with your trust, ja? Feel the word trust, can you trust, what is impacting your life and so on. Or, 'Expectations'. So, I take one word, or one topic, and when we have the beginning relaxation, I am talking a little bit about this, then it's going a little bit in the mind, they are laying there, relaxed, and they can think about this if they want. And I see very often they are talking after the lesson about this, this was exactly what I have been thinking about all the times, problems and such. So, I take it into the lessons, and I do it also when I am teaching flute. If I know the student well, and I feel that the student is coming to me with problems, then of course I am talking about these things also. I do now the apprenticeship for *Heilshamanismus* – I started last weekend!

L: Oh! Congratulations. What is it specifically? Chakra-

G: No, is Shamanic work so, really going into the healing, it's also with herbs, but also working with the clients. It's a big field, I cannot go into it now. I've started only now - but I

felt when I went to the Yoga and Buddhism and everything - I have to go deeper. Of course, with my problem, that I can't play anymore, I am looking for a solution, I am looking for a possibility to come out, to play again. So, the ways led me there, it came -

L: The universe put you there –

G: Yes, yes. And then I came nearer and nearer, and I thought - this is exactly the thing that I want to do. I don't know how I will integrate it in the Yoga or teaching or something – but everything works together. It's not like, this is the Buddhism, ok this is the Shamanism, ok this is this – no. I see all the parts connecting together. And yes, I will integrate the Yoga also. I don't know how, but – we will see. So of course, if somebody is open for this - it's very supporting. But you cannot bring somebody to Buddhism – they have to find-

L: And they have to be open to that way of thinking, and things like this.

G: Yes, yes, of course. Then you can put small things there, and – perhaps they grow (laughs).

L: Were you able to learn Yoga in Vienna?

G: Yes. The thing is, I did Yoga as a child because my mother was doing Yoga, my mother is also a flutist.

L: Oh really? In the family!

G: My mother was studying with Jauret in Zurich, and she was the first teacher of Wolfgang Schultz. And she was playing in Passau in the orchestra, and my father also, and they met there. It's so funny, I hear Passau orchestra and I think... So, she was a little bit doing Yoga, she was doing a little bit with me and it was fun, I was very flexible, I could put my feet here (behind head) but I was never doing it seriously. I started again when I was about 25 years old, for myself at home. So, no lessons, nothing, just books at home, I remembered all the things, I was familiar with all the things, so it was not like – oh, I should have a teacher. I did this for myself, and then I got pregnant, I did also Yoga for pregnant women, and then I had my baby. I think now, of course I should do Yoga, but I thought I have to play again, I got my son in July, I started teaching (flute) in September again, and I played in orchestra

immediately afterwards – and I forgot almost, it was enough to just manage my life. And then – I had a burnout. So, then I had to work with myself, how to come out. I had then also a very good therapist, and very good books, and then the Yoga. One question, to come out of the Burn-out, was what you always wanted to do, but never did – because you have no time. The first thing was Yoga. Also, other things. And then I came back to Vienna, and then I went into a shop, and then I saw there a new Yoga studio. I called there, and then this was my really, really great teacher. I started to do Yoga very regularly and this helped to come out of this burnout. Admittedly, I didn't learn enough - I was very quickly back to my old life. I had quit Linz (University) then; so, I had Vienna University, and I had Linz, and I had Eisenstadt. So, it was Monday - two hours in Linz, Tuesday – 11 in Eisenstadt, and Wednesday – 10 at the University in Vienna for the rest of the week. So, I had quit Linz, and I wasn't playing concerts so much, so the next problem came – Dystonia... and then you learn (laughs)

L: Yeah, yeah. Your body says – Hello, I'm here!

G: and with this thing that helped, the Yoga helped me to survive. Yeah...

L: Yeah. Wonderful.

G: I am only looking for the questions, but I think –

L: I think we've covered everything from the Interview actually - unless there is something more you'd like to add? Something you feel from your students maybe? That they've had success with Yoga?

G: They have. For the students that are coming regularly – they have. There are students... they don't really understand - they are coming for a time, and stop again. And then I leave them and say, ok you have to find a way yourself. Or they feel it's too arduous to do it, because we are also going in our power, going in our energy -

L: Yeah, I mean this is Vienna, this is the place where you have to be strong –

G: You need this for this profession, so ok so you play flute and practice and so on, you need your full energy, your full power, and your full concentration. This is not an easy job, this is not an easy job. And you go for an audition and there are 70 people, flutists -

L: At least –

G: Invited.

L: Yes invited...

[change of subject – auditions, her life in orchestras in vienna and zurich, talking about gisela's Yoga course for flutists]

L: Well I think we've covered everything! So, thank you so much for doing the interview, and being so open!

G: It's a very important thing for me in my life, and for my students, and so I really like to talk about this, and I think people should know more about this. Because especially music students, are so... I was the same, so I can understand to say... I always thought, when I was studying, ok, the students doing things like this – they have problems, they aren't really good, so I don't need this, I do my things, my concerts, I have my career and everything – Ja. Well... We say in German – “*Du kriegst die Rechnung spaeter*” (laughs). And then – you have to learn! So, I also want to prevent a little bit in my students' situations like this. Also, since I am teaching Yoga – when I look at the student, how he is standing, how he is moving – because we have to move, but we have to think about how to move - so I see earlier points where there could be problems later.

L: Sure, give the impulse now -

G: Ja, ja. When I started to teach flute, I was only ja ok – I said you have to practice this, if you can't play this, you have to practice -

L: Taffanel und Gaubert, chop

G: Ja, ja (laughs) And then more and more I thought why is this happening – why is this working with me, and why isn't it working there. So that I started to feel into my movement, what am I doing? Because we should... - the good thing, I had a good teacher from the

beginning, so I didn't think about these things – I did it, and it worked. I had the job in the orchestra, and Schultz made me his assistant, and then I started to teach, and then... ja –

L: It unpacks –

G: Ja Schultz didn't think about this, Schultz thought you have to practice, and leave it (the sound) open, it has to swing, the sound has to swing, yes! Ha!

L: But how?

G: He was a talented musician – but he didn't think about what he is doing.

[talking about flute professors, unrelated to Yoga]

**13. APPENDIX D. INTERVIEW HANNAH REARDON SMITH**

Transcript from recording made 20.02.2019 via videocall, Passau (Germany) to Brisbane (Australia)

L: Hi! Thank you so much for agreeing to talk with me! Great ok - let's start from the start – how would you describe your Yoga practice? Studio, style and so.

H: It's varied throughout my life, and at the moment it's a home practice, because I haven't found a studio that I'm super happy with, after my long-term teacher has moved out of town. And so, I was quite committed to that studio, and then I was going to a studio of one of his students, but it's on the other side of town so it's a little bit of a hike –

L: Oh yeah – Brisbane!

H: I tried a few local Yoga studios, and so I've decided to make it just a home practice, so tend to get up and practice first thing in the morning before breakfast. Yeah so, I do a combination – because I did a bit of study and things, I can do some series myself, and I work it out and do it, or I use various videos online, I have a few favourite online teachers that I return to again and again, and yeah! So, my practice - it isn't daily, but I would say most days of the week.

L: Ok – so you would say 3 – 4 times in the week? Or it just varies week to week?

H: Yeah it really varies week to week. Sometimes it is 7 days a week – but mostly it would be 4, and maybe 5 days, yeah.

L: Ok. Do you do any breathing or meditation, as well as the postures?

H: Yes, absolutely. I do probably 4 to 5 days a week – or try to make it daily – meditate for around 30min, and I do a bit of Pranayama (breathing) sometimes, I try to integrate that into the postures. But then when I meditate, I do that separately, after breakfast usually. I'll just sit observing the breath for 30min, so meditation.

L: Ok that's great. Do you think that Yoga can impact flute performance?

H: Yes! Absolutely! Short Answer, yes.

L: Great, that's what we want to hear! I have 6 different points that I just want to talk to you about, how Yoga and flute go together - Posture and injury prevention?

H: Yes absolutely, that was the main reason why I started doing (Yoga) – sort of injury prevention and recovery. I started doing a combination of Pilates and Yoga to deal with a calcified muscle in my shoulder. So, it was a long-term repetitive use injury, and a bad posture injury. The combination of Yoga and Pilates was good because – I mean just mat Pilates – I did a bit of time where I saw a Physiotherapist and was using the machines, which was really useful. It really stabilizes the core muscles, so it really helps everything to just work a lot better. But I found that wasn't enough, it wasn't moving my body enough, it doesn't have enough stretching things that feel good to me. I'm quite a naturally flexible person, and so Yoga for me really opens me up and so it allows that strength to work in a really good way, and it just make me feel really good. And so, I started doing that as my more regular exercise to prevent injury. And the days that I miss, or if I miss 2 or 3 days of Yoga, I really feel it. Also, in my flute practice, I don't feel as supported, and I can feel like when I'm in danger of going closer to injury.

L: Ok.

H: Since I've started a regular (Yoga) practice, I haven't had any significant flute-related injuries. Sometimes I maybe don't practice (flute) as many hours as you do – I probably have a very varied (flute) practice schedule. I am playing super complex 'new complexity' things, very high detail practice, very fast, pretty intense sometimes, it's sort of more a case of - I might end the day a bit achy, but I know what I need to, to make sure that doesn't turn into an injury.

L: Great, so you're almost prescribing Yoga to yourself?

H: Yeah totally – and in a way, that's why I did the teacher training.

L: You've done the teacher training as well?



H: Yeah, I've done level one teacher training. I did teach for a little bit for a while, but I don't teach at the moment, mainly because I'm not in one place very consistently. When I'm teaching flute, I only teach a couple of adult students that don't mind a pretty erratic schedule. At the moment I'm sort of traveling a bit for gigs and things.

L: Yeah, I saw on Facebook and Instagram – ah she's here, she's there (laughs)

H: (laughs) It's really fun, I've sort of thought it's something I've always wanted to do. I enjoy travelling - so I'm taking the opportunity while I'm on this PhD scholarship basically, without having to be too stressed about the financial implications of not working regularly or that sort of thing. So yeah, I did the Yoga teacher training - at least 80% so that I could just practice myself, and set up my own things that work for me and also that I could identify what would be the best postures to deal with specific kinds of pain or problems that were emerging. So, I can kind of self-prescribe Yoga yeah (laughs).

L: Ok next topic – fatigue and stamina.

H: Oh yeah, definitely. I mean that is something where breathing comes into it. There's a series of breathing exercises, Pranayama. I did this workshop years and years ago in Woodford (Folk Festival) with Riley Lee, who's a Shakuhachi player (Japanese traditional end-blown flute) and he has this amazing set of breathing exercises that are kind of about overcoming little mental blocks around breath, more than about real, actual breath stamina. They're probably some of the most useful breathing exercises for me. Those have been really interesting, but there is one in particular called 'Sea-breath' which you just use your tongue to create a little whistle-tone with your teeth, or like a little hissing tone. It's so soft – it's trying to release the smallest amount of air at once, and then you just have a timer on and you sustain it as long as you can. And you can't run out of air, because there's so little air that you're losing. But because it's the build-up of carbon dioxide in your body and it's also just your body has a timer, regulation for when you inhale again, it starts to say "Ahhh I need to take a breath again!", so you need to overcome that.

L: Ah ok you're fighting it – that's really good actually!

H: It's actually so good for being able to sustain a soft sound or really long time, when you're not using much air. Because you train those muscles to sort of hold your ribcage open, so you can hold it full of air. I often find if I have too much air and I'm playing soft I'll let a little out my nostrils or something like that, and if I'm playing a short phrase - that's fine. But actually, training yourself to keep that air and to be able to play those long-refined phrases is something I think really helped my flute playing - especially because I'm working on circular breathing, and I'm getting there - but I can only do it in really specific circumstances, and I kind of got away with it in pieces that have even required circular breathing. I can hold a phrase at a low volume for a really long time, so it helps for circular breathing to hold a note for a very long time, but actually I don't really need to circular breathe, because I can just play that note for that long (laughs).

L: But I'll make it look like I'm circular breathing! (laughs).

H: But Yoga, Pranayama and also those Riley Lee exercises – which I think are just on his website, you can just download it yeah. Then also just doing exercise in general, and doing lots of Sun Salutes, and matching the breath to the movement, it just moves all those muscles around the ribcage that in a way – if we're always just practicing flute, and we're not doing that physical exercise, I think we can get quite tight muscles around the ribcage, we're not expanding and this kind of thing, we're not doing more dynamic movement – yeah it's the combination of stretching and strengthening and breathing that's particularly useful for flute playing. The other thing that I should have said from the previous question about injury prevention – the great thing about Yoga for flute players is that you mirror everything from one side of the body to the other, and in flute playing you're always on one side. Part of it is just observing the difference, without necessarily trying to change it. But then at the same time, you know if you observe that you're really much weaker on the other side in certain exercises, which as flute players because we actually have built strength on one side and not the other in certain ways – that can be the case. But it can mean you can use Yoga exercises to correct some of those imbalances, yeah.

L: Next one – mental training and concentration?

H: Yeah, helps with that, definitely. I think in several ways for me. One of the things is just staying with difficulty. Even though I play a lot of stupidly difficult music - being able to stay

in a practice session with something that I'm failing at, again and again, Yoga has really helped me to do that. Because there are some postures, I am pretty agile and can get into pretty easily, this kind of thing, and it feels good – and then some are a huge struggle. I'm flexible in some ways and not in others, there's some particular postures for my hips – it just doesn't really work for my body easily. So, I can stretch into that but it's difficult and my brain is screaming (laughs). So, it's like staying, finding a spot where it's still healthy to stay there, and then dealing with those brain messages that are just coming up. The more time I just spend time staying with that, and also with meditation absolutely, just staying with those moments, and staying with the breath in those moments. And then when you come to a (flute) practice session, you can recognize more quickly when that frustration arises, and be more able to stay there a bit longer - in a way that isn't just hitting your head against a brick wall.

L: Yeah. Ok next one – heightening and isolating senses and awareness.

H: Hmm that's an interesting one. Yeah definitely – even more with a meditative practice, and particularly with a more mindfulness observing the breath meditation. I do quite a bit of just observing the sensation of the breath hitting the upper lip, as I breath through my nose, which is a very subtle feeling, or just around the edges of nostrils - just staying with that subtle feeling. And there is also, being a bit more observant of sound, being about to listen to the sounds around you as an entire thing rather than just jumping around from one to another, which is something that's still really difficult and it's something that's more of a life-long practice to work at. I think that those kinds of practices really help when I'm at a concert and I'm listening - if I notice that my brain is jumping around, I have the skills to say - no let's stay with this entire sound for a little while, or let's focus on this fine subtle detail. Or if it's a piece where I feel like I don't 'get' what's happening, there's way to find my way into it now, which is really great. I haven't had so much of difficulty with focusing on what I'm doing and finding detail in what I'm playing, I think that's maybe the physicality of it combined with things, there's enough things that are drawing my attention. But maybe Yoga has benefited that as well.

L: The next one – performance anxiety.

H: Mmm. Well definitely breath work, and also just kind of having a bit of a routine with pre-performance with some stretches and things that I know will make me feel better in general.

Performance anxiety is something that has lessened over the years for me, but there are circumstances where it flares up again. But definitely breath work, and Yoga practices that are about feeling more grounded, and letting your weight sink down into your hips and heels and postural stuff helps with anxiety in general, you so I definitely use those skills if performance anxiety that comes up for me.

L: Great ok! Do you think there are any specific postures or breathing exercises that impact flute performance directly - you've mentioned some already, but is there anything now that comes to mind specifically?

H: Something that my teacher here has said many times if there's one Yoga posture that you do every day, make it Downward Dog. I think it's a really good one for flutists once you've really learned to do the posture properly, so that you're rolling the shoulders away from the ears a little bit, tightening around the ribs – it's a really good one for posture and it's just that little bit of an inversion. I think having the arms above the head is extremely good for flutists. It's strengthening the back muscles a little bit, strengthening the corset muscles around there, and also giving the lower back a little bit of a break, strengthening the upper back muscles, giving the hips a bit of a break. And also, just stretching out the body in general – all those nerves, right down your back. Also, if I feel a bit stiff after a practice session, I just stay in Downward Dog for 5 minutes (laughs).

L: Oh, it's more like a Yin pose!

H: I mean it's also a very comfortable posture for me because I'm quite flexible though the hamstrings and things. It may not be not so easy for others - I don't think it's a universal thing. I don't think there are universal postures that I think are good. I think breathing is a pretty universal thing. I think any side stretch, particularly for anyone doing a lot of standing, and a lot of flute stuff. And then also hip releases as well for a lot of standing, if you're practicing standing up. And then a little bit of opening through the chest, because as flute players we tend to do this (slouch). I mean there'd be a number of postures that are just really good for helping to open up the chest wise – there's obvious ones that are just stretches of the pecs, but also there's also bridge, or supported bridge can really help to roll the shoulders out a little bit, because you're using those muscles to push yourself up, to lift. So that helps to strengthen those muscles in the back. *Chataranga*, but that's one I struggle

more with. So, for me I still tend to roll my shoulders forward a bit, because there's some point in my body that's has a little bit of weakness, that's probably just my biceps to be honest – that means it's quite a difficult one for me. But that one for another person might be really helpful if they're really using their back muscles. And then - definitely anything on your stomach where you're not using your hands to press up, so Locust pose. Because that strengthens all these back muscles, it's like your 'back core', and also it helps you to get you a bit more open – that definitely is really helpful. And also breaking it down – lifting the legs, lifting just the torso and arms, and then all together, that's a really good one –

L: Yeah just isolating each. How often do you think you should practice Yoga to have the benefits, for flute? In the week.

H: I think as much as you could do, even if that's only once a week, or even (laughs). If it's less, it's not going to have any huge benefits, but I think any time you practice Yoga will still have benefits for flute. But to see longer term benefits and real injury prevention, then probably 2 to 3 times a week minimum. And it's kind of depends what you're doing in your Yoga practice. Yeah. If you were doing a whole bunch of exercises that were really targeted to the flute body and flute playing - over time if you're neglecting parts of the exercise then that also wouldn't be super helpful. You could probably devise a 20-minute practice that is really specific to flute players, that you could do a couple of times a week that would have a quick result, something that could be seen. And then you could add, you could build on that in a way that would be helpful. But I don't think you need to practice 5 days a week, or 7 days a week in order to get any benefit from it. I think any Yoga Practice. Well in that way, any kind of exercise is beneficial to flute playing. And stretching. But I do think a Yoga practice has particular benefits from even just one session a week, it will still have some effect.

L: Would you recommend Yoga to Flute players, Flute students, and Flute colleagues?

H: Yes, and have!

L: Yes, it's very straight forward (laughs).

H: I mean that fact that I did teacher training means it's pretty easy for me to recommend that. And I do teach (flute) students a couple of little postures if they're having a particular problem with their body or something like that, that they can just add into their flute practice. If they're not feeling like taking up Yoga as a whole thing. So yes, I do recommend it. And part of doing the teacher training was being able to do that, for students.

L: Sure, yeah! Are there any forms of Yoga that you wouldn't recommend, or postures?

H: That I wouldn't recommend?

L: Yeah.

H: Well I haven't got enough experience with certain-, I've always worked with Yoga that's worked for me. I general I don't tend to recommend Bikram Yoga, or Hot Yoga. Although I know some people are really, really into it. I think people get into it because it's more of a gym class. I mean, I live in Brisbane, so I don't need hot Yoga to get sweaty-

L: It's hot enough!

H: I just walk around my flat. But it's basically in a sauna. So, it helps you be more flexible – but that's one of the things in general, Hot Yoga in general, there's a tendency to over-stretch – is a problem. And for flute players, until you've got that strength, if you've been practicing Yoga for a year or two, and you go to some Hot Yoga classes then maybe it's fine. But if you go in with Flute player problems to a Hot Yoga class, the potential to do more damage than good is high. So, in general I wouldn't recommend Bikram, I wouldn't recommend Hot Yoga. I mean a lot of Yoga studios, especially in colder places, are still heated to a comfortable level. And that does still help with stretching, but it's at a safe level. I would recommend that. I's just kind of listening to your body – that's the thing that you learn doing a bit of teacher training, is that everyone's body is so extraordinarily different, and so I'm really flexible in some ways, and then with my outer hips – maybe it's partly my bone structure or things like that, or fat deposits – that means that it's a little bit harder for me to get into those postures. But I mean the musculature around there is quite tight. And so, Liam (her partner) for instance has very short hamstrings, has very loose outer hips, which actually a lot of skinny men have that, these hips that you can just flop right out and kind of stack

your legs on top of each other like this. Which is not something I can do. So, it's just listening to your body for those bits where, I don't feel that because you can do this posture you should be able to do this one easily. And also starting to be mindful of your body enough to notice the difference between a muscle just stretching, and problems where there's bone on bone, or things where things just won't stretch that way, really matter. Because when you try to push past some those points you can do injury very easily. I mean the other thing I would say to be mindful of, especially at the beginning, is too much weight bearing on the hands. People get really into hand stands and things like, and if you've built up strength and you're really careful about wrists, that's fine. I have really skinny wrists for the rest of my body weight, so I'm quite cautious about weight-bearing on my hands. If I do more arm balances, I tend to do more stuff on my elbows, which is actually good for stabilizing the shoulders, a little bit more than the handstands on the hands. Also, if you hyper-extend through the elbows be a bit careful with weight-bearing on the hands and arm balances and things like that because wrists are really delicate. If you injure your wrists it's going to be a big problem for flute playing-

L: Oh yes-

H: So not to get too caught up in impressive Instagram posts and things like this. I mean we all do. Yeah it looks great, but it's more like acrobatics than it is Yoga. And as a flute player you're already a kind of acrobat in a different way – so just try to keep that as your acrobatics. So then do Yoga in a more solid grounding way. You can still do inversions without it putting too much pressure on the wrists. And the other thing is to be careful with headstands. That's sort of pushing yourself into things before you're ready. Just being really mindful of the wrists and weight bearing in the hands.

L: Ok, last question! Do you think it's important for flutists to understand devotional Yoga, holy texts, Buddhism and that sort of thing?

H: For me it's been useful to explore that spiritual side of Yoga and I kind of feel that if you do get serious into a Yoga practice, that's just an essential part of doing that, at least a large part of respect for the culture that Yoga comes from. That it's not like 'white ladies'(laughs)-

L: Appropriating-

H: It's not just an exercise, and I think that that is important. I do practice meditation - my own spiritual practice is a little bit more mixed, it's a bit witchy, a bit other things. Especially when I did Yoga teacher training, and before, read a lot of texts around Hinduism a little bit around Buddhism – certain strands, mostly Indian style Buddhism. I have read a little bit of Zen Buddhist stuff but not a lot, just because I don't have so much contact with that - Yoga has given me quite a lot of contact with Indian spirituality. In terms of what's necessary for your flute practice – I think that's so down to the individual. For me a spiritual practice that has worked for me, which you know, I'm always shaping over the course of my life, has been helpful for my flute practice, mostly from a mental health perspective – but it's probably not the thing from Yoga that's going to be the most helpful. Maybe for somebody it is. But I think that studying that a little bit is part of a respectful practice of Yoga, and it may have benefits for flute playing that you might not have expected. Does that answer the question?

L: Yes! We've actually covered everything!

Later addition - "Iyengar Yoga is my personal pick. BKS Iyengar was Menuhin's teacher"





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