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Exploring Flow and Clutch States in Expert Performing Musicians

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Declaration of Originality

Full name: Kevin Gersteling

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Degree: Master of Music

Title of Study: Exploring Flow and Clutch States in Expert Performing Musicians

I declare that this study is my own original work. Where secondary material is used, this has been carefully acknowledged and referenced in accordance with university requirements.

I understand what plagiarism is and am aware of university policy and implications in this regard.

25 May 2021

SIGNATURE **DATE**

Abstract

This study aimed to explore the lived experiences of expert performing musicians and the relationship between the flow and clutch optimal performance states. Five professional pianists were interviewed to gain an understanding of their experiences of optimal performance states during performance.

The study took a constructivist-interpretivist approach situated in the phenomenological paradigm. It made use of multiple case studies, and data were gathered through semi-structured interviews. The data were analysed through Interpretive Phenomenological Analysis (IPA), as proposed by Smith, Flower and Larkin (2009). Three superordinate themes were identified: Performance-related experiences of flow; The experience of clutch and choke during performance; and Coping skill and performance conditions, which were all discussed relative to ten subordinate themes.

It was found that flow and clutch experiences in a music context are predominantly similar to those found in other contexts such as sport. Flow and clutch experiences in a musical context were shown to be distinctive from other fields due to specific task completion requirements. By comparing findings to the proposed Integrated Model of Flow and Clutch by Swann et al. (2017b, 2017c), findings show that the model adequately represents flow as an antecedent of clutch in a music context, and the results provide detailed insights on the experience of optimal performance states in expert performing musicians.

The study concludes that clutch is a deeper element of flow, and these optimal performance states are experienced in many similar and distinctive ways compared to existing research in sport psychology. Various non-cognitive traits play a large role in an individual's ability to obtain and successfully maintain flow and clutch performance states.

Keywords: *Clutch, Flow, Optimal performance, Performing musicians*

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Table of Contents

List of tables and figures

Chapter 1

Introduction

1.1 Introduction and Background

Optimal performance and peak performance are terms familiar to performing musicians, artists and sportsmen. Performers often explore various methods or systems that help them achieve successful performances or understand why they sometimes fail (Wrigley & Emmerson, 2013).

Flow and clutch mental states are primary experiences that have an immediate and direct impact on performance progression as it takes place over a certain period (Swann et al., 2018). Researchers from various fields such as performing arts and music, but particularly sport, have explored performance states and various particular means to aid the process of obtaining peak performance. Specifically, flow and clutch are psychological states associated with optimal performance. While both flow and clutch have been studied in sports and performance psychology (Baumeister & Showers, 1986; Csikszentmihalyi, 1990), the concept of clutch has not been researched in the realm of music performance.

Flow, as described by Csikszentmihalyi (1990: xi), is the amalgamation of all of the positive states of human *experience* such as joy, creativity and the process of total involvement. It is a mental state that promotes "optimal experience". The phenomenon is also referred to as being "in the zone". During performance, clutch is described by Cohn (2016) as: "any performance increment or superior performance that occurs under pressure circumstances." Within a "clutch window", a performer meets the requirements for a potential clutch situation to occur in a specific timeframe. Clutch constituents vary based on the activity, but the element of time is essential and is never longer than a couple of minutes, and the performer must be subject to pressure within that time. The antithesis of clutch is failing to rise to the occasion and "choking" under pressure. Given the similarity of optimal performance states in music and sport, there is a paucity of research exploring the phenomena of flow and clutch in music.

The most recent literature presents criticism of previous flow and clutch study. Not so much as to discredit existing research but only to consider developed perspectives that may change future research approaches (Swann et al., 2017a, 2017c). Swann et al. (2018) state that flow and clutch are not mutually exclusive and that clutch could be a component of flow or is dependent on flow.

As a performer, my few years of practical study have led to many discoveries about what it truly means to prepare and finally perform for an audience. One particular lesson learnt is that practising is not enough for successful performance. Through performance experience, one becomes aware of the mental skills needed to perform and that the experience is more than replicating hours of rehearsed material. The role of the cognitive psychological process is so impactful that regardless of preparation, it can make or break the performance. It influences everything from concentration to bodily control, fatigue and even anxiety. I noticed that a performance is not like sitting in a practice room. Focusing feels different, more effort is needed and the result is more gratifying. It has been surprisingly successful in many cases, especially under moments of intense pressure. In hindsight the enjoyment of the experience is more valuable than the fear of facing such challenges is daunting. Upon my discovery that optimal mental states are highly influential concerning the performance experience, I set out to learn more about improving my own experience by observing it in other performers. I wanted to know how other individuals experience these states. If they incorporate these states into their experiences, how do they do it? How does one prepare their mind to operate at peak efficiency? What does it take to overcome intense performance pressure with no room to rectify mistakes? How does one stay positive and make the most of an experience in which you only have a single chance? These questions led me to pursue knowledge on optimal performance states in music performance for the sake of my own playing, especially considering the practical component of the Masters course, and to educate others on how they can better their experiences. This research hopes to provide insight on these concepts and some answers to these questions through in-depth discussions with professional performers who have a great deal of performance experience.

1.2 Statement of the problem

Flow is a well-documented concept in music performance, but little is known about clutch in musicians and performance. Clutch is a well-defined concept in sports and is more dependent on the contextual circumstances of various activities than flow (Swann et al., 2018). Given that optimal performance in sport and music share similarities, it is likely that success outcomes seen in sport will be reflected in music performance. Research in this field may yield better performance strategies and increase overall performance quality from musicians educated on the subject. No research of which I am aware has focused on flow and clutch in musicians.

1.3 Aim of the study

This study aims to explore the lived experiences of clutch and flow mental states in experienced performing musicians. The study also aims to identify associations, differences and similarities between the two mental states in musicians and their impact on optimal performance. The results will be discussed with regards to current literature on flow and clutch.

1.4 Research Questions

What are the lived experiences of flow and clutch states in expert pianists during performance?

Secondary Questions

Which factors impact musicians' ability to experience flow and clutch?
How does the flow and clutch experience influence performance outcomes?

1.5 Methodology

This section provides a brief overview of the methodology discussed in detail in Chapter 3: Research Design.

The study will take a qualitative approach situated in the phenomenological paradigm. Interpretive Phenomenological Analysis (IPA) was used to analyse data captured through semi-structured interviews of five participants. Through a purposive sampling strategy, the participants were selected based on performance experiences they could draw from over 60 minutes in duration; however, an extensive performance history from each participant served the purpose of the study more effectively.

The semi-structured interviews were intended to take place in person but were conducted in online video calls due to the COVID-19 lockdown implemented in South Africa in 2020. Each interview was audio-recorded and transcribed verbatim. Three superordinate themes, accompanied by ten subordinate themes, were identified during analysis.

The research complied with ethical standards stipulated by the University of Pretoria, and the University granted ethical clearance for the study to commence. Letters of consent were obtained before the interviews from each participant, and all were assured anonymity through the use of pseudonyms.

1.6 Key concepts

Optimal performance is defined by successful performance experiences and outcomes that exceed expectation and are subjectively identified by the individual as performing the very best they could at that point in time.

Flow in positive psychology is a mental state as an element of optimal performance. Colloquially described as being “in the zone”, it is characterised by an individual being fully immersed in an activity and feeling energised, focused, and fully involved, while enjoying the experience as it unfolds.

Clutch is a psychological phenomenon observed mainly in sport. It is a mental state as an element of optimal performance and characterised by perseverance and successfully performing

under pressure. It typically occurs in very short spaces of time where pressure is particularly high.

1.7 Chapter outline

Chapter 1 includes the introduction and background to the study, the problem statement, the research questions, aims of the study, a brief overview of the research methodology, key concept descriptions and the chapter outline.

Chapter 2 includes an overview of literature on flow and clutch in various fields and in music.

Chapter 3 provides details of the methodology of the study. The research approach, research design, sampling strategy, data collection, data analysis, write-up methods, role of the researcher, validity and ethical considerations of the study will be discussed in detail.

Chapter 4 contains the results of the IPA analysis. Individual cases are discussed, followed by the cross-case analysis and the three superordinate themes, subdivided into the ten accompanying subordinate themes.

Chapter 5 presents a discussion the findings against existing literature.

Chapter 6 provides a brief summary and conclusions of the research, including limitations and suggestions for future research.

The study ends with a list of sources and appendices.

Chapter 2

Literature Review

2.1 Introduction

The concept "flow" was first coined and documented by Hungarian Professor Mihaly Csikszentmihalyi in 1975. This first iteration was broadly aligned in philosophy and positive psychology and was intended to be applied as an overall approach to how people could improve their quality of life (Jackson et al., 2004). The flow state is a multi-dimensional phenomenon when one experiences being fully engaged, in control, has optimal concentration and finds the experience ultimately rewarding. Clutch or 'a clutch performance' is a recent concept used in sport psychology concerning optimal performance when an individual is under high pressure. The literature review will focus on research on flow in music and literature on clutch to present the framework to explore flow and clutch in a musical context.

2.2 Flow

Over the past three decades, research in the phenomenon flow has grown exponentially in many fields. Researchers in music have used various methodological approaches to understand flow from a variety of psychological and physiological perspectives. Of particular interest are factors that impact the occurrence of flow and its controllability. This section will discuss literature centred on flow research by addressing the standardised dimensions of flow, approaches used to study flow, flow theory and finally, flow context-specific flow research.

2.2.1 The dimensions of flow

Csikszentmihalyi and Jackson are some of the first researchers to explore flow in various domains and discuss the phenomenon according to nine standardised dimensions Jackson et al., 2004).

Challenge-skill balance

The first of the nine dimensions of flow is challenge-skill balance. Challenges and skills are opportunities for actions or goals and our capacity to produce desired outcomes for those activities. Our perception of the challenge and skill primarily drives the balance of the challenge-skill equation. Once this balance is achieved, flow will occur. A dynamic balance defines the flow state. The extension of a person's capabilities will occur if the challenge is perceived as challenging, but the individual is also able to meet the challenge. Flow is accessible across all domains of experience as challenges and skills can be adjusted to provide the means for flow to take place.

Action-awareness Merging

This dimension is best described as total absorption and the perception of oneness that brings peace and harmony to the body and mind during the performance of a particular task. Descriptions vary but are most often similar to "becoming one with the activity being performed." This flow dimension is associated with effortlessness spontaneity when performing the task at hand. Actions happen automatically or reflexively as well-learnt routines allow for full, subconscious attention to these actions.

Clear goals

Clear goals include having a clear idea of what needs to be done, such as having knowledge of objectives, adequate preparation, awareness, and understanding the finer details needed for a task. This "clarity of purpose" occurs moment-by-moment, helping the performer maintain focus and keeping them connected and responsive to the activity. Musical performance provides an ideal scenario for goal setting – in both preparation and the final performance itself. The addition of personal goal setting aids in monitoring the process of achievement and, ultimately, the occurrence of flow – which is very unlikely without clear goals and clarity of focus.

Unambiguous feedback

The dimension – unambiguous feedback works hand-in-hand with goal setting. This feedback is the mind monitoring whether one is on track with momentary goal completion. It always exists but is much easier to achieve during flow. The information is clear and unambiguous during flow

– which is then effortlessly processed by the performer, and the performance is geared in the right direction (success). Subjects best describe it as clearly knowing what to do and then having everything click or fall into place.

This feedback comes in many forms from varied sources. Kinaesthetic awareness is described as one of the most important sources of feedback for athletes, and the same can be said for musicians. This type of awareness is knowing the spatial location of one's various body parts (especially the hands and fingers) and awareness being internal information the performer needs to optimise movement. The performer continually assesses their movements to produce a successful or good quality performance. External sources are also included as influential facilitators of feedback—for example, an audience. Flow can occur in situations that do not necessarily show positive sources of feedback. As long as the nature of feedback is precise and instantaneous – maintaining or achieving flow is possible.

Total concentration on the task at hand

This dimension ultimately defines the flow state and results in being completely focused on the activity. No external thoughts or distractions invade this level of concentration. These clear moments provide much satisfaction, promoting the growth of complexity that results from flow experiences. This dimension is most commonly mentioned by subjects and relies on present-centred focus. Flow essentially exists in being able to be in the moment and is not subject to the past or the future. Ironically, the dimension displays a balanced contrast between complete focus but also effortlessness and "release". The focused mind-state is spontaneous, as it is not the same as actively forcing oneself to focus on the task at hand.

Sense of control

A frequently occurring characteristic is the feeling of being in control. Remarkably absent but desirable by musicians, this sense of control is construed as a high sense of confidence or self-esteem. One becomes so confident that the possibility of failure seems impossible. This dimension is paradoxically a sense of being in complete control yet not feeling the need to control. This feeling frees the performer of the "fear of failure" aspect associated with performing, especially in musicians.

Loss of self-consciousness

The loss of self-consciousness is when the necessary self-evaluation of the task occurs with no concern for those around the individual. This dimension of flow results in one feeling completely unselfconscious, which liberates one from a self-critical mental space.

Transformation of Time

Flow appears to transform one's perception of time. This part of the experience includes timelessness, the slowing down and speeding up of time. During flow, nothing else invades the individual's awareness, and thus, even the conception of time is affected. This dimension is often associated with the most intense flow experiences.

Autotelic experience

This final dimension was named after Csikszentmihalyi (1990) formulated the term *autotelic experience*. The term refers to the intrinsically rewarding experience encountered during flow. The term originates from the Greek words *auto* and *telos*, which in tandem describe doing something for the sake of doing it. Csikszentmihalyi believes that this final dimension is the culmination of the other eight dimensions. Flow is such a desirable experience that individuals simply wish to relive the experience with no concern for the rewards brought about by completing the activity in which flow occurred. Colloquial terms describe the experience as "a rush", "in the zone", "exhilarating", and "a buzz". The experience itself is, in fact, the primary source of motivation for many professionals to try and achieve new heights in their capabilities. No other reward is comparable to being in flow.

Other dimensions of flow have been "identified" by various sources but have proven to be left undefined as they appear to be experiences resulting from or post-flow (Jackson et al., 2004). Not all nine dimensions occur during a flow experience, and some are more common than others. There are individual differences in the intensity and frequency of flow experiences. Jackson et al. (2004) and Csikszentmihalyi (1995) state that flow results in optimal experience or performance. Many domains show considerable consistency in flow experience and shall be discussed further

in this review. The dimensions provide a practical framework upon which optimal experience and flow can be evaluated and understood.

2.2.2 Methods for studying flow

Researchers have used qualitative and quantitative methodological approaches to explore the phenomenon. Quantitative research has made use of various survey instruments. In the early stages of conceptualising flow, Csikszentmihalyi constructed a Flow Questionnaire (FQ), which was the first method of flow research (Csikszentmihalyi, 1988; Ford et al., 2020). The Experience Sampling Method (ESM) was created to measure flow experiences while addressing the level of intensity and challenge-skill balance not seen in the Flow Questionnaire and to exclude biases that arise with self-report recall methods (Ford et al., 2020; O'Neill, 1999; Wrigley and Emmerson, 2013). Currently, research makes use of Jackson et al. ‘s revised Flow State Scale – 2 (FSS–2) or the Dispositional Flow Scale – 2 (DFS-2) (Ford et al., 2020). The FSS–2 was designed to assess flow after the event has been completed and is a measure of optimal experience Jackson et al., 2004, p. 15). In contrast, and more commonly used, the DFS–2 aims to capture the dispositional tendency to experience flow within a particular context (Jackson et al., 2004, p. 13).

Sinnamon et al. (2012) conducted a study that aimed to investigate the adequacy of the DFS–2 flow test when applied to musicians and to study the flow experience of amateur and elite music students in an attempt to address the lack of research regarding flow in fields outside of sport and physical activities. Although the DFS–2 test displayed high reliability in the context of this study, the authors suggest that qualitative research is necessary to enhance the identification of flow dimensions (especially those more ephemeral, such as loss of self-consciousness) and to grasp the depth of flow experiences in performing musicians truly.

Qualitative research uses methods situated in paradigms that focus on interpreting detailed descriptions of individuals' experience. These methods include but are not limited to phenomenology, hermeneutics, and critical realism. Flow studies typically have one of two primary goals. Researchers simply observe flow in hopes of gaining a better understanding of the phenomenon or an attempt to manipulate flow occurrence and controllability for more efficient

task completion and success (Swann et al., 2015). It is suggested by Ford et al. (2020) that qualitative research is the best method for researching flow if the goal is to understand the concept in a particular context.

The study of flow mental states is a rapidly developing field, and Swann et al. (2018) introduce qualitative research that criticises traditional nine-dimensional conceptualisation of flow and the direct questioning of the flow scales (FFS-2 and DFS-2) accuracy. Flow is more suitably labelled as a theory. This theory should be questioned in forms of application and preciseness of results. The study takes a critical stance to promote establishing a progressive and practically useful theory for future research. There is an overlap in the definitions of the various dimensions that result in incorrect coding of the dimensions during results analysis (Swann et al., 2018: 12). Some dimensions lack specificity and are open to interpretation. Event-focused approaches enable greater detail in the observation of flow and generate new avenues for the theory to develop. Suggestions include research that is paradigm specific and methodologies that are very particular about sample bases, task context and interpretive perspective. A developing theoretical structure will undoubtedly yield results that enable a more practical application of flow.

2.2.3 Flow research

Studies have found that flow is specific to individual differences and activity type (career-based or otherwise) and that some dimensions feature more prominently than others depending on the activity (Panebianco-Warrens, 2015; Swann et al., 2012; Wrigley & Emmerson, 2013). Varying degrees of flow can also be observed with higher-level skill requirements resulting in more intense flow experiences (Sinnamon et al., 2012; Swann et al., 2012; Wrigley & Emmerson, 2013). Csikszentmihalyi's (1975; 1990) description of "deep flow" and "light flow" are often referred to in these cases (Sobel, 1995; Wrigley & Emmerson, 2013).

In an interview with Csikszentmihalyi, Sobel (1995) discusses the author's conception of flow in degrees existing on a continuum (Csikszentmihalyi, 1975). Flow takes place in lesser forms called "low flow" or "light flow" and more intense forms called "deep flow", which occurs in activities of higher complexity. "Low flow" or "Microflow" represent automatic or mundane

tasks that occur daily in all people's lives. "Deep flow" occurs with more complex and engaging activities such as chess, music, composition or surgery.

A systematic literature review by Swann et al. (2012) focused on flow in elite sport relating to three features: 1) The experience of flow, 2) how flow occurs, and 3) the possible controllability of flow. The review found that subjective descriptions of participants correlate with flow theory; however, not all dimensions are experienced in equal proportions, and multiple dimensions overlap. It is plausible that the athletes experienced all the dimensions of flow but could not report on all nine. Swann et al. (2012) state this alludes to Csikszentmihalyi's (1975) descriptions of flow on a continuum and that individuals may experience "macro" and "micro" flow states; however, not much research has been done to support this notion in a sporting context.

Psychophysiological aspects of flow

Researchers have sought to understand the psychophysiological impact of flow. De Manzano et al. (2010) attempted to observe the relationship between subjective flow reports and psychophysiological measures. They found that mental effort is related to changing heart rate, breathing and facial muscles (measured by Electromyography EMG). A significant correlation between reported flow experience and these physiological responses was observed. The dimensions concentration and the autotelic corresponded most directly with emotional and attentional state. In contrast, challenge-skill balance, concentration and autotelic experience were shown to be specifically sensitive to blood pressure measures. The authors conclude that flow is a positive mental experience associated with positive mood and well-being, which in turn was found to positively correlate with healthy immune function (McCraty et al., 1996; 1995).

De Smedt et al. (2016) conducted an electroencephalogram (EEG) on four professional classical musicians to observe the correlation between alpha activity and creativity in musicians (creativity was manipulated by incorporating an improvisatory factor). The alpha wave (8-13Hz) is associated with relaxation and a low-stress state. The study found a positive correlation between alpha power, creativity and the flow experience in the improvisatory situation. Conversely, stress evoked arousal negatively impacted alpha waves.

Victoria Jaque, Thomson, Zaragoza, Werner, Podeszwa and Jacobs (2020) performed a quantitative study on 60 pre-professional and professional dancers to investigate performance flow and heart rate and the autonomic nervous system (ANS). Dancers experience flow in a physiologically demanding and stressful environment. The study found that the sympathetic and parasympathetic branches of the autonomic nervous systems operate simultaneously during flow states. Similar results were found by De Manzano et al. (2010), Peifer et al. (2014) and Tian et al. (2017) in varying contexts.

Despite many more studies having been conducted on flow in the past decade, more questions have surfaced than those answered. Current approaches attempt to link flow to new contexts or fields such as physiology, neurology, and emotion in artistic situations to sporting activities or even a corporate environment.

Flow induction, proneness and controllability

Much research has been done to understand how to induce flow (particularly in sport), whether some are more prone to flow, and how to control flow.

Swann et al. (2015) conducted a qualitative study on factors that could induce flow in 10 professional golfers from the European Tour. Ten facilitators were identified using thematic and connecting analysis on semi-structured interviews: focus, preparation, motivation, arousal, thoughts and emotions, confidence, environmental and situational conditions, feedback, performance and team-play, and interaction. The analysis identified 24 connections between the facilitating factors and how they influence flow. The caddie, preparation and practice and high-quality performance influenced flow in the highest number of possible ways, whereas the most influenced aspects of flow were increased confidence and heightened concentration. The authors acknowledge that a greater number of connections does not suggest a greater influence on the flow experience.

Bloom and Skutnick-Henley (2005) aimed to identify essential elements that promote flow in 90 active classical musicians of varying proficiency. A multiple regression analysis revealed that some individuals are more prone to flow occurrence than others. The study identified five key

predictors of "flow proneness" most salient in all the participants: (1) Self-confidence and self-trust while playing; (2) Desire to experience feelings through music; (3) Having experience goals; (4) Ability to maintain focus on the music; (5) Ability to play without self-criticism. The authors posit that mindfulness underlying flow amongst musicians may be enhanced by expanding one's awareness of feelings, bodily sensations, thoughts, and imagery while playing. Flow is shown to be unaffected by proficiency level, experience, age or gender. However, certain types of music, such as *Romantic-era* works, are potentially more conducive to flow than other musical types. Flow was shown to occur more often in ensemble playing. Findings suggest that explicit experience goal-setting is especially beneficial for those seeking a flow experience. The authors state that being overly intent on the flow experience will ultimately deny an individual the experience.

Swan et al. (2012: 24, 26) identify non-formalised factors shown to influence flow occurrence. Internal and external states influence flow which suggests that it involves a complex interaction of processes. The authors found it difficult to isolate which factors have either positive or negative effects on flow induction. The current understanding of these factors label them as descriptive of flow but do not explain the phenomenon. They lack emphasised research and do not occur as consistent responses across various studies. The authors believe that the individual's subjective context must be considered, as the individual difference in causation is crucial to progress scientific understanding of flow. The authors believe that flow is controllable to an extent – participants perceive that they are in total control. Supposed mechanisms at play in the controllability of flow are preparation, positive thinking, and optimal arousal. Despite two-thirds of participants reporting a sense of control over flow or facilitating factors, these results limit understanding of such controllability as it does not specify to what extent flow is controllable.

2.2.4 Flow study in specific contexts

Research on flow has been conducted in various contexts such as sport, dance, fine arts and music.

Flow in Dance

Thomson and Victoria Jaque (2012) conducted a quantitative study on 74 professional and pre-professional dancers, wherein flow experience results (from both Jackson et al. ‘s (2004) DFS-2 and FFS-2 scales) are compared to dissociative experiences in individuals. A loss of self-awareness and self-reflection is lost during complete dissociative absorption, whereby the context and content of thought are transformed. In this way, dissociation is similar to flow and an inorganically induced change of one's conscious state (Thomson & Victoria Jaque, 2012: 479). Flow results in this study show that dancing successfully produces high levels of flow – specifically autotelic experiences such as enjoyment, fulfilment and spirituality, and a better sense of well-being (Thomson & Victoria Jaque, 2012: 480). Normative dissociation has little to no impact on flow experiences and is a separate psychological process. Perfectionistic tendencies are assumed to play a part as artists are potentially required not to lose self-consciousness. Where dissociation is defined by one's departure from the mental process, flow centres on more in-depth and more intense mental process integration. Pathological dissociation or depersonalisation seriously impacts positive flow experiences, causes cognitive failures on a clinical level, and disrupts normal mental processes.

A qualitative study by Panebianco-Warrens (2015) exploring the impact of music on flow in professional ballet dancers showed strong semblances to Csikszentmihalyi's (1990) nine dimensions of flow and that music plays a vital role in the flow experience. The study suggests that ballet dancers, contrary to sporting athletes, experienced specific flow dimensions more prominently than others: *merging of action awareness*, *autotelic experience* and *loss of self-consciousness*. The study argues that music processing has a unique outcome on the flow experience of the dancers. Conclusively, the author states that music plays a much larger role in the flow experience than previously believed and highlights the lack of literature on flow in artistic fields. The ballet dancers' experiences of flow are comparable to those of other performance-based activities, and there is also a suggestion that a live orchestra (as opposed to recorded music) also acts as a facilitator of flow, but this requires further investigation. The uniqueness of this study emphasises the importance of qualitative research that is task-specific.

Dance is similar to sport but is primarily an art form and can be viewed as a bridge between sport and music. Research on flow in this field is beneficial to research in music as it addresses

self-expression, emotion, physiology and content in similar ways; however, it is the same when one observes stage-performance for an audience and the time spent on the activity.

Flow in Music

Flow has been observed in musicians of varying ages. O'Neill (1999) explored the flow state in young musicians (ages 12 – 16) to observe motivational and social factors associated with their musical development in the context of their daily lives with the use of the Experience Sampling Method (ESM) – an intensive, longitudinal, qualitative approach that asks participants to observe phenomena repeatedly. O'Neill (1999) observed 60 students from different specialist and non-specialist schools and found that flow occurs in children during music-making more than any other activity.

Bakker (2005) quantitatively explored the impact of music teachers' working conditions (including resources, autonomy, feedback, social support and supervisory coaching) on flow. 178 music teachers and 605 students from 16 different schools took part in the study. Results showed that job resources correlate with the challenge-skills balance of music teachers and a positive relationship exists between flow in teachers and that of their students (Bakker, 2005: p. 35). Greater reported flow results in teachers correlates directly with reported flow results in the students of those teachers. The crossover is linked directly to emotional contagion theory (Bakker, 2005: p. 38; Hatfield et al., 1994). The author states the crossover as both conscious – through deliberate dedication of the teacher – and subconscious – an automatic reflection by the student of a positive and inspiring teacher.

Fritz and Avsec (2007) conducted a quantitative study to explore the connection between flow in musicians and their subjective well-being. Three data collection tests were completed by 84 music students of varying gender and background. The results of the Positive Affect Negative Affect Schedule (PANAS), the Satisfaction with Life Scale (SWLS) and the Dispositional Flow Scale – 2 (DFS–2) tests were conducted. Results show that opportunities for flow were more prevalent in group performance settings, and performing for an audience causes anxiety, which negatively impacts the potential for flow occurrence. The comparative results show some connections between some dimensions and subjective well-being. Correlations between flow and

satisfaction with life are mainly evident with the challenge-skill balance, action-awareness merging and autotelic dimensions. The clear goals dimension results were shown to be the only predictor of satisfaction with life. Satisfaction is portrayed as self-rewarding. Clear goals are evident alongside reports of a greater sense of well-being, and the challenge-skills dimension is the best indicator of well-being. Flow is inherently a positive experience centred on positive feelings and thought. The authors conclude that individuals who experience flow more often are predictably more positive about life and have a good sense of subjective well-being.

Wrigley and Emmerson (2013) quantitatively observed the intensity of the flow experience in 236 university music students using the FSS–2 flow scale test. The study focuses on the extent that participants experienced the flow state during solo performance examinations. While flow was shown to be independent of gender, skill level, and instrument type, the dimensions; sense of control, autotelic experience, and challenge-skill balance featured most prominently, whereas transformation of time was reported the least. The authors posit that the examination context is viewed as a judgmental and intimidating space by the performing students – which directly inhibits flow. Students with better examination results experienced heightened flow. Most participants believed they were not skilled enough to meet the challenge presented by the examination, and most did not enjoy the performance experience.

Cohen and Bodner (2019) sought to understand the relationship between music performance anxiety (MPA) and flow amongst professional classical orchestral musicians. Previously thought to be antithetical experiences, the authors hypothesized a negative association between MPA and flow. Additionally, the authors sought to explore the moderating potential of Musical Emotional Contagion (MEC) in the link between MPA and flow. MEC was explored in the context of physiological arousal and its impact on the body (MECbody) and the effect of MEC on mood (MECmood). The results suggest that finding ways of facilitating flow may be a helpful approach for mitigating MPA in orchestral musicians. The study also found that musicians prone to experiencing higher levels of MECbody may experience MPA more.

Where music is concerned, flow research is still lacking; however, studies in this field are becoming more common. The detail of results tend to contrast with existing sports research;

however, the sporting context has provided an excellent foundation for directing future research in music and music performance. Research on flow in music typically addresses various facets of music, from education to performance or audience experience. The flow phenomenon is relevant in all of these cases.

2.3 The concepts clutch and choke

Clutch as a phenomenon has been predominantly researched in sport, popularised in the 1970s in baseball and basketball (Cramer, 1977), although it has received much interest in the last five years. In the context of sport, clutch refers to improved performance under pressure (Otten, 2009). Researchers investigating flow in sport found the nine-dimensions framework of Csikszentmihalyi's framework to be lacking in that they argue that optimal performance includes more than the flow state; it is also characterised by a "clutch" state.

2.3.1 Associations between clutch, choke and flow

Qualitative research into clutch revealed several overlapping qualities between flow and clutch. Swann et al. (2017b) found that both flow and clutch resulted in a sense of enjoyment, motivation, feelings of being in control, a sensation of absorption, increased confidence, and distorted perceptions, similar to time in flow. However, there were clear differences in experiences of the clutch state. Clutch was associated with complete and deliberate focus, heightened awareness and a sense of effort and having to give more effort (Swann et al. 2017b). Participants described clutch as moments of being in "survival mode" and a battle (Swann et al. 2017b, 92) while being under extreme pressure. Unlike flow, it was not enjoyable in the moment and needed intense effort and concentration. Some participants described a rush of adrenalin and analytical thoughts such as "This is bloody hard" (p. 92). The clutch state also resulted in feelings of exhaustion and extreme tiredness, unlike the euphoria of the flow state.

An essential premise of the current study is that the clutch state can be experienced in domains other than sport, although no such research has been found to date. The literature on clutch is often accompanied by the term choke and phenomenon that musicians easily identify with. Otten (2009, p. xiii) explains that "choking" (failing to perform under pressure) is the

antithesis of a clutch performance, whereas a clutch state, while difficult, is entirely calm and focused on the task at hand amidst complete chaos (2009, p. 1). Altenmüller and Ioannou (2016, p. 107) state that choking under pressure (CuP) is a well-known condition in performing musicians. They concede that performers of any kind may better identify with choking and the constituents of failure as opposed to clutch during successful performance under pressure. Choking results in loss of motor control, agility and muscular stiffness, which impacts precision of movements and results in poorer sound quality.

Baumeister and Showers (1986) conducted one of the earlier qualitative studies on choke, specifically focused on the "paradoxical performance" that results in failure or "choking", despite incentives for greater performance. This study revealed four pressure variables that can have a negative impact on performance: audience presence, competition, performance-contingent rewards and punishments, and ego relevance of the task. Without using the term clutch, Baumeister and Showers (1986, p. 372) explain that performers can benefit from pressure situations. Three variables are mentioned as possible mediators of "choking under pressure": Task complexity, expectancies of success and failure, and personal susceptibility to pressure. This study is interesting because the authors inadvertently describe the conditions for clutch, although the authors conclude that choking should be viewed as an attentional phenomenon (Baumeister & Showers, 1986, p. 376 – 377).

Hill and Hemmings (2015) explain that clutch results from positive psychological processes, whereas choking is a negative psychological process. An essential feature associated with clutch is that during a high-pressure situation, the experience lasts no longer than a couple of minutes (Cohn, 2016, p. 2–3; Favale, 2015; Hill & Hemmings, 2015; Solomonov et al., 2015; Swann, et, al. 2017b).

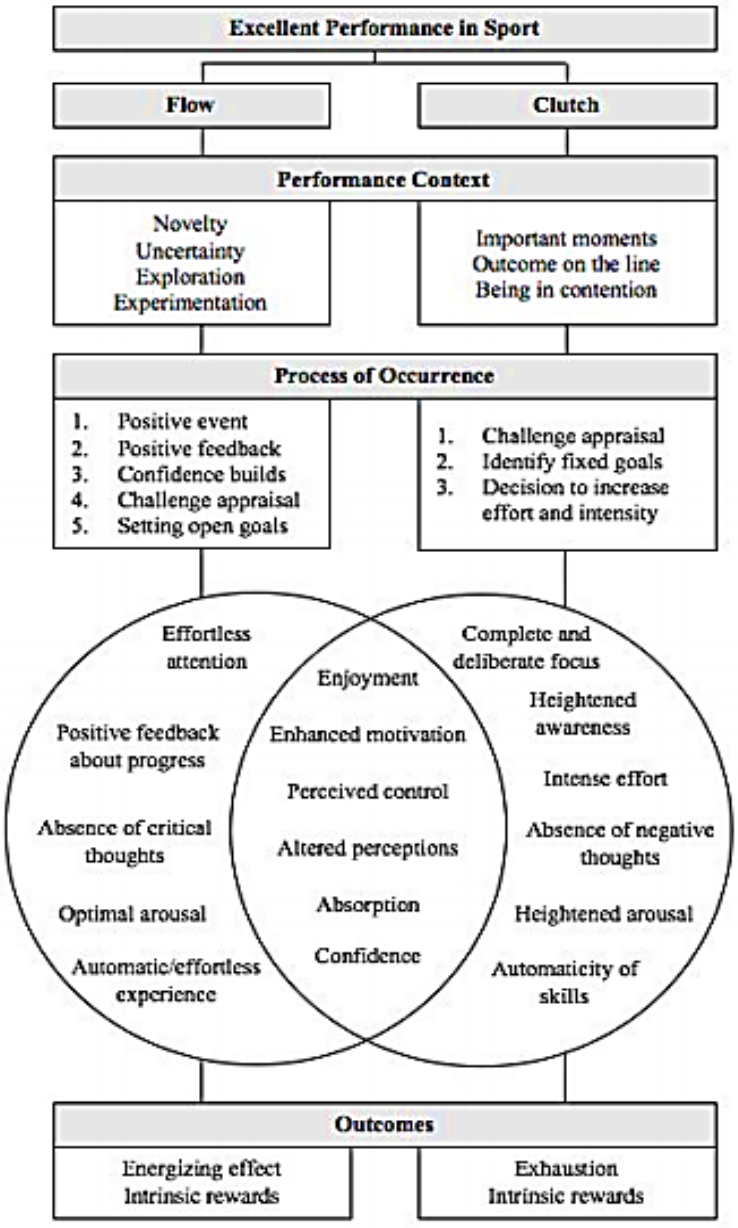
2.3.2 New perspectives of flow and clutch states

Swann et al. (2017c, 2019) propose that optimal performance in various contexts involve both clutch and flow, although distinct to various settings and individual performer differences. They suggest an integrated approach to understanding the states and developed an integrated model. Figure 2.1 illustrates the distinguishing features of flow and clutch, as well as the overlapping

shared elements presented in the integrated circles resulting in enjoyment, enhanced motivation, perceived control, altered perceptions, absorption and confidence.

Figure 2.1

Integrated Model of Flow and Clutch in sport (Swann et al., 2017c: 6)



Since there is currently no recognised verifiable measures to distinguish between clutch and flow, particularly the undefined features of flow such as clear goals, Schweickle et al. (2017) explored the impact of open goals (do your best) versus specific goals (play this passage as accurately as possible) on flow and clutch. Their study aimed to investigate the effects of open versus specific goals on flow and clutch. Through a mixed-method approach, they found that open goals resulted in higher levels of flow than specific goals and that the clutch state is associated more acutely with specific goals. The implications of these findings suggest that existing flow research that has attempted to induce flow through manipulating the challenge-skill balance might have inadvertently measured clutch instead (Harris etal., 2017) since flow is associated with open goals, not specific goals.

While much research on flow and clutch is focused on a situation-specific occurrence, it has been suggested that personality constructs under flow and clutch (Kimiecik & Stein, 1992; Otten, 2009). Jackman et al. (2020) aimed to investigate the role of mental toughness as a personal construct in the experience of flow and clutch and to understand whether these states differ between athletes with higher and lower levels of mental toughness. The study's findings support the Integrated Model of Flow and Clutch in suggesting that the level of perceived pressure as a result of the performance context and the nature of the goal influenced flow and clutch. The study found that athletes with higher mental toughness excel under pressure and approach challenges with more confidence, especially during negative events. High mental toughness was also associated with more effective coping and bouncing back from setbacks. Heightened confidence in athletes was found to be a feature of mental toughness in a study by Coulter et al. (2010).

The research by Swann et al. (2017b, 2017c, 2019), Locke and Latham (2013), and Jackman et al. (2020) provides valuable insights into flow and clutch, which could be useful to explore in the context of expert musical performance. Questions such as how goals contain specific and measurable objectives, variability in context, individual differences and role of mental toughness in clutch and flow would provide more nuanced insight into the context of musical performance. Since repertoire of varying difficulty requires different psychological demands from a musician during performance, compounded by performance context (such as competition versus recital),

performers generally experience pressure and play under high-stress conditions. It, therefore, stands to reason that musicians too would identify with experiences of flow and clutch. Given the paucity of research on flow and clutch in musicians, this study aims to address the lack of research by exploring the states among expert professional musicians.

2.4 Summary

This chapter included a review of literature related to flow and clutch. It explored the dimensions of flow and the development of flow study methods. It reviewed flow research on psychophysiological aspects, flow induction, proneness and controllability in music and non-music contexts. Literature on clutch and choke was discussed, followed by studies concerning current perspectives on the integrated nature of the flow and clutch states. Existing research is dominated by the observation of flow. The novelty of clutch is evidenced by the contrast of available clutch studies to flow studies. Furthermore, research concerning clutch outside of sporting contexts is near non-existent – especially where mental state research is concerned with music and the arts.

Chapter 3

Methodology

3.1 Introduction

The aim of this chapter is to provide a detailed description of the research approach and design implemented in this dissertation. It will define the aspects of the qualitative research design and interpretive phenomenological analysis approach used for the study. This is followed by a discussion on the research procedures: Sampling strategy; Data collection; Data analysis; and Write up. The chapter concludes by addressing ethical concerns and validity of the research presented in this study.

Interpretive Phenomenological Analysis (IPA) is a qualitative research approach concerned with how people make sense of their experiences (Pietkiewicz & Smith, 2014; Smith et al., 2009; Willig, 2013, p. 260). This approach was ideal in conducting research for my study in that the aim was to explore the flow and clutch mental states by observing the lived-in experiences of performing pianists.

IPA is an excellent method for observing the way in which individuals experience particular situations with attention to detail. The novelty of the clutch and flow states as phenomena in music performance requires such a detailed approach and was therefore the reason for my choice in using IPA. Another reason for my choice is that, like the flow and clutch states, performance experiences and perspectives are unique to every individual. Thorough and in-depth accounts of experienced performing musicians are well-suited for semi-structured interviews aimed at seeking knowledge in these under-researched fields.

3.2 Research Approach and Design

Research in optimal performance, experience, and psychological concepts such as flow and clutch can ideally be studied within the qualitative paradigm situated in phenomenology. The

proposed study will therefore be grounded in a phenomenological paradigm with a constructivist-interpretivist ontology.

Willig (2013, p. 85) explains that phenomenology reviews "the content of consciousness and the individual's experience of the world". Phenomenology is about "intentionality" – it is directed toward something (Behal, 2019). Phenomenology first emerged as a broad philosophy and remained so to a large degree. Major theorists include Husserl, Heidegger, Satre, and Schutz. Husserl (2012) first documented his views on phenomenology in 1900 – 1901. It centres on detailed, subjective accounts of the lived experience. Developments in phenomenology as a concept in philosophy separate the idea into two parts. First is the philosophical part as described by Husserl, and second is hermeneutic or interpretive phenomenology. Heidegger linked Gadamer's founding of philosophical hermeneutics (the theory and methodology of interpretation – especially interpretation of text) and Husserl's phenomenology to create the paradigm upon which this study is grounded. According to Kakkori (2009 p. 20), Van Manen is the "most famous person to apply hermeneutic phenomenology in the field of education and research". The hermeneutic phenomenological paradigm is most appropriate for this study as it addresses the phenomena flow and clutch.

IPA is concerned with the individual's subjective account and the researcher's interpretation thereof. The performer must provide a detailed 'lived-in', eidetic account of the experience to provide the researcher with accurate and high-quality results to interpret (Pietkiewicz & Smith, 2014; Smith et al., 2009).

IPA is a popular system used for data analysis in phenomenology. Such a framework aids the researcher in obtaining information of greater quality (Pietkiewicz & Smith, 2014). IPA follows phenomenological underpinnings by exploring experience in "its own terms" (Smith et al., 2009; Behal, 2019). The subjective interpretation of the individual having the experience is of value instead of trying to force an objective position. This approach is essential for flow and clutch analysis as each individual experiences a situation and environment differently (Willig, 2013, p. 84). IPA draws on idiography, phenomenology and hermeneutics and is an expression of a double hermeneutics system in that a detailed analysis is done on the personal descriptions of

participants and the researcher's interpretation (Pietkiewicz & Smith, 2014). Van Manen is closely associated with interpretive phenomenological analysis (Behal, 2019), and he defines his method by stating: "The phenomenological method consists of the ability, or rather the art of being sensitive to the subtle undertones of language, in the way language speaks when it allows the thing themselves to speak." (Van Manen 1990/2016, p. 111). In modern research, we are fortunate enough to have recording technology that will allow for interpretation of more than just the text of the participant but the exact words, tone of voice and expression of the person.

By coming into contact with various IPA studies in various fields, it became apparent that Smith et al. (2009) is central as a guide to performing an IPA study. I adopted this book (authored by the founder of IPA) and the guide (Pietkiewicz & Smith, 2014) by the same author as the primary methodological source for my approach.

3.3 Sampling Strategy

The study focuses on the experiences of music performers with skill levels of graduate performance requirements and above. Therefore a purposive sampling strategy was used – participants are selected due to specific characteristics relevant to the study (Creswell & Creswell, 2017, p. 189). Selection criteria for participants included performance skill level in students and professional musicians.

Eight musicians were invited to participate in the study. Participants were asked to draw on experiences of recent performances of between 60 – 75 minutes so that the performers would have the best opportunity to draw on potential flow and clutch experiences. Creswell and Creswell. (2014, p. 189) and Smith et al. (2009, p. 46) state that no rule governs how many participants are required in qualitative research, but the number is typically small. They state, more specifically, that phenomenological studies range anywhere from 3 to 10 participants. Smith et al. (2009, p. 46) suggest no more than 3 participants for a Masters level study.

I attempted to recruit participants with a range of performance experience due to research showing different flow experiences in participants who are more experienced in the activity. The

sample ranged from recent graduates to seasoned performers; however, throughout the process, three of the eight participants were removed from the study post-analysis due to the following reasons:

1) Eight participants are considered many - even at a Doctorate level for an IPA (Smith et al., 2009, p. 46).

2) The question of experience led to a significant contrast in answers from seasoned musicians compared to recent performance graduates. The experienced performers naturally tended towards referring to performance practice overall instead of focusing on a single event - despite the interview trying to direct them to one performance, which provided much more depth in the descriptions and perceptions of the discussed experiences.

3) The less experienced participants happened to be the first three interviewees, and as the researcher, I was able to adapt and identify issues with my interview process. These three interviews now served as pilot/practice interviews in understanding how to interact with the participants during the interview process. They aided the development of my analytical skills while also contributing to the themes and codes that arose across the various cases.

3.4 Data collection

Data collection had been done through in-depth, semi-structured interviews conducive to IPA (Smith et al., 2009, p. 51). The aim of the interviews was to enable me to arrive at an understanding of the alternating flow and clutch phenomena in participants and to encourage them to discuss their experiences in as much detail as possible. IPA handles cases ideographically – each subject will be interviewed alone, and their account will be independent until all accounts can be compared during analysis (Pietkiewicz & Smith, 2014).

3.4.1 Semi-structured interviews

The nature of semi-structured interviews are conversations facilitated by a research question to gain knowledge and understanding of a particular topic (Smith et al., 2009, p. 51). With this in mind, there is room for flexibility in questions asked as they serve more of a directional purpose as opposed to seeking a straight answer for a simple question (Smith et al., 2009; Willig, 2013, p. 261). The research question is then later answered through analysis. The interview questions explored broad themes – optimal performance, flow, clutch, influencing factors on performance success, lived experience, and personal interpretation – to allow the interviewee to give as detailed and personal a description as possible of their flow and clutch experiences. Interview questions addressed occurrences of flow and clutch, detailed descriptions of performance states, and the association between flow and clutch. The interview questions were directed towards the participant's thought process in describing the flow and clutch experiences.

3.4.2 Conducting the interview

The interviews were audio-recorded on a cellular device, which were then transcribed verbatim. At the outset, establishing rapport and comfort with the participant was essential to allow them to speak at length on what can be complex topics to understand and afford them the freedom to interpret freely (Smith et al., 2009). Ideally, participant agency would be preferred, such as allowing them to choose the time and place for the interview – but this was limited to a large degree as all the interviews were conducted online due to the COVID-19 outbreak in 2020. Following a respectful interview protocol is a given requirement (Cresswell, 2014, p. 193 – 194). Considering the topic of conversation was career-focused, based on understanding more about the profession, and being a performer myself, I was not concerned with participants being reluctant in discussing the nature of their work. I focused on participating as little as possible in the interviews and frequently attempted to show signs of interest, acknowledgement, agreement and understanding. As a fellow performer, relating to their situation helped me be more interactive and responsive to them as the central focus. Allowing the participants to deviate saw the most significant degree of thought and interpretation present itself, and I often encouraged continuation on the line of thought when they realised that they were perhaps off-topic. I was very familiar with the schedule to avoid the use of a printed copy.

3.4.3 Interview schedule

An interview schedule aims to aid the interviewer in creating the required space with sensitivity, ensure all the relevant content is covered and enable the participant to give a detailed recollection of their "lived-in" experiences (Smith et al., 2009, p. 52 – 53). Each semi-structured interview began with a recommended "warm up discussion" to allow the participant to release any tension, promote context and prepare them to talk sensitively about personal experiences (Pietkiewicz & Smith, 2014). A description of the concepts flow and clutch was provided at the start of the interview to ensure participants comprehend the concepts. Each interview was slightly longer than the predicted hour in length, bar one which lasted 2 ½ hours. During the interview, participants were asked to reflectively describe a recent event (a performance that took place during their current level of performance skill) – in a sense reliving the experience. In some cases, participants would cover multiple questions within a single answer as they elaborated on the subject and even probed questions and encouragement from me to elaborate further.

The interview probed performers' experiences of flow and clutch during performance and honed in on detailed descriptions of their lived experiences of these states during musical performance. The interviews were constructed in line with related literature and the identified research gap that this study aimed to address.

3.5 Data analysis

There is no definitive way to conduct an analysis of the interview in an IPA study (Smith et al., 2009, p. 70). An IPA is characterised by a standard set of processes that have resulted in various analysis methods in many different contexts. Despite room to manoeuvre and be innovative, various guides and guidelines have been established to aid the process. The primary concern of an IPA is the participants lived experience; however, the final result is an account of the researcher's reflection on the finer details of what the participant has expressed (Smith et al., 2009, p. 70). Various sources give flexible step-by-step guidelines as to how to go about doing the analysis.

The following steps are all exemplified to a large extent by all of the authors used to guide the methodological process of this study (Smith et al., 2009, p. 72 – 89; Willig, 2013, p. 262 – 275; Pietkiewicz & Smith, 2014; Belal, 2019).

i. Transcribing, reading and rereading

This stage is essential for immersing oneself in the raw data - becoming familiar with what the person is saying and how they say it. This active engagement allows the researcher to get in touch with the participants' world on its own terms and produce an idea of the bigger picture.

ii. Initial noting/coding

At this point, the researcher approaches the transcript in an exploratory manner, noting anything of interest with an open mind (Smith et al., 2009). New insights may occur each time the data is reviewed. All content is valuable, from the discussion material to language use, emotive conversation, and personal interpretation (Smith et al., 2009; Pietkiewicz & Smith, 2014). Any notes made during the interview are also to be reflected upon. At this stage, the researcher should make notes of all insights and points of interest.

iii. Developing emergent themes

The researcher will have developed an extensive data set at this point in the analysis and will be familiar with the whole transcript. Here, chunks of data can be grouped to reduce the volume of detail and manage separate data sets (Smith et al., 2009, p. 80). Willig (2013, p. 263) explains that at this point, one can start applying terms and phrases that essentially represent the information as a whole. “The researcher aims to formulate a concise phrase at a slightly higher level of abstraction which may refer to a more psychological conceptualisation” (Pietkiewicz & Smith, 2014) without departing from the participants’ original account. A small number of themes will serve as primary headings for findings in the study. Themes are then used as perspective “looking glasses” for each case for in-depth cross-analysis.

iv. Searching for connections across the emergent themes of each separate case

Here the information is clustered and organised. Various methods are then used to group the themes and observe any relevant connections that form (Smith et al., 2009, p. 84). This section is

described by Smith et al. (2009) as the charting of how the analyst thinks themes and subjects fit together.

v. Moving to the next case

Repeating the previous step per transcript is necessary. In keeping with IPA's idiographic nature, it is essential to observe each case in its own terms (Smith et al., 2009, p. 88).

vi. Looking for patterns across cases

The final step is finding patterns across cases (Smith et al., 2009, 88). An essential aspect of IPA is that researchers use a homogeneous sample and are concerned with similarities and connections as much as any differences presented by participants (Pietkiewicz & Smith, 2014, p. 9).

I attempted to keep with the process mentioned above, but through experience with transcripts, various aspects of the process merged and developed. Initially, I had frequent access to the recorded interviews to gain familiarity. During the initial noting process, it was necessary to note the context at this point, so sentences, phrases and quotes were frequent. The three main types of comments described by Smith et al. (2009, p. 74) would become apparent in this stage – descriptive, linguistic and conceptual comments. I did not initially focus on defining and separating these kinds of comments, but they became apparent upon reinspection. This section was viewed as a summary section. I then moved to develop emergent themes, or what I called the interpretation section. I applied words and phrases that grouped the information into sets. I also attempted to cluster the information while focusing on the research question and the overall topic of the study, alongside creating themes based on frequency and emphasis by the participant. Upon interaction with new transcripts, it is impossible to deny connections and similarities, so key themes relevant to each case and across cases became apparent – which were noted. By assigning colours to these phrases, I could exemplify connections between themes in single cases and then across cases. Finally, a spread-sheet was set up with three levels of codes and each participant, where further connections and theme "sorting" took place. These themes were derived from and applied to all eight transcripts despite only using five of the initial eight participants.

3.6 Write–up

Pietkiewicz and Smith (2014, p. 13) explain that the analysis method used above proposes a narrative account of the study. Smith, et al. (2009, p. 95) explain that there is no particular way to write an IPA study. The results section post-analysis is the most important section of an IPA write up. The researcher's purpose is two-fold – "you need to give an account of your data, to communicate a sense of what the data are like, and you need to offer an interpretation of your data, to make a case for what they all mean" (Smith, et al., 2009, p. 96). The results section is discrete with reference to conveying exactly what the participant has said and with no reference to existing literature. This exhaustive account of the participant aims to present a convincing report of the participant's experience of the phenomena in question – clearly divided between researcher interpretation and participant reflection (Willing, 2013, p. 276). This process is carefully structured and guided by discussing the identified themes.

"Each theme is introduced and its various manifestations are discussed" (Willing, 2013, p. 276). Each superordinate theme is discussed separately with the aim of detailing how it is relevant to each of the participants in the study (Smith, et al. 2009). After the results are presented in a way the best represents the participants perspective, conclusions can be drawn in the final two chapters with supporting literature. The themes are best presented with any form of evidence available, such as transcript quotes and theme tables so as to reinforce the case, support the narrative argument and exemplify effective study methodology (Smith, et al 2009, p. 96 – 97; Pietkiewicz & Smith, 2014, p. 13).

3.7 Ethical Considerations

The University of Pretoria has granted ethical approval for this study. Ethical issues that may arise from an IPA and specifically in this study are outlined by (Smith et al., 2009, p. 48), mostly covered by the approval of the ethical committee of the University of Pretoria. Issues encountered within the research process are few to none in qualitative research (Smith et al., 2009, p. 48), but good research conduct, protection of participants, and their identity is of most importance. Personal circumstances should be handled sensitively.

3.8 Validity

The validity of a study can be observed and improved in many ways. IPA is a particular form of qualitative research, backed by a significant number of methodological developments and a plethora of studies being conducted in such a format. Provided the researcher maintains the global standards set by the research community, there is no question of validity in conducting an IPA study. However, Smith et al. (2009) describe a deeper look into the quality of validity in an IPA. In keeping with this source as a central guide, I have used this process as well. In keeping with the subjective nature and emphasis on hermeneutics as a cornerstone of this study, the authors suggest that the subjective view of the researcher be addressed. One needs to apply sensitivity to the context of the discussed material, both in data collection and when interacting with it. The researcher must be serious about and committed to the work and display investment through thorough systematic diligence. Being transparent and coherent in ideas and interpretation is achieved by working and re-working material through many drafts to achieve the highest degree of clarity possible. Finally the impact and importance of what the researcher has to say to the reader should speak for itself.

3.9 Summary

This chapter addresses the methodology implemented in order to complete this research dissertation. It defined the research approach and design in detail, the sampling strategy, and the data collection process. The data analysis methods were explained, and finally, this chapter discussed the validity and ethical considerations associated with the study.

Chapter 4

Findings

4.1 Introduction

This chapter presents an IPA analysis of the transcribed interview data collected from the interviews with each participant. The interviews primarily aimed to capture the subjective understanding of flow and clutch of each individual in their own performance context. Several subordinate themes emerged during the analysis process, which were then grouped into superordinate themes. Each superordinate theme is discussed separately and supported by extracts from the interview transcripts. The chapter concludes with a summary.

4.2 Superordinate and subordinate themes

The three superordinate themes were generated from ten identified subordinate themes. Table 4.1 represents an overview of the superordinate themes, their underpinned subordinate themes and selected quotes from the data transcripts. The first superordinate theme focuses on flow experiences related to performance and examines five subordinate themes. The second superordinate theme focuses on clutch and choke experiences related to performance and examines three subordinate themes. The third superordinate theme focuses on performance conditions and the role of self, relative to flow and clutch, and examines two subordinate themes.

Table 4.1

Superordinate themes, subordinate themes, raw data and keywords

Superordinate Theme 1: Performance-related flow experiences		
Subordinate Themes	**Raw Data**	**Keywords**
a) Meaning and purpose of performing	I love performing … I love that imparting of information, … – John ...the intellectual stimulation … incredible sense of achievement and also emotionally very rewarding – Robert	**Love of performing; Communication** **Intellectual stimulation; Rewarding**
b) Descriptions of in-flow experiences and the dimensions of flow	... I experienced a calmness and a deep sense of being ok. … connection between my physical touch and my emotional feeling… – Petra The atmosphere becomes heavy … They (the audience) are gripped. – John … at this moment. … So it's this kind of absolute focus. – August … things come together … they were acquainted to me. Sometimes it really feels incredibly quick… no concept of time. – Robert … I got amazing energy from the piece… I started living myself into this whole process. – Robert	**Well-being; Physiological responses** **Heavy Atmosphere; Gripping In the moment; Absolute Focus** **Unified experience; Communication; Time distortion** **Unambiguous feedback**
c) Prerequisites for flow	… non-stop concentration, that sort of long distance concentration. … helpful to have practiced. – August … pieces that were stronger for me, that I feel naturally– Robert	**Experience; Preparation** **Repertoire** **Preparation**

	…. I was well prepared and I also know my music so well – Petra	
d) Distractors from flow	… not sure practiced enough... enforce that mentality… becomes a bad habit. – John … doubting myself… my learning process, my memorization process. – Petra We all get inner-voice. That voice comes up to you and says "haven't practiced so much," or " take a wrong turn" – Robert	**Habitual negative mentality** **Doubt** **Negative inner-voice; Doubt**
e) Elusive nature of flow	I don't … measure my success … on whether flow happened or did not happen.. – John So you're aiming for it but you can't directly aim for it … – August	**Flow ≠ Success; Not aim for; Not think about** **Indirect aim**
Superordinate Theme 2: The experience of clutch/choke during performance		
Subordinate Themes	**Raw Data**	**Keywords**
a) Descriptions of clutch/choke during performance	… overarching flow performance is full of these mini clutch or choke moments. – August You have this moment of pressure and snap. You rise to the occasion again and again… – John	**Clutch points; Flow and Clutch are connected** **Sudden; Rise to occasion**
b) Participants' divergent responses to clutch and choke	That euphoria after the concert – Robert … prefer not to experience the clutch – Petra	**Euphoric** **Negative**

c) Impact of pressure on clutch and choke	… so many emotions and feelings in such a short space of time. …pressure was so immense… – Robert I don't like the idea of pressure... – John	**Unique; Intense; Sudden** **Negative**
Superordinate Theme 3: Coping skills and performance conditions		
Subordinate Themes	**Raw Data**	**Keywords**
a) Psychological tools, physical self-care, and metacognitive awareness	… ability to psychologically forgive yourself ... – August … Hi hello voice I hear you, … – Robert	**Self-forgiveness** **Self-talk**
b) Performance context	… a very distinguished audience, which usually results in anxiety. - Petra … one of the most difficult piano concertos that there is. – Leevi	**Audience** **Repertoire**

4.3 Superordinate theme 1: Performance-related experiences of flow

All participants identified with performance-related flow experiences. This superordinate theme includes five subordinate themes. The subordinate themes are: Meaning and purpose of performance; Descriptions of in-flow experiences and the dimensions of flow; Prerequisites for flow; Distractors from flow; and The elusive nature of flow.

4.3.1 Subordinate theme: Meaning and purpose of performing

All of the participants expressed a sense of connectedness, love and passion for performing, which appears to be driven by a sense of meaning and purpose. This meaning or purpose is of an elevated nature and goes beyond the physical experience that is performing. Although this contributes to the flow experience, it is not definitive of the flow experience but rather a leitmotif and *raison d'etre.*

For John, his purpose in performing is spiritual, and he emphasises his connection to God and the importance of sharing and giving, as a good Christian would. Music is his way of communicating with himself spiritually and with a higher power, which he then shares with his listeners. In a very personal way, John practices his belief in the gospel with more intensity and greater impact through performing than he is able to in any other way.

> John: I love performing and really find it incredible. I think I was called to be someone to share. I think my innate calling is to share a revelation, or to share something that I have unearthed or discovered, be it in music now, and share that with an audience. I love that imparting of information, or a feeling, or of an emotion and that connection that you get, or that you are able to have. Performance is who you are, for me, as a Christian, performance is an act of worship. As long as the heart is sincere. (4)

John's development as a musician brought about this perspective over time. With maturity and understanding, he was able to reach this conclusion about his purpose as a performer. In his youth, John describes a much more naive yet competent self brimming with confidence and perhaps even over-confidence. With this mindset, there was no sense of fear, yet he acknowledges that the same level of purpose and meaning he has developed now was not present

at the time. As the feeling of invincibility dissipated, John learnt to focus on the meaning behind his playing as a source of motivation and inspiration to be better.

> John: Performance has changed. I think, the older you get, the better you understand what it is you are doing and you lose a sense of naivety, which, in my first year walking onto the Musaion stage, I felt invincible. I didn't know what I was getting into. Who are these people? It was just such fun and now, it's something completely different because it has come to mean so much more to me. Back then it was giving back notes that I just learned. Now it's become something so precious and so dear and so personal, that you want to give your best of it and that's both motivating and, in the same breath, can be very limiting and scary, because you have to deliver this in (well I hate to use the word perfect) but in such an excellent way… (5)

John explains that this experience is only rewarding or successful when purpose and meaning is invested in the performance. It is beyond simply making beautiful sounds. John explains that without this, he would rather not perform. It has a direct impact on his ability and results as a professional pianist.

> John: I mean it's fine but it's not convincing to me. It's not breathed and it's not really gravitas or weightiness. And that's not what I'm after. I don't wanna make noise. Too many people play the Chopin preludes really well – why would I want to play it well too? It has to have something so personal that people go wow this was something. I heard something else tonight. (24)

Similarly, Robert expresses how special it is for him to take an audience on a journey for two hours of their lives. These two hours are in his hands as an artist, and it is an honour for him to present and share what he loves with fellow human beings. He explains how he makes the music come alive as he reenacts something so old that is still appreciated by an audience.

> Robert: But it's an amazing sensation to play a long recital. And it's quite remarkable – I have taken up two hours of somebody's life, many people's lives, on that particular evening. And I produced and acquainted them to music that was written 200 years ago. So, it's very interesting to experience that. I mean I was thinking about that while I performed – how amazing is this you know? That you can be almost… that you can bring things alive… that you can reenact something that was written so long ago and people can still relate to it and be moved. That is

> maybe one of the enjoyments of Classical Art Music, Western Art Music, in many ways. Because it's not something new. It's something old, that you are playing. (14)

Robert shares that performing for an audience is stimulating in various ways that he only finds when on stage. Performing is mentally and intellectually stimulating, promoting a sense of emotional achievement and a deep sense of satisfaction.

> Robert: The first feeling immediately is the intellectual stimulation. It (performing music)… challenges one in all possible ways incrementally and the structures are very intricate and interwoven and very complex, and yet also very free and full of fantasy and rhapsodic elements. That's a tremendously wonderful feeling… to study such music and to perform it. The mental and intellectual stimulation is something I crave in performance and then of course that leads to the feeling of satisfaction. It's wonderful to be able to go through. To be able to present it successfully is an incredible sense of achievement and also emotionally very… very rewarding to play and ummm... it's wonderful. There is a very strong sense of emotional, like poetical achievement when I play a piece with great expression and people respond to that – it's a wonderful experience. (8)

Despite acknowledging his success, sense of achievement and rewarding feelings, Robert explicitly describes his appreciation of the in-the-moment experience and its drive behind his purpose for playing.

> Robert: It's not only about the achievement, it's about the in the moment experience as well. How to let the music surprise me… that's another salient point. It's that point where you as a performer also feel that you're a listener. The music surprises you too – that you are playing. That is also a really fascinating thing that one can experience often. (9)

Petra's experience of purpose and connection to music and performance is best identified in her early career, prior to a difficult time as a result of personal circumstances. This period in her youth is similarly comparable to John's perspective of naivety, invincibility and confidence. Petra explains how performing was an addiction that she thrived on and a sense of pride prevails in her need to memorise all her music. She enjoyed the attention and was fearless on stage. This idea of purpose played a large role in obtaining flow easily as a young performer. Her purpose in

music is guided by being structured and well prepared. A great deal of emphasis is placed on learning processes and responsibility, which primarily resonates with an educator's perspective.

> Petra: I would describe my career as a very up and down career, because of personal circumstances. Mostly when I was younger, I had a very nonchalant way of performing and I did it very easily. I memorised very easily. I loved the attention of the performance when I was younger. I thrived on it. And I did it very easily and it was kind of a bit of an addiction. I was addicted to it. I could not perform enough. I hated performing from music, I wanted to memorise every single thing. Up to today I never in my career had a performance without performing from memory because I feel that is so absolutely important and in the beginning I didn't realise why I did it. Now I know. I realised that even then, when I was younger, I could not perform effectively enough and with enough flow – if you want to put it that way – although I did not realise, in the beginning, you know the definition. I didn't understand flow at all. (1)

Leevi very briefly displays a deeper sense of purpose and meaning behind performing as he searches to obtain what he understands is flow. He mentions the importance of a special connection between himself and his audience. This phenomenon could be described as emotional contagion, which, according to researchers, is a psychophysical, behavioural and social reflexive interactive phenomena. It is the process in which an observed behavioural change in one individual leads to the reflexive production of the same behaviour by other individuals in close proximity, with the likely outcome of emotional convergence (Hatfield et al., 1993; Panksepp & Lahvis, 2011). Leevi emphasises his awareness of the audience's sensitivity to his deliverance of the piece and the space that they all share in-the-moment. This experience is closely related to the role of repertoire choice and program order in Leevi's experience.

> Leevi: I started realizing that somewhere in the concerts, there's something that switches on, something that makes the concert special if you will or the energy in the audience… that starts becoming my… the thing I aim towards for a concert. Then I start thinking like what would be the first work I program to get that as quick as possible. ...the audience, it's almost as if they are prepared and sensitive to the space. (2) I know this sounds weird, but the audience almost sounds quieter. Like you can literally hear the audience listening to you. (10)

The concept of synchronization presents itself in Robert's discussion of his experience as he

explains the unity between members of an ensemble. He explains that the separate individuals become of one mind working towards the same end as a team.

> Robert: In ensemble playing it's wonderful to really become one not only with the instrument but also with the other person (huge smile). That is a level of communication that is unprecedented in many ways, especially maybe in a duo. I work a lot with my flutist and we ourselves become one when we play. That is an incredible feeling when you achieve a unit, a whole, an architectural whole, with somebody else (9)

August contrasts positive experiences at an early age that present a grounded sense of purpose and a doorway to more sustainable flow experiences with negative experiences that create a sense of fear, no flow and no sense of purpose in performance. In his case, he considers himself lucky enough to have this positive foundation that gives him purpose, which he can rely on and feel confident about.

> August: was able to get in the zone enough on stage and have good experiences enough that even when you had the bad choking performance, which everybody does, it didn't make this sort of… horrible fear of performing – which a lot of people have. And I think a lot of that probably does get developed in students who aren't prepared enough and get thrown into performance situations and they just can't control that flow. And jumping into your other thing clutch and choke… they choke too much. If they develop this sense of choking a little bit too quickly or too often then that ingrained fear, that adrenaline rush, which makes you choke, is … drives a lot of the emotional fear behind performance. (1)

A vital element behind purpose and meaning, which ultimately leads to flow experiences, is the choice of repertoire. All the participants discuss the role of the music in their perspectives on why they perform. This element, however, is later discussed in more detail and with relevance to the prerequisites for flow.

Meaning and purpose is not definitive of the flow but is an essential element for successful, positive performance experiences for the participants in this study. It is associated with the autotelic dimension of flow (dimension 9).

4.3.2 Subordinate theme: Descriptions of in-flow experiences and the dimensions of flow[1]

The in-flow experiences and feelings are unique to each participant in this study, and it is clear that the more experienced performers are more adept at expressing their subjective in-the-moment experiences of flow. In their descriptions of flow experiences, several dimensions of flow can be identified.

An important finding prevalent amongst John, Robert, and Leevi is the role of the audience in flow, which ties in flow with dimension 4 – unambiguous feedback. These participants are very aware of the audience's response which seems to enhance intensity and atmosphere. There seems to be a reciprocal awareness and transfer of energy between the performer and audience member.

> Robert: ...they (audience) felt more and more as if they were acquainted to me, so they also started responding and that makes one feel better and that makes one feel more in control of the situation. (18)

> John: ...when the atmosphere becomes heavy and the audience becomes just a little too quiet and it feels as if their ears are on my piano. Like I can feel the people are so focused on what's happening that I am emitting everything clearly from my piano to their ears and hearts and it goes… I can feel that. (10) There's no cough or scrambling papers trying to get a sweet… because it's so gripping and so fresh. (11)

> Leevi: ...you can almost play anything afterwards. You can go way out there with modern or pre-Baroque or whatever and the audience, it's almost as if they are prepared and sensitive to the space. (2)

While some participants are hyper-aware of the audience, others are not. Petra's description of flow is described as a physical, cognitive and emotional experience. She feels a deep sense of satisfaction and well-being, and the feeling is a very in-the-moment awareness of details that she struggles to recall after the event. Petra describes flow as transcendental, particularly how

[1] The dimensions of flow (Csikszentmihalyi & Jackson et al., 2004): 1) Challenge-skill balance, 2) Action-awareness merging, 3) Clear goals, 4) Unambiguous feedback, 5) Total concentration, 6) Sense of control, 7) Loss of self-consciousness, 8) Transformation of time, 9) Autotelic

concentration, loss of self-consciousness, and action awareness merge (flow dimensions 5, 7, and 2). She mentions her lack of awareness of her outward situation and a sense of timelessness (flow dimension 8).

> Petra: I actually become free of the notes on the score. I am not even aware of them, I don't even think of them when I play. (7) I am not aware of my audience when I perform. I forget who they are. I am very very concentrated when I perform. I can completely forget everything except the music. (8) … from then a kind of transcendental state takes over. (10) I experienced a calmness and a deep sense of being ok. When I experience flow. And because I am not aware of time and not aware of specifics, it's very difficult to describe it in detail. But I know that while sitting there in that moment I am satisfied in the deepest sense. Satisfaction I think and being umm… a sense of well-being. The deepest sense of well-being and on different levels… (12)

Petra's explanation of the flow experience is quite clear, considering her experience of flow is one she "forgets" or is less aware of while it occurs. For her, the 7th dimension – loss of self-consciousness is most prominent. Her reflections centre more on the after-effect of a positive flow experience. Despite acknowledging heightened awareness of her senses, emotions and cognitive function, Petra is the only participant to give an in-depth explanation of an embodied flow experience. One in which she is specifically more aware of what she feels physically. When flow occurs, Petra is able to relax and perform without tension. Flow is closely connected to her sense of well-being, and the experience brings her into contact with her whole body, both physically and mentally.

> Petra: I got the flow back. I could relax within that knowledge and again perform without the tension. (2) The deepest sense of well-being and on different levels… because I experience it cognitively, and I experience it emotionally and I experience it physically. The physical feeling of touch and the kinaesthetic feeling and the connection between my physical touch and my emotional feeling. (12)

John describes flow as a transcendental state that is beyond everything else. John's descriptions of flow are rooted in the act of performing as a joyful (autotelic – flow dimension 9) experience. Performance is ultimately enjoyable and stimulating, and from there, other

dimensions of flow are triggered. His current goal as a developing performer has him focused on maintaining flow more consistently. He discusses the enjoyment and purpose of playing the most. He refers to the control, loss of self-consciousness and autotelic dimensions (dimensions 6, 7 and 9) of flow as he identifies with their importance and his struggle to maintain them. John's perception of control changes, and the experience is motivating and encouraging. He explains operating on the edge of disaster in the glory of that moment. Being inspired by the music and the composer has John's authenticity, and expertise as a performer present itself in a spontaneous reaction to the music – making it fresh, unique and gripping. He experiences the music more spiritually and emotionally, and this is described as euphoric.

> John: I love playing the piano in front of people so it was fun to share the gift. (1) I love performing and really find it incredible. (4) I can feel that (flow - emotional contagion). ...it's like the planets align and it's quiet, even amidst all of the noise that you are making… I don't remember that moment in the performance very clearly. When it just comes into focus. When that happens it encourages and motivates me as a performer to know… "right well here we go". I always tell people that true beauty lies on the edge of disaster. Right, so it's on that knife edge that people are waiting to see now… are you gonna fall apart now or is this the ultimate expression of beauty? Either way… they are gripped. And that to me is when flow happens… and you are not in control, well I mean you're in control but also not really. It feels to me that there is a state that transcends all of the stuff that happens underneath it… it becomes… Muuuusic hahaha. It just feels like I am experiencing this for the first time. It's euphoric… it eureka… (11) ...rather have a spontaneous reaction to the music. As if I would be playing it, being inspired by Brahms in that moment and just releasing whatever I felt he was trying to say… (9)

August's description of flow is vivid and rich, albeit strongly linked to a sense of being in control (flow dimension 6). To him, control is about being able to manipulate sound, which in turn manipulates the audience. The control is not only over his own playing but also an awareness of the audience, which is the dimension of unambiguous feedback from himself and the audience. He describes clear goals (flow dimension 3) as a result of control, being focused with complete concentration and loss of self-consciousness (flow dimensions 5 and 7). Flow plays a significant role in his performances, but it is also a phenomenon he has been acquainted with in a high-level sporting context – Tennis. He describes a comfortable space void of

judgment defined by absolute and deliberate focus on the exact moment as it occurs. To his knowledge, the mind is in a timeless state of present focus (dimensions 8 and 5), with no room to think of what has been and what is yet to come.

> August: You're on stage, you're in control, you're manipulating sound, you're impressing people, you're having all these sort of powerful experiences with music that allow you to maybe start to experience this idea of flow… (1) I learned how to get through them and stay focused and stay in the moment. It's an amazing feeling when you're in control and you're having one of those performances where you aren't slipping. (5) For me, when I'm in the zone, that space of non-judgmental, spontaneous creativity that seems to be going well on a particular day… You have to be in the state of making the music. You can't be judging it and you can't be over enjoying it either. So it's this kind of absolute focus… and I see this in tennis a lot. You've gotta get back on the horse (if flow is lost) and just focus on right now, this moment, this point, this next phrase. All I can do – I can only affect this, I can't affect what just happened. I can't think about what's coming up either. You can only physically control this one split second of what's happening. (6) And just sitting in that zone, I think helps you to understand that flow zone. It's being in that very small split second, not judging and not thinking about what's coming or what's happened. Just experiencing right now – what you can control. And if your mind is fully focused on this split second, you shouldn't actually have time to worry about what's just happened or what's coming up… you're just going through this little drive, this journey and experiencing it as much as you can at this moment. (7)

Due to Robert's vast experience, like August, he gives a detailed and structured description of flow closely tied to purpose, meaning and enjoyment (flow dimension 9). Robert describes becoming more involved, inspired and energised by the music as he performs. He emphasises often being surprised or moved by the in-the-moment experience as he spontaneously reacts to it. "I started living myself into this experience." Similar to the descriptions of John and Petra regarding the transcendental aspect of the flow (flow dimension 7), Robert illustrates a meditative, in-the-moment experience in which a loss of self-consciousness occurs (flow dimension 7).

> Robert: It's almost the best experience of it all and that hasn't happened in every competition. Ummm but in some competitions, in particular the ones where I finally had much success, I

> remember that I completely focused on the beauty of the music and I was still surprised and overwhelmed by the sounds that I encountered from what I produced. So this is umm... also, a very interesting thing is where one can allow the subconscious to take over. And let the conscious not dominate too much. (3) It's not only about the achievement, it's about the in-the-moment experience as well. How to let the music surprise me… It's that point where you as a performer also feel that you're a listener. The music surprises you too. (9) I became more and more involved in the music. And interestingly, I got a different energy, I got amazing energy from the piece… and I don't know if you know but in the middle of the last movement, it's extremely exciting (excited tone). So… as things go well, one becomes more excited and I started living myself into this whole process. It actually gave me inspiration for the next piece haha! (13) The loss of self-consciousness has taken place but at certain intervals during a concert. I can't say that it was a constant thing but umm… it developed gradually. (16) … loss of self-consciousness happened when it's maybe in the larger pieces as well, when one has time to… you know you're in, you really get more immersed in a work. Ummmm and the beauty of it and that meditative aspect. (17)

Robert was the only participant to mention flow in an ensemble setting.

> Robert: ...in ensemble playing it's wonderful to really become one not only with the instrument but also with the other person (huge smile). That is a level of communication that is unprecedented in many ways, especially maybe in a duo. I work a lot with my flautist and we ourselves become one when we play. That is an incredible feeling when you achieve a unit, a whole, an architectural whole, with somebody else. With all the unexpected aspects of chamber music we become one. Ja… being moved by music. (9)

Leevi's initial discussion of flow was focused on how he discovered the experience as a mature adult and performer, and once he realised its potency, he focused on obtaining and maintaining flow. For him, flow is linked to repertoire, often loud, flashy works that create a specific energy in the room, which has an immense impact on the audience. The experience of flow gives him a sense of complete confidence and control (flow dimension 6).

> Leevi: I started realizing that somewhere in the concerts, there's something that switches on, something that makes the concert special if you will or the energy in the audience… that starts

> becoming my… the thing I aim towards for a concert. (2) What I have also found is that when I reach that state of flow or whatever, you can almost play anything afterwards. (2) … It felt like it could go as slow as I wanted to, as soft as I wanted to, as loud as I wanted to, as fast as I wanted to. It was a weird experience. (3)

Leevi states how his awareness of flow has him being conscious of wanting to maintain the experience. Despite the positivity of the experience, he needs to contend with nervousness.

> Leevi: I thought this during that performance, I felt both calm and more nervous. Because it's almost like the energy was special so I didn't want to ruin the rest of the performance by making a mistake. (5)

From these in-flow descriptions, the most salient dimensions of flow are loss of self-consciousness, complete concentration, a sense of control, and an autotelic experience (dimensions 7, 5, 6 and 9, respectively). Less frequently mentioned are the time distortion, action-awareness merging, clear goals, and unambiguous feedback dimensions (dimensions 8, 2, 3 and 4) and no mention of the 1st dimension – challenge-skills balance.

The desirability of flow or any positive mental state is inspired by the results that come with it – optimal performance, success and fulfilment. By identifying with these states, it appears that participants imply that they performed optimally through the experience of flow. The following statements confirm participant awareness of optimal performance as a result of being in a positive mental state.

John associates flow with his best performances. Flow results in optimal performance that he is aware of; however, it comes as a surprise in the moment.

> John: I know when I am playing better than I should be. (10) I have identified that flow often accompanies my best playing. (15)

Like John, Robert and August are aware that flow accompanies their best playing. Flow allows one to perform at their optimal capacity without being distracted, and August believes

that the best performers in the world have not only mastered their instruments but the psychology of flow and positive mental states to perform optimally.

> August: You know so I worship this idea of flow and being in the zone, where you can express and perform at the highest level without being distracted. And I think it's absolutely key and I think that's what the top performers do. They find that zone very easily. Maybe the best ones find it more quickly than anybody else.
>
> Robert: It's really a very particular scenario for me. Umm…then I think some of my best performances have happened under those circumstances. (2)

Few participants communicated awareness of improved performance results. The implied nature of the positive experience is associated with success, but the actual connection between flow and optimal performance is not directly addressed.

4.3.3 Subordinate theme: Prerequisites for flow

While the participants are aware that certain conditions may promote a flow experience, they realise that there is no guarantee for flow. Various factors contribute (in varying degrees of importance) to the potential for flow – from preparation techniques, repertoire and pre-performance routines to interactions with certain individuals and the atmosphere within the concert hall or the audience, as examples.

Preparation

Each participant expressed the importance of preparation and its role as a prerequisite for flow – solid preparation results in a positive mental state and increases self-confidence.

Petra shows an extreme level of dependency on her preparation. She directly associates success and flow occurrence with being very well prepared – specifically with regards to memorisation.

> Petra: Up to today I never in my career had a performance without performing from memory. And it was because I was well prepared and I also know my music so well that I could memorise it without any doubt in my mind. (1) I was very well prepared. And… I usually lose the anxiety the moment I get on to stage. (5) ...the learning process of my material is very structured. I follow the strict rules that I give myself for proper memorisation. Because it's not often that you sit at an instrument before the performance and think "I know every single note of this piece". (6) That is usually my first prerogative for having flow in my performance. I must be sure that I know every single note of this piece of music. So the learning for the process for me, in the end, is very important. I cannot state that strongly enough. (7)

She is flexible with her pre-performance routine while acknowledging its importance in preparing the mind for the upcoming event – hopefully opening the doorway for flow. Petra prefers to be alone before her performances – a common trait amongst many musicians. She describes a structured, personal routine that she believes alters her mental state during the performance.

> Petra: ...my routine before I perform is very <u>important to me.</u> I like <u>being on my own</u> before I perform and I like having a specific routine, personal routine. A <u>calm personal routine</u> alters my state during my performance. I keep my routine very structured before I perform as well. I warm up for a certain time. I am not very particular about how much I play before I perform. I am not particular about how and what I practice before I perform. You know some people have some very particular ideas about that. (8)

Petra discusses the significance of experience, which can be seen as long term preparation and how it can affect flow in performance. She states that maintaining multiple performances of this nature comes with performing often and consistently, and this is a way of conditioning the mind to reach flow more easily.

> Petra: I must tell you. I think you must be a very practiced performer to maintain these kinds of performances. I think it would be very different if I was performing more often like once every two days and every weekend. ...if you perform often – you could sort of almost handle more clutch moments. But if you do not perform often, you prepare for not having those moments. (11)

John explains the importance of quality practice and his realisation of the importance of healthy preparation and its impact on performance success and flow. He believes that the mind is conditioned during practice, and this mentality will resurface in the same way when he is performing on stage. John has recently experienced difficulties while performing, and he has deduced that it is as a result of having practised with a negative mindset (centred on playing the correct notes instead of meaning and purpose), despite being technically well prepared.

> John: ...(I) practiced so hard I could play it like this *crosses hands*. (21) I have come to realize having always known but now realizing that the mentality you have about every note, every practice session is absolutely deterrent (detrimental?) in what will happen in the performance in a year or six months away. (25)

With about 30 years of active performance experience, August discusses preparation in great detail. He discerns between kinds of practice, mental strategies and how these processes play a role in his acquisition of flow. Firstly, he differentiates between short, focused sessions of practice (music is learnt, mistakes fixed, critical of details, and concentration is practised) with performance rehearsal (a mock-performance kind of practice). These two forms of preparation are used to address both the technical and musical aspects of learning repertoire and coming into contact with the various mental situations that present themselves and how to deal with them.

> August: So if you do practice sessions of 15 minutes, 20 minutes, which you need lots of – but you don't play the whole thing through a lot… (14) in practice mode, where every two minutes where you're really focused and then you have a break and you fool around, you're not absolutely concentrating for 45 minutes nonstop. (15)

> August: I had set up a number of practice runs of it so I'd played the whole program through about… at least 7 or 8 times in different venues before then (live broadcast on radio). (4)

Within these contexts, the strategies applied aim not only to prepare and promote flow but to acquaint August with potential occurrences. August practices dealing with what is usually unforeseen on stage – he considers the situation that is not in-flow and addresses the issues that keep him from flow. Therefore, he not only attempts to promote flow through positive

experience but teaches himself to handle less than ideal situations that will definitely keep him from flow.

> August: I can stay there (in flow) through a pretty carefully rehearsed mantra of really not trying to think of how good it's going… or whatever. (6) I have some psychological coping mechanisms to help with the not perfect day. ...you have to have your repertoire of tools, psychologically, to make sure those things – you can block them out and you can just focus on that music. (8) I have to practice not being so self-critical. So I do a lot of playthroughs where I try to be in the state of creating… I'll even practice deliberately crashing and making a mistake just to know that it can happen and what it feels like and to just move on as opposed to absolutely not think about it. (14)

"Playthroughs" are August's term for practising "long distance concentration" and being in a psychological state for a long piece. Short practice sessions are not ideal for this. These playthroughs are examples of mock performances to August, where he is free to take greater risks and play freely. This strategy helps him prepare for the real performance and the potential situations that could arise. August believes that one can practice being in the zone.

> August: ...being free and taking extra chances, playing extra slow or extra fast, dropping a note or skipping a measure deliberately just to let it… the idea of doing something weird and not throw you off. All those kinds of tools to help you be in the zone ready to deal with whatever is gonna happen in a live performance. ...that sort of long distance concentration – I find that really helpful to have practiced. I think your brain needs that kind of long distance concentration to really hold it together, even psychologically as you do it (15)

August believes in being flexible in his pre-performance routine. His logic is that set requirements create expectations that, if not fulfilled, could leave one disappointed and can negatively affect one's mental state before and during the performance.

> August: I tried to have a different set of, a flexible set of things that I want to be in place for me to play well. It's nice to know that I can play well if I didn't have exactly what I wanted to eat or if I didn't have the perfect nap before the concert… I know certain friends who are very super subscribed about what they want to have happen before a concert… You have to be flexible. You could sabotage yourself. (13)

Like Petra, August also states that consistent exposure to performance experience is conducive for flow. His opinion is that the best performers in the world have a great deal of control over their mental states and organise their performances in such a way only to present the material they are absolutely comfortable with. August assesses his own playing and how important it is to play for an audience as often as possible.

> August: And I think, a lot of the top guys, they don't play new stuff when they're out there. They really take their good pieces, that they have played a lot… (12) The top professionals are really good at it (obtaining flow) because they are playing the whole time, in front of people, making their brain concentrate the whole time for 2 hours or at least 45 minutes for the halves. (15) They find that zone very easily. Maybe the best ones find it more quickly than anybody else. (16) Playing a lot helps, the more you can get out there and play and fight these demons that attack you, mostly all self-created. (22)

Robert's report on preparation is extensive considering his vast experience as an international performer for about 30 years. He emphasises the importance of being well prepared and knowing a piece very well. With regards to the physical effort during preparation, he compares lengthy performances to running a marathon. Preparing the body and the mind and building up adequate stamina is essential.

> Robert: So I find in effect that my preparation is very important and I have to be 600% on top of the piece. (7) ...it's also physical, very physical. It's very athletic actually and you can't go run a marathon without adequate preparation. During the preparation, I have to build up, as I said, the stamina and also the strength… (15)

Robert's primary concern in terms of preparation is presented in the form of his mental preparation and the strategies he has in place to fully prepare for the task. Very similar to August's approach, Robert discusses the importance of aiming for the ideal experience (flow) while preparing to deal with what one cannot anticipate and how to respond in the moment. A deliberate attempt to develop mental strategies was part of Robert's growth as a professional to execute the task with the highest possible level of success. Obtaining flow is one such a strategic

process for Robert. He states that compartmentalisation is important in preparation and during performance. Each aspect needs to be focused on in isolation while setting up clear goals towards achieving success. Robert's perspective is comparable to John's as he too acknowledges his strategic approach being relevant and utilised in practice so as to be replicated in performance.

> Robert: I had to develop strong mental strategies to deliver the task (4) I had to set myself the goals in the process of how am I going to achieve it? So, this is part of the preparation. When… how I would be able to play those difficult things with ease and still make music out of it? (15) Even if you prepare really well, the "in the moment spirit" is definitely going to do stuff with you that you didn't anticipate… so you have to respond accordingly haha (17) The flow for me is a strategic process isn't it? Where things come together in a sequence of events in a performance. And it becomes a thing as a whole – a unit is created. (31) To sit and compartmentalize. That is a very important word in performance! (23) I think that one has to single out those passages and try to think: "how am I going to feel in the concert when that happens and how am I going to be strategic about it and how am I going to alleviate difficulty and also enable myself to play that passage well?" And that is all to do with preparation and the strategic approach and putting it into practice during the concert. (32) Let's single out things – "this is very difficult, how are you really approaching it? How do you know you are playing it well…? (33)

Like August, Robert values the idea of performance rehearsal or a mock performance as a form of preparation, especially if colleagues and friends can be involved to create a safe performance environment. He specifically refers to evaluating the psychological experience within this environment. He sees much value in reviewing oneself by listening to recordings and assessing past performances.

> Robert: That is amazing and listening back to the recordings one can often get a very interesting perspective on how one played. (3) ...a recital is a good scenario to evaluate one's psychological process. I also had the chance to have a friend I play with here in London, listen to my whole program before the concert. (14)

Robert's perspective on pre-performance routine considers that being treated well by conductors, stage managers, fellow musicians, or anyone he comes into contact with before

performing can positively affect his mood and psychology. An adequate amount of time on the piano he will be performing on is also ideal. However, he does not discuss any specific routine that he follows. He simply emphasizes the need to be in a positive and calm state of mind.

> Robert: One has often little time to try out the instrument prior to concertos and such. The logistics behind that is often extremely important too. (7) It's also a nice sensation in a concert or when one feels pampered you feel that the organizers are nice to you and they talk nicely to you and you are being treated professionally. These things can have a huge impact on one's performance. (23)

Leevi has very little to say with regards to preparation and its role in his flow experience. He does state that upon his discovery of flow, he could utilise it as part of good quality practice. Interestingly, Leevi discusses still learning a work a week before it was to be performed; however, instead of considering this as a lack of preparation, Leevi believes that this emphasised contact with it so close to the performance. In his view, it was better prepared than his other works. This was the work he is certain was defined by a flow experience.

> Leevi: ...in the week of this performance I was still learning the Vine sonata. Which was a… blood curdling haha! Um so I guess my preparation for the Vine was much higher than for the Bach and the Rachmaninoff. (5) And while I practice, having learned about that thing in performance, I started applying it while I practice, it started happening during my practice sessions. I would say that my practice sessions became way more intense. (6)

A performer needs to be sure that the hours put into practising and rehearsing, learning methods and being technically and mentally ready to perform was adequate so as to have a solid foundation that can be relied upon. This surety helps negate anxiety, doubt, fear, and other negative mindsets, promoting a sound basis for flow.

Teachers and positive experiences at an early age

Some of the participants pointed out that teachers play a pivotal role in allowing flow to

manifest itself during performance. Amongst many responsibilities, a teacher should foster love and purpose in young musicians, and these positive experiences impact flow development.

August considers a good teacher that properly exposed him to the wonder and nature of music and performance as the drive behind his performances as a professional pianist. His perspective on healthy and positive experiences in the formative years is relevant to all of the participants, who believe their journeys as young musicians are essential for how they perceive performing as professionals. August specifies that these positive experiences are flow or flow-like in nature.

> August: What I think is what drives people to perform – even from a young age. If you're a young kid, I started playing the piano when I was four, and you're sort of a robot in those young ages. You sort of develop the facilities where you can do this sort of thing without the pressure of "oh I'm gonna crash or…" You know there's no expectations and you're this little kid and you get up and play and everyone is wowed and… you get this feeling of… describing a number of those emotional states that are part of that flow experience – well at least some semblance of them, at this early age. It makes performing gratifying. You're on stage, you're in control, you're manipulating sound, you're impressing people, you're having all these sort of powerful experiences with music that allow umm you to maybe start to experience this idea of flow… on a small scale. It makes you want to keep practicing and perform and get out there and express yourself. So, as I grew up, you know I had good teachers and good enough instruction that I think those flow experiences for me were good. I was able to get in the zone enough on stage and have good experiences. (1)
>
> John: Yeah this teacher really instilled a love for music in me, so I loved playing the piano and I love playing the piano in front of people so it was fun to share the gift (1)
>
> Robert: I can remember that my first concert was at around the age of 11. Umm… that was a very positive experience for me and something that made me feel at home and that was probably a very incentive moment for me to become a professional musician (1)

Supportive, formative teachers who instil a love for the art form and expose students to performance without introducing its challenges too rapidly is an important point not often associated with proneness for flow and has considerable implications for teachers.

Repertoire

All the participants express the importance of connecting with and selecting suitable repertoire for the best performance outcomes and proneness for flow. Participants report that flow experiences are related to specific pieces of music that they appreciate more.

> Petra: What caused it or what helped these performances? It usually is repertoire that I really love. Repertoire that I, before I start, am really excited to learn. (6)

Music of the Romantic era is often associated with flow as, by design, the music is intended to be more evocative of emotions and explores programmatic ideas in many cases. This notion is evidenced by participants who mention the Romantic composers Brahms, Chopin, Liszt, Debussy (Late), Beethoven (transitional), and Schumann.

> John: I played on the program, Bach's 2nd English Suite, which I love, with many memory lapses… I can't even remember how many I haha and it's very ironic. Then I played a piece which is incredibly close to my heart, which was Brahms' 3rd piano sonata and that was, really… an incredible experience for me to play… (8) And I think just focusing on the music again, falling in love with it as it is going on… I wasn't trying to recreate something or produce something rather – like create the CD perfect performance here… but rather have a spontaneous reaction to the music. As if I would be playing it, being inspired by Brahms in that moment and just releasing whatever I felt he was trying to say… (9) So I think to really get flow flowing, you kinda have to find a motivation that's really personal as to why you are playing, every single moment that you are playing. (15)

> Robert: And then it was interesting to see, because there were many different pieces in the program, to see which pieces I naturally… pieces that were stronger for me, that I feel naturally now and I am like a fish in water and I can just go for it. And I am sorry to say but there is always Liszt (laughs), Liszt is one of those composers that is very kind to me on stage. I find sometimes with Chopin, you know I love playing it and I enjoy it, but it's much harder for me to play… Beethoven is always hard – no matter what anyone says. So it really depends on the composer.

Leevi specifically mentions the power of dynamics, the intensity of the music, and its impact on flow. Starting the concert with a softer, subtle piece, he gradually guides himself into a flow

state. On the other hand, starting with a very intense and gripping work sets the tone for the rest of the performance.

> Leevi: My most recent finding is that if it's a loud and intense piece. I tried starting a concert soft, meaning like a Debussy prelude or whatever – it didn't necessarily – I mean the concert goes well but it doesn't necessarily have that special energy to it. And ummm, the most recent one I played was the Beethoven Appassionata Sonata, which is quite intense and it's a very intense experience for the audience and then it's almost like – it lays the groundwork for the rest of the recital. (2)

Both August and Robert discuss the experience of having played works multiple times. Different approaches are taken with regards to working on older works compared to newer works. These performers highlight the need to reinvent themselves in older works, which takes a certain kind of attention to detail compared to newer works. Older, familiar repertoire is perhaps given less preparation time as well, requiring a great deal of in-the-moment focus.

> Robert: I find that my concentration was better with the works that were new because I had to concentrate harder to remember them, so they were fresh. … but maybe the works I knew better and had performed in the past, I also had to concentrate very much because maybe I hadn't practiced them as much as I had practiced the new pieces (laughs). Things that I have played a lot… I have to reinvent myself in the moment and that requires a lot of immediate concentration in the moment. (16)

> August: But sometimes you get stuck, because even with finding great interpretations of a piece, you can't keep redoing that same interpretation because it very quickly gets old. In this you need to find something new, a new way of interpretation, a new way of expression otherwise you kind of become this poppet that's copying everything, a rehashing of your old self. It never works. (9)

August states that a successful performance creates an expectation and sets a standard that one inevitably uses to compare later performances. If one attempts to recreate this success, a failed attempt will bring about negativity and judgement – this is not conducive for flow experiences. New interpretations and approaches are necessary while addressing a performance in isolation, in its own right, to avoid this and to feel good about progress and being creative.

> August: And if you listen to the recording of guys playing the same thing. They are changing stuff all the time. They are in a creative zone that allows them not to get stale. Well I think on performance practice, you can do the same. If you have this really nice recital experience, you try to repeat it. And if something goes wrong or something isn't like it was before, you're gonna think, "oh why is this recital, woah… why am I playing like this?" You start judging yourself against this really good performance that you had. (9)

Instrument/Hall

Among various preferences from each individual, the analysis identified that the performance venue and instrument quality could have an impact on a positive, flow-inducing experience. The performers need to be comfortable on stage, and their feelings about the venue and the instrument have a significant impact on this.

Three participants mention the significance of the performance venue and its impact on how comfortable they feel.

> Robert: when I play a recital, say for example I play in Pretoria (which is my home town) and the audience reception is warm and there is a sense of, I strongly feel there is a sense of what I am playing and what I am presenting is appreciated and taken in by an appreciative or an attentive audience – that makes it more like a discussion and it makes one feel very free to express and to communicate. (3)

> John: I love sitting in a hall that's acoustically – I mean we have the Musaion Hall and the Musaion is a great hall! (7)

> Leevi: ...where I studied, back there it was like playing at home and when you're playing home you know you want to play well. That always has an effect on me (9)

Robert mentions a situation where he was disappointed with the quality of the instrument he had to perform on, and it definitely affected his comfortability and enjoyment on stage. He felt he was required to work much harder to achieve success. August mentions that the wrong piano can be the cause of a less than ideal experience on stage, and John shows much excitement for a great instrument that impacts his enjoyment of the performance experience.

> Robert: I had the afternoon to try out the Piano, which was a Fazioli. It was a very bad piano, I thought. Well I was very disappointed by the instrument. First and foremost. The tuning wasn't 100% in my opinion and the sound, the regulation and the evenness of the tone was very hard. I had to work extremely hard, already during the rehearsal, to achieve the colours and the sounds that I had to play. (11) I have to feel comfortable, in my body and in front of my instrument (24)

> August: I try to be in that state and if I can't find that state – many times it's difficult to find that state, you know if you are underprepared or it's not quite the right piano or you just don't feel great that day… (7)

> John: There is a great Steinway and I really enjoy playing it (in the Musaion). I have had some incredible moments there, just sonically, and aurally, the moment is just second to none. (7)

Atmosphere

The performers mentioned the impact of atmosphere and its important role in obtaining flow. Some performers are more aware of atmosphere as a source of positive energy, whereas others are not. The atmosphere is dependent on various factors such as the venue, performance conditions, audience reception and the aforementioned emotional contagion.

Robert mentions his awareness of the atmosphere during his performance, to the point that he attempts to control various elements to create a more atmospheric space. He recalls instances where the weather influenced the atmosphere in the concert hall and was well suited for the kind of music he was playing or a symbolic connection with a church bell in a beautiful church. In other instances, he reflects on visually pleasing venue elements, and he even attempts to create these kinds of spaces while he practices at home.

> Robert: I am very attuned into atmosphere on stage. I find that this can have a big impact on me…I remember a concert I once did in Cape Town. Two piano concertos of Liszt. I am remembering the second concerto of A major I played. There were these huge trees outside the city hall there (Akker Bome) but there was a storm the trees were swaying… you could hear the thunder and you could hear the trees, the leaves of the trees outside the concert hall and in the music, the music was very… spiritual and Liszt you know and that was I remember, it spurred me

> on haha. It really inspired me as well… I like this. Or when you play in a church for example, a very old church. Here in London we often give concerts in churches and then there is a bell that rings or something and I rather see that as a comforting moment and not as a distraction…Ummm I rather like it. (21) The beauty of the venue, nice lighting… there were huge candle holders with candles all over the place and I think it was quite nice – atmospheric… and it does make one feel better. Atmosphere has a big impact on one's psychology. You know when I am at home I try to use nice lighting and stuff like that… umm and to make the atmosphere as congenial as possible around me. (23)

Robert mentions how the audience becomes more involved in his playing as the performance develops, and he is aware of their interest in him. He appreciates their involvement in his experience.

> Robert: At the beginning they did not know who I was but through my playing and the way I express the music they felt more and more as if they were acquainted to me, so they also started responding and that makes one feel better and that makes one feel more in control of the situation. (18)

Leevi is acutely aware of atmosphere, which he attempts to create through strategic programming. Another element he finds important is the use of a spotlight and a darkened performance venue.

> Leevi: when the piano has a spotlight on it… when the rest of the auditorium is darkened and the piano has like a light… it sounds strange but I have learned that it also really makes a very good performance…(4)

Finally, John vividly describes his awareness of the atmosphere during his performances.

> John: I know when the moment becomes… when the atmosphere becomes heavy and the audience becomes just a little too quiet and it feels as if their ears are on my piano. Like I can feel the people are so focused on what's happening that I am emitting everything clearly from my piano to their ears and hearts and it goes… I can feel that. (10)

In summary, the prerequisites for flow are unique to each individual, but the general "first step" is in promoting positive experiences that will hopefully lead to flow. These approaches are practised in preparation, formative development, choice of repertoire, preference of conditions and atmospheric relevance. Addressing negative experiences is an indirect form of attempting to facilitate the opposite. The more experienced performers are acutely aware of managing both sides of this coin, whereas the others seem to only focus on methods that bring about positivity. Negativity is ignored at all costs.

4.3.4 Subordinate theme: Distractors from flow

As important as flow is for the participants in this study, each is faced with the challenge of obtaining it. The prerequisites for flow are desirable conditions that likely contribute to inducing a flow experience; however, several undesirable influences detract from getting into a state of flow.

Petra describes a period of time in her performance career that was very difficult for her. Her developed mindset as a mature performer, centred on perfection, learning methods and structures and the responsibility for all this, hindered her ability to have positive flow experiences. She thought too actively about the systems she had in place and not making any mistakes. Petra describes the need to have made peace with these elements of her learning and memorisation approach before she could reobtain flow. This trauma is an example of an internalised distractor that she had to face as a professional. Considering her isolated flow and performance experience, this form of trauma makes sense.

> Petra: I became aware of, specifically, the memorization process. And when I became aware of the process, it actually hampered my performances. I think because I consciously did it – it prevented flow, for a while in my career. Until I made peace with the process of memorisation and, although I struggled for a while in my career to perform and experience flow, I was so focused on not making mistakes that I couldn't get flow. (2) I was doubting myself and I was doubting my learning process, especially my memorization process. I became aware of how I memorised. (3)

Petra also mentions that allowing herself to think about external emotional experiences and

thoughts can be distracting and take her out of the moment. She is aware that she should not allow herself to do this.

> Petra: Usually that's not because of circumstances within the performance situation. Usually I let my mind go to personal emotional stuff, while I perform. And that I know I shouldn't do. Cause then I fumble something or I… I'm just not concentrating well enough. (10)

Leevi expresses the influence of anxiety and fear of making mistakes. Specifically, he describes a situation that he does not enjoy with regards to performing concertos. He feels very uncomfortable with dress rehearsals that take place on the same day as the performance. They are unnecessary, cause a great deal of stress and take too much energy. Leevi then expresses that the time of day may not be suitable for certain kinds of music, especially not an intense piano concerto.

> Leevi: I instinctively do not like dress rehearsals. I never understood why orchestras need to play at like 10 in the morning and then again that evening… especially with something like Rach 3. It's so massive and then you have to work out this energy twice in one day. I wasn't prepared for the… the space. Then in the evening, because I had just had that (negative) experience in the morning, I was really nervous. Fight or flight kicked in and it was really intense. (7) Well, I remember being really nervous for this performance because in the week of this performance I was still learning the Vine sonata. Which was a… blood curdling haha! (5)

John's biggest challenge with flow is one that takes place over his preparation time. As mentioned, one's mental state during practice emerges in performance, and John has noted that a habitual negative mindset has affected flow in his recent performances. He believes that a perfectionistic mindset that dominates a purposeful mindset will ultimately result in failure and an unenjoyable, non-flow experience.

> John: I would start playing and then immediately my thought pattern would shift from music to doubt. I would think that I am not sure that I practiced this enough... and you know when you enforce that mentality over multiple weeks – it becomes a bad habit ... a consistent mindset that leads to a whole lot of inconsistent mistakes that you think are consistent mistakes. (24)

Within this frame of preparation, John explains how negative perfectionism – focusing on nothing but playing the right notes – distracts from flow. This type of perfectionism is extended into performing, and he believes that this is not how an individual will truly succeed. He relates strongly to a famous performer who emphasised this notion with a student.

> John: Zimmermann the pianist had this one student and the pupil's only desire was to play perfectly. I associate with (relate to) this because I had this thing where I worried too much about my mistakes. Zimmermann's soul focus was to instill meaning into every note that the student was playing. (15)

Although typical performance distractions, specifically from audience members, are common for any individual, Robert discusses these distractors more specifically. These common distractors may not necessarily impact his performance ability; however, emotional contagion is affected, as he becomes aware that the space inclusive of the audience can be broken, which is, therefore, a direct impact on his flow experience. Being very well acquainted with every possible situation in performance, Robert states how debilitating performance anxiety can be.

> Robert: Robert: ...anxiety can be debilitating (4) Sometimes, of course, there is, sadly, someone who coughs or somebody who can't sit still. Maybe there will rarely be a mobile phone… ummm so that can really take one out of the moment (shows visible frustration) and then one has to work even harder to stay on track and to keep going. (16) I remember there were latecomers… so it was very difficult because, you know then I don't know when to start, should I wait before I start playing? You know that moment of uncertainty and then maybe that could lead to a rather tentative beginning to a piece… (20)

Robert discusses a common distractor among many performances as he personifies self-doubt. The inner-voice can be very distracting and can make the performer anxious, which results in negative experiences.

> Robert: Then… my big thing whenever I perform – you know we all get that inner-voice. It's a cliché but my violin Professor told me this when I was studying at university and that voice

> comes up to you and says “hmmm now we come to that part that you haven’t practiced so much,” or “ooooo, are we going to take a wrong turn here because it is the same as at the end of the piece…” you know this irrational voice (24)

August, like Petra, shows an internal struggle more than he shows awareness of external distractions. He discusses undesirable situations prior to performance, such as a family argument or not liking a conductor during a concerto, for example, which can negatively impact the performance. However, his primary concern has to do with how he treats himself. He believes that being too self-critical distracts from flow, and it is a result of a practising mindset being dominant in the life of a performer. August mentions that being nervous can have an effect on flow.

> August: … you may have personal arguments or something with your spouse and you fight right before a concert and you’re like, “urggg I really don’t feel like playing this right now.” Sometimes you’re nervous, sometimes you’re not. It depends on if you are confident with the program or not but… so you’re still a little bit, “yeeeaaahhhhhh is this gonna work, is it not? I need to hit this a bit more.” You don’t want that anymore. (12) I think we do that because we are always practicing and when you are practicing you always criticize yourself the whole time, “I need to fix this, I need to do this, I need to do that.” (14) I didn’t like the conductor and there were a few things that just didn’t go well and I hated the performance. (20)

August has a particularly interesting view on what could distract one in performances. A performer needs to be on their toes and cognitively aware because decisions need to be made, and one cannot be on autopilot. Therefore changes to the interpretive approach must be employed to repertoire that a performer is familiar with. Otherwise, one gets stale and will not experience the thrill of flow.

> August: But sometimes you get stuck, because even with finding great interpretations of a piece, you can’t keep redoing that same interpretation because it very quickly gets old. In this you need to find something new, a new way of interpretation, a new way of expression otherwise you kind of become this poppet that is copying everything, a rehashing of your old self. It never works. (9)

This subordinate theme illustrates that flow can be impeded by internal and external factors.

Internally perceived hindrances include perfectionism, self-criticism, distracting thoughts or emotions, lack of experiential stimulation, and self-doubt. These are potentially further amplified over time as they surface during practice or recur in performance and can even result in lasting trauma. External factors impact flow, such as the audience, the atmosphere of the venue, undesirable interactions with people prior to the performance, poor relationships with other musicians on stage, undesirable performance conditions or physical and mental fatigue.

4.3.5 Subordinate theme: Elusive nature of flow

The elusive nature of flow is one of its most defining features. This quality in itself serves as a distractor because merely being conscious of it draws attention from the task at hand and ultimately leads to a fumble or hesitation during performance.

> John: ...flow is veeery elusive in this way. The moment you identify it, is dangerous… Because I found often times when I go, "heeeey this sounds good", bam! Then it does not sound good anymore. I can identify it almost retrospectively but I really try not to identify it in the moment. (13)

> Robert: It is wonderful of course when one can completely switch off and only think about the music… but it's not… in reality, it does not happen all the time. (30)

August relies less on his knowledge of flow to explain its elusivity and more on his experience of it, resulting in a well-detailed approach to understanding flow. He believes the flow state should occur naturally, in the background, on a subconscious level – despite a somewhat deliberate attempt at working towards it while playing. Thinking about flow not only hinders its occurrence but is also a lack of focus on the task.

> August: Like sometimes when you know you really want to play well – you can't force it to happen. (10) … I have to deliberately not think about that. The idea of thinking about it is taking me out of the moment of being able to do it. So it's the mental discipline of knowing that that state of existence is there, but and putting it back in that sort of unconscious, back part of your brain – like you know it's happening but you can't be conscious of it in your mind because then it's gonna distract you from doing what it is that you have gotta do. So you're looking for it but

> you have to sneakily or quietly not acknowledge it. You've gotta be in a routine of not doing this stuff. So you're aiming for it but you can't directly aim for it or else your brain is gonna be in a weird place. (19)

John is well acquainted with flow research and is very aware of its elusive nature. He provides a detailed description of flow which is an excellent definition for the elusivity of flow within his own experience as a developing performer. It is something that almost appears spontaneously and is desirable and pleasant. However, a performance without flow is not one he would call unsuccessful. Flow is not an indicator of success.

> John: Flow is something that I never aim for or try to achieve in a performance.
> And I think it becomes elusive then. So flow to me is something that happens as a byproduct of what is already happening. (8) I am not necessarily gonna hunt for it. I don't necessarily measure my success of the recital on whether flow happened or did not happen (9) That's the main drawback with flow – if it happens it happens and you aim for it but I don't even wanna touch it. I don't even wanna name it because once I do, I feel like, again, I'm holding myself up to a standard. Which in itself will take flow away because flow is something that happens independent of these other things because all these other things aren't there. So naming it makes it dissipate I think… (14) it happens less, but when it happens… it happens in a much deeper level, than it used to happen (17)

While Robert has only recently actively thought about flow. His experiences serve as a testimony to flow's elusivity, but it is not something he actively addresses as a performer.

The elusive nature of flow is defined by actively addressing one's mental state while performing a task or activity. Individuals who are aware of flow and the desire for it are aware that it needs to occur naturally on a subconscious level. Despite this desire, it is secondary and not central to one's attempts at successful task completion.

4.4 Superordinate theme 2: The experience of clutch and choke during performance

The second superordinate theme explored performers' experience of clutch and choke during performing. During the interview, clutch was described as short periods of optimal performance when under pressure and choke was explained as the antithesis of clutch – failing to perform under pressure.

However, since clutch is a much more difficult concept to identify with, participants often confused clutch with flow and more easily described choking during performance. The data revealed three subordinate themes in this superordinate theme: Descriptions of clutch and choke during performance, Participants' divergent responses to clutch and choke, and Impact of pressure on clutch and choke.

4.4.1 Subordinate theme: Descriptions of clutch/choke during performance

Although some participants associated with clutch, their descriptions of the experience are not as detailed as their descriptions of flow.

John was one of the participants who clearly understood the concept of clutch and choke and summatively speculates that a successful chain of clutch moments is ultimately what leads to a flow experience. John is the only participant to use the terms "clutch points", whereby a performer predetermines a clutch/choke event. These clutch points are described as unnatural as they are self-created situations.

> John: I think there might be a case for saying that multiple links of clutching leads to flow. You have this moment of pressure and snap. You rise to the occasion again and again and it creates a bit of momentum and before you know it, "Heck! It's going well and the piano sounds good tonight." You're like a boat that's coming up out of the water and starts planing right…(20)

John's perception is that being in a clutch state is a gamble with success and failure, a defensive manoeuvre that is not conducive to creativity. He believes that a clutch experience is euphoric. On the other hand, choking (associated with memory lapse specifically) leaves one feeling lost and confused.

> John: I always tell people that true beauty lies on the edge of disaster. Right, so it's on that knife edge that people are waiting to see now… are you gonna fall apart now or is this the ultimate expression of beauty… (11) It's going to force me into a space where I have to be on the defense more than I can be on the offense. It's perhaps a great feeling if you succeed and it's probably very euphoric… (22) ...you set up clutch points or if you perceive clutch points where, "this matters most" (18) I have reacted to a situation that I have sort of created for myself, which is unnatural in a way. I had so many memory slips and memory slips to me is a moment of choke where you go, "woah! I have no idea what's happening now." When that happens (choke), it's not only discouraging, but it also breaks the chain of what I have put on now. (20)

Petra did not fully grasp the concept of clutch since her descriptions were more centred toward flow – a concept she is familiar with in practice and study. She did, however, understand the concept of choke. Petra feels that her approach to learning and memorization is a way of avoiding unpredictable situations or choking. She perceives a moment of clutch or choke potential as negative and one to be avoided. Petra acknowledges that with more performance experience, one can learn to handle such moments effectively. While Petra does not associate clutch with a technical glitch, she can associate with it emotionally.

> Petra: I seldom ever get a situation where I perhaps fumble or surprise myself regarding technical aspects. I more often get that regarding the emotional side aspects and I touched on that… I could kind of lose it emotionally. And by lose it I mean get too emotional. I really have to keep that controlled. Otherwise it could result in a situation where I lose technical control. So you could call it clutching emotionally? But like I said, I am so prepared… (9) I would prefer not to experience the clutch. For me that's not a very positive thing in a flow performance. ...if you perform often – you could sort of almost handle more clutch moments. But if you do not perform often, you prepare for not having those moments. (11)

Leevi has only recently become aware of clutch and choke in his performance experience as a professional. He identifies with clutch and choke and readily contrasts his experience with flow. He describes recurring moments of clutch, one after the other (similar to John's description of clutch points), which are tiring and do not lead to flow. The experience of facing a potential point of choke is not a positive feeling. Leevi does not fully understand the concept of clutch, as

his most confident response was to relate clutch and choke to fight or flight before a performance.

> Leevi: It would have happened multiple times because there was no state of flow. ... if you don't have a state of flow – it makes the performance harder. Cause it's like, you don't, I don't want to say you're not in it but like every difficult section is focused on separately and so I guess you hit this clutch over and over and over. It's tiring the whole time you thinking: "Oh this is gonna be the section that stops me or whatever" (laughs). (8)

Both Robert and August showed a clear understanding of clutch and choke and, contrary to the other participants, do not perceive it as a state to be considered with caution or hesitation. Over time they have come to understand and accept that clutch and choke are natural occurrences during performance.

August's experience of clutch is positive and he describes it with excitement. Like John, August describes a momentum that is generated as one successfully hits one clutch moment after another. To him, flow is made up of these many clutch moments.

> August: I just had a great feeling on stage. You get to those first few moments without something silly happening that sort of jars your mind and you get irritated for the rest of the performance. (5) And you move to another, like the next one and if you jump the next hurdle, you get back on the horse and you probably feel good and you will probably get the next one and it's just fine. (18) I think that an entire overarching flow performance is full of these mini clutch or choke moments you know! (17)

August identifies with clutch through his interest in sport. He explains that this is where one truly sees clutch and choke often, and as musicians, we can learn from these observations of elite performers in another context.

> August: So it's this kind of absolute focus… and I see this in tennis a lot. I play a lot of Tennis and I've gotten into the psychology of high level Tennis. And I think it's the same in Basketball, a lot of these guys that perform at peak moments. (6) And yet we see it in professional sports all

> the time. Why does the number one tennis player get on and one day he just sucks, he can't play the first serve, he can't get the second, he double faults five times… What's happening you know, yesterday he just knocked off the world number 2 and played the best match and today he's just playing like shit. (18)

As a young performer, August recalls a traumatic choke experience. He feels it is the worst possible occurrence. Nevertheless, he claims choking is something all performers *are* familiar with, and although horrible, one has to endure it and learn from it. In his experience, choke prevents flow, especially when a momentum of mistakes takes place. Silly mistakes or "mini chokes" can result in a sabotaged, irritable mood or throw him off. August explains that there are comparable degrees of the experience, where some chokes go unnoticed and others result in a complete stop.

> August: I just couldn't control it and then in the middle it crashed. I mean it wasn't that kind of a long memory slip but I remember sitting there feeling like I was gonna die, you know! (2) You can sabotage performances and I can talk about performances that I have sabotaged myself… Where something little goes wrong and you start to second guess it. (5) Again, just psychologically, I got a little bit rattled in one piece because I had this slip, I wouldn't say I choked… I mean I professionally got through it and it was fine, but it was not ummm you know, top level musicians would have known it was a slightly off night – like I was missing stuff that I wouldn't have missed. (10) Some days you miss and you miss and you miss and it just tumbles you know and it's choke after little choke and it just… it doesn't feel good, it's awful. Maybe the adrenaline has just spiked a little bit and he's not in control and he's not believing in himself and he probably had a couple of mini choke moments that set the whole flow off… (18)

August finds that flow is hindered by being too self-critical and unforgiving. It also affects his ability to clutch and potentially results in more choke. He states that being more self-forgiving is a skill he has to work on to stay in the moment. Otherwise, he moves into new territory in a negative state of mind, which makes him more prone to choking.

> August: I think, in my own personal case, my fight with clutch is to not get too self-critical. ...having the ability to psychological forgive yourself ... but in the moment, you just have to enjoy the ride (21)

Robert describes clutch as a very positive experience. For him, clutch is affected by how comfortable one feels on stage, which requires a great deal of self-care. Robert identifies clutch as his perseverance through the extreme pressure of particular performances.

> Robert: I remember that I completely focused on the beauty of the music and I was still surprised and overwhelmed by the sounds that I encountered from what I produced. (3) I think for me the element of clutch lies in the fact that I persevered under the pressure. (26) Clutch is the moment of unforeseen stuff that maybe… as you say pressure… (32)

Like John and August, Robert associates choke with memory lapses. In his case, he recalls three specific choke events which resulted in a crash – which Robert states is the worst thing a performer can experience during a performance. Interestingly, all of these choke situations occurred as a result of exhaustion. Robert believes that choking can result in trauma, and clutch represents the unforeseen and unpredictable elements of performing.

> Robert: One can easily become tired or you feel you lose confidence maybe when something happens or you feel something does not go as well as you want it to and one hits a few wrong notes and then you are easily phased by it. (26) I have choked… Most of that involved memory lapse. I think that is the worst experience that can happen during a concert… each of these three concerts interestingly, each of these experiences was accompanied by severe exhaustion. (27) ...whereas the clutch is the moment of unforeseen stuff that maybe… (31)

4.4.2 Subordinate theme: Participants' divergent responses to clutch and choke

The analysis showed that participants have very different responses to clutch and choke experiences. Some participants were articulating their experiences of clutch and choke for the first time.

Robert has developed a more analytical approach to performances in the maturity of his career. He closely examines why things happen as they do and reinforces the positive while learning from the negative. This perspective is constantly developing and has also emerged in his teaching, as he critically investigates and thinks about not only his performances but those of his

students. Where clutch would appear in the spirit of youthful vigour and spontaneity, it now comes from a well thought out method of achieving success. Robert states that the worst moments in playing are full of bodily tension and even anxiety, which one has to learn to move past in the moment. Robert states that the sense of achievement and the feeling after clutch is euphoric and addictive.

> Robert: It's not worth denying that it ever happened. But I remember the feeling and I learned from it. (27) I think there is a youthful spontaneity and intuition that I might have lost now. Now I think more, I know what I am doing. I analyze the music more carefully and… umm.. also because I teach I have a much more analytical brain for performance. I am very clear about what happens during a concert. I am very alert and aware, whereas I might have been very alert and aware then but I might not have known how to respond to everything so well. (25) ...sometimes I realize that maybe through great concentration, my body becomes tense. (15) that euphoria after the concert when things went well (clutch) is also an experience that very few people will experience in life. So they don't know the kick that you have haha. That is also an amazing sensation and that is addictive. (5)

August maintains an attitude of acceptance over aversion to clutch moments and choke. He emphasizes that a single choke experience or a few bad moments in a performance can be shaken off, and one can make the best of what is still to come. August describes his bodily response to pressure clearly. He feels a rush of adrenaline and tension in the body. Handling this is essential as one cannot lose control. Getting the most out of these experiences is described as fighting a personal war within.

> August: ...we can learn from sports because you can make the dumbest play or the most horrible thing but you can't let that bother you, you know. You've gotta move on like in my big piece, if I blow a big famous passage, I can't let that bother me, I've gotta keep going on...(17) ...there are maybe a thousand reasons for why it went wrong and I can't think, "Ah I just suck!" But, you can't worry about it. You gotta move on and you get through it. (18) Maybe you're gonna miss some stuff because you don't have complete control over the uhhh… of… well… and we're just human you know. (21) The more you can get out there and play and fight these demons that attack you, mostly all self-created, you try to win your own personal war. I think a lot of it – you going into your own personal war that you are fighting. (22)

Some participants are either entirely against the idea of clutch or are unsure about it, as the perceived risks presented by it are not worth the gain. They are not willing to forfeit a certain degree of control that comes with clutch.

John and Petra both state that they do not like the idea of clutch. John is explicit that as much as the clutch experience is a positive one, choke is a more likely outcome that is less desirable than clutch is desirable. It is not worth the gamble.

> Petra: If I could, I would prefer not to experience the clutch. For me that's not a very positive thing in a flow performance. (11)

> John: Ja so my experience with this is… more often than not you will fail and you won't clutch, you will choke. (18) that entire concept to me – I don't like it. ...the issue with the clutch is always its evil brother. I will put up a point and I know I have to nail it, and then I don't nail it. (20) I am not a gambling man. I don't want to rely on the chance of clutching over choking to succeed. (23)

John acknowledges that clutch and choke are typical for all performers. His approach is that should clutch present itself (like flow), the occurrence is convenient. In cases of choke, John accepts that it happens and is something one can learn from.

> John: These moments of choke I think they happen to the best of us. They are horrible, but they do provide the opportunity for us to go back and think about "why did I choke?" Was there a gap in my preparation? (21)

After successive choke experiences over several performances, John's primary response to choke is that his overall mentality needs to change. The continuous, inconsistent mistakes are rooted deep within his psychological approach. He concludes that being overly critical of his mistakes leads to choke and that one should focus on purpose and meaning to achieve flow and more positive experiences (as discussed under superordinate theme 1). This belief evidences John's understanding of choke being in direct conflict with flow.

> John ...a consistent mindset that leads to a whole lot of inconsistent mistakes that you think are consistent mistakes. It makes it impossible to pin down what the problem is. It manifests itself differently every week. That's been my recent experience of these moments which have definitely been more negative. (24)

Petra and Leevi have little say about clutch and choke. The concept is new to both of them, and ultimately they are still trying to understand it. In Petra's case, choking is uncommon, and she relies on extreme preparation to avoid it at all costs. However, she does acknowledge a time in her career that was very difficult and not positive. She had to learn how to deal with it and accept that some elements are not in one's complete control. This acceptance within the mind produced better results.

Leevi simply states that his body reached a fight or flight situation in anticipation for a performance after choking in the dress rehearsal earlier that day. His response was anxiety and overthinking his preparedness for the upcoming performance.

> Leevi: Then in the evening, because I had just had that experience (serious choke) in the morning, I was really nervous. Fight or flight kicked in and it was reeaallyy intense. Then it flipped over to the other side and it went really well. (7)

The data suggest that through their extensive performance experience, Robert and August have learned to use clutch effectively for success, or at the very least, not deny themselves an opportunity and take the risk. Despite being aware of the consequences of failure, taking risks and having a challenge mindset helps them better understand and appreciate performance. They have processes set in place to avoid choking or deal with and learn from it effectively. They do not show an aversion to clutch and understand that clutch is perhaps a step to performing above and beyond their normal capabilities. August and Robert are able to quantify choke in degrees of intensity – choke is not necessarily just choke. Small slips here and there are easily handled "minor" examples of choke; however, a complete stop halfway through a work, as a result of a memory lapse, is much more serious. This perspective gives them a better and varied understanding of the risks they are taking in hopes of achieving clutch and flow.

With more experience, performers are better equipped to closely examine their experiences on stage and identify character traits of states such as flow, clutch and choke. Furthermore, they can develop valuable skills that take advantage of concepts such as clutch; however, it appears that the risks involved intimidate the lesser experienced performers, who perceive clutch as unreliable, and tend to focus on more dependable means of success.

4.4.3 Subordinate theme: Impact of pressure on clutch and choke

According to all of the participants, pressure is the distinguishable factor between experiences of clutch, choke and flow.

John has an aversion to clutch, specifically because he wants to avoid pressure altogether. Any form of pressure that can be alleviated is more valuable than even considering the benefits of clutch. His perception of clutch is that these points during a piece are self-created points of pressure.

> John: I don't like the idea of pressure because it has just resulted in choking so many more times. (20) Was there too much pressure that we have inflicted on ourselves? And really this is the defining feature of clutch. That it's within a pressured moment. (21) I really don't like the idea of pressure as a performer. I am really just trying to shake that off as much as I can. Any pressure, anything that makes me feel that I have to now do this perfectly or else! That's not conducive to creativity. And the whole idea of clutch and the way that I perceive it goes: Step 1 – identify a difficult part where you are struggling that you feel under a lot of pressure. (22)

Leevi's acknowledgement of flow, clutch and choke is still going through a great deal of development as he is gaining more and more experience as a performer. He acknowledges the pressures of performance but does not have a particular approach to dealing with it. They are part of the performance experience, and he handles each case individually. Increased pressure has resulted in anxiety for Leevi and has led to choking when looking at the case of the dress rehearsal for what is one of the most difficult concertos written for piano.

> Leevi: So in the dress rehearsal, the conductor insisted I also do the cadenzas and just do a full run through – in that moment I was like: "Dammit!" And remember there was also an audience because it was a dress rehearsal… and it's weird because I wasn't, of course you are prepared but I wasn't prepared for the… the space. I wasn't prepared for: "OK, I'm going to perform now at 10 in the morning" – one of the most difficult piano concertos that there is. The whole situation caught me by surprise and haha I am just glad I got through it. (7)

August accepts that pressure is part of the performance experience but is able to discern that certain contexts promote varying levels of pressure. This idea has a direct impact on clutch and choke. August states that it is much more difficult to focus under greater amounts of pressure. The greater the pressure, the more stress or anxiety he has to deal with - which his body reacts to physically. August remarks that the top professional performers are able to reduce pressure by getting into flow. August believes that flow is made up of clutch moments which appear more intensely with greater pressure.

> August: It was recorded live on the big radio station there in Chicago… so I knew it was going to be recorded and so there's a different kind of pressure with that. You know thinking, if I do crash like the whole world is going to hear it… (4) it's a lot harder to find it, under the more difficult pressure situations. (8) Probably because the heart rate was a little bit up, the pressure was there… (10) they (the top performers) get to that zone where they are not pressured too much. (16)

August mentions that repertoire can impact perceived pressure. A great deal of expectation and judgement comes from experienced pianists and colleagues due to many popular works written specifically to challenge the technical skill of the pianist. This educated audience is more acutely aware of the nuance of such works, and August is aware that even the smallest slips or chokes do not go unnoticed. Playing for an educated group of musicians adds a great deal of pressure to August's performances.

> August: There were some quite technically challenging sections...yeah so it's all these little mini "fail or succeed" moments that psychologically you have to process… where a lot of our repertoire was written to be really difficult, and so you've got these sections always coming up,

> which are notoriously impossible and so you are always kind of judged as a pianist – well did he hit all the jumps, did he hit all the notes… (17)

Success and achieving peak performance despite pressure is what Robert describes as the best examples of his performance career. Different circumstances promote unique degrees of pressure. Robert states that competitions are one of the most intense experiences a person can endure, and in this scenario, he felt he was under the most pressure. However, this brought him into contact with clutch.

> Robert: You have to now perform under the utmost pressure and yet, you have to be brilliant and the whole process is very interesting in a competition because just backstage, going to the stage entrance, going to the piano, playing, going through the program, ending and coming off stage… it's a massive process that really… I can't think of anything else in life where one goes through so many emotions and feelings in such a short space of time. Umm…then I think some of my best performances have happened under those circumstances because the pressure was so immense and as you say, the idea of complete focus and concentration can be achieved when that element of fear and exposure and pressure becomes involved. (3)

Robert says it is possible to lose oneself during a competition because of pressure and abnormal performance expectations. For Robert, pressure in music performance is unique, a kind not found in any other career, where even the simplest of statements has no chance of being altered or a mistake rectified. The performer only has one chance. However, the sense of achievement after persevering is euphoric and addictive.

> Robert:I think the possibility, under that immense pressure, to forget about the scenario. About the audience and about the jury. It's almost the best experience of it all and that hasn't happened in every competition. (2) you have to develop and actually plan your mental state. Otherwise it is not going to succeed and then the pressure will cause one to break. As a performer you don't have that (a chance to rephrase or correct yourself). You only have one chance. So this is very difficult (5)

Robert is concerned about the origin of pressure.

> Robert: It’s very tough because where does the pressure come from? Where or why do we feel these pressures? Is it society, is it the industry, is it our teachers? Who puts this pressure on us? (30)

Petra makes no mention of pressure specifically but does reminisce about large, difficult programs and prestigious audiences that she managed to cope with very well. Her ability to cope is due to her complete dependence on a rigorous and structured preparation process.

Being a distinguishable facet of clutch and choke, pressure is something all the participants identify with. They accept that it is part of the experience; however, it is a negative occurrence. Perseverance and success despite these pressures are the positive and rewarding elements of dealing with pressure. Perseverance under pressure is associated with clutch, whereas succumbing to pressure is associated with choking. The latter being the most common occurrence of the two.

The data shows that participants' perceived clutch as a much more difficult concept to understand and describe than flow. From the interviews, the participants shared similarities between flow and clutch experiences. It is clear that the two experiences are easily confused if the concepts are not well-understood. Participants found that the boundary between clutch and choke is unpredictable and is a risky experience to rely upon. They identify with choke more easily compared to clutch. Smaller clutch or choke experiences in succession are described to evoke a momentum that affects performance success. However, in the more experienced performers, clutch is perceived as a positive experience that brings about optimal performance.

4.5 Superordinate theme 3: Coping skills and performance conditions

Each person identifies specific performance conditions they find more or less than ideal. The results show that participants have, over time, developed ways of coping with various kinds of situations that present themselves in music performance. This superordinate theme explores participants’ responses to the impact of performance conditions on mental states under two subordinate themes: Psychological tools, physical self-care, metacognitive awareness, and

performance context.

4.5.1 Subordinate theme: Psychological tools, physical self-care, and metacognitive awareness

The results show that some performers are highly aware of how much control they have of their environment and mental states. Participants understand that developing a good set of psychological tools and habits that result in self-care and metacognitive awareness are essential components to a performance career and that it directly impacts performance, flow and clutch.

August best describes a set of psychological tools he uses to control the performance environment and block out inhibiting thoughts. These tools are practised and need to occur habitually on a subconscious level.

> August: I have some psychological coping mechanisms to help with the not perfect day. ...as a professional performer you have your repertoire of tools, psychologically, to make sure those things – you can block them out and you can just focus on that music.(8) … my attention was not in the right place you know. It was deliberately on all these tools that are supposed to help you but you can't be thinking about those tools, they need to be in place while you're performing but you can't be thinking about them. (20)

August shows a great deal of metacognitive awareness in his responses to his experiences. His reflexive awareness is not only analytical post-performance but during performance, in real-time, constantly evaluating his thought processes. He has developed an approach to self-analyse and build on positive experiences while fighting off the negative. August has learned that achieving clutch is positive and that allowing this positive momentum during the performance is an advantage that can be utilised as a tool, despite the risk of choke. August creates scenarios for himself to face choke and develop his coping mechanisms. Rehearsing and performance simulations address stamina as performers often practice in short bursts but are not used to integrating psychological tools over a long performance. Clutch and flow can be obtained through deliberate effort and are not only presented through chance.

> August: I'll even practice deliberately crashing and make a mistake just to know that it can

> happen and what it feels like and to just move on as opposed to absolutely not think about it. (14) All those kinds of tools to help you be in the zone ready to deal with whatever is gonna happen in a live performance, you just have to be able to mentally block out all of that nonsense and go to this zone. I think your brain needs that kind of long distance concentration to really hold it together, even psychologically as you do it. So being in that state of playing through and being free and taking extra chances, playing extra slow or extra fast, dropping a note or skipping a measure deliberately just to let it… the idea of doing something weird and not throw you off. (15) So I think that managing these little choke or clutch moments, you know if you hit the clutch moment, you sort of have to roll with it and play off of that and be positive with hitting those clutch moments, wherever they are. (18)

August is very aware of being self-critical during performance and understands that clutch moments can trigger this. He prepares for activities by simulating performances. He believes that self-compassion is an ability that one can learn.

> August: I have to practice not being so self-critical. So I do a lot of playthroughs where I try to be in the state of creating. (14) In my own personal case, my fight with clutch is to not get too self-critical. Because then I won't clutch. And so I have to have practiced and emotionally been prepared to not be judgmental, especially against myself if something went wrong. Sometimes we just F it up you know haha. It happens. So just having the ability to psychologically forgive yourself for not always getting everything you want it hit and you want to nail. (21)

August is highly aware of how he feels in his body during performance and explains that a good amount of sleep, relaxation and avoiding high energy food or beverages are important. Being confident that your body will respond in sync with your mind is vital for successful performance.

> August: I try not to drink like coffee, for me if you have a funny caffeine buzz or something like that and something would go wrong, then I would think the caffeine… yeah sometimes, in a personal statement, you know you have a wife and kids and you may have personal arguments or something (12)

Through extensive experience, Robert has developed a unique set of psychological tools for

managing his performances. He deliberately tries to guide his psychological responses by controlling his body and environment to the best of his abilities. Robert displays a highly developed metacognitive awareness of his psychological state and thought processes during performances and has become aware of its nuances. As a result, he is rarely caught off guard.

> Robert: One has to learn how to cope with that and produce the optimal result with little time and with great psychological certainty. (7) I have to stifle making a facial expression that communicates that irritation with myself. So it's also holding your pose I suppose during the concert. (14) I think there is a youthful spontaneity and intuition that I might have lost now. That you know now I think more, I know what I am doing, I analyze the music more carefully and… umm.. also because I teach I have a much more analytical brain for performance. My idea of flow you can see that I can much more easily answer the questions, I can go through the steps of… I am very clear about what happens during a concert. I am very alert and aware, whereas I might have been very alert and aware then but I might not have known how to respond to everything so well. (25)

In an attempt to control his mind, body and environment, Robert actively uses self-talk as a well-developed skill that plays a large role in his success. Self-motivation is necessary in times of doubt to create self-assurance and confidence.

> Robert: I have to actively address myself, or my body and say, "no, breathe and relax, otherwise you are not going to be able to continue this" (15) Sometimes one has to motivate oneself… during a concert and say, "I just need to hold on a little bit longer" – just like in sport, I think you know when you think, "Hmm oh I have to do another 10 reps of this very difficult exercise" you just have to be strong. Just keep going, keep going. You have to motivate yourself to "do". (20)

Robert actively addresses negative self-talk. He has wisely personified this inner-voice of doubt as a character that can be told to go away and not bother him during his performance.

> Robert: ...you know we all get that inner-voice. That voice comes up to you and says "hmmm now we come to that part that you haven't practiced so much," or "ooooo, are we going to take a wrong turn here because it is the same as at the end of the piece…" you know this irrational voice and so she (teacher) always told us to say," Hi hello voice I hear you, I appreciate your words but

> can you go and wait in the green room? I'll deal with you after the concert." So I said, "Oh thank you voice, FUCK OFF!" (24)

Robert has faced his most significant drawbacks on stage due to exhaustion. He is adamant that treating your body well and looking after yourself physically is essential for truly successful and fulfilling performances that promote the best possible conditions for flow. One needs to learn to be aware of bodily demands – especially when it comes to overexertion.

> Robert: I can go and sit and do certain things that make me feel better like having a cup of tea or eating a banana… Just doing some meditation. That might be… being very pragmatic about one's feeling of physical and emotion… but the physical one, one has to look after oneself properly. Because no one else will really look after you… you can do yourself. (31)

Both Robert and August mention that one can make the best of a bad situation. Both refer to the power of channelling negative energy – anger in particular. In some cases, this energy was channelled so well that the performance result was much better than satisfactory.

> Robert: I find that I sometimes play very well when I am angry… So for example, if somebody irritates me before a concert… I will play well. (Proper laugh). Because I can channel all those feelings of aggression into the music.(23)

> August: Umm… yeah sometimes in a personal statement, you know you have a wife and kids and you may have personal arguments or something with your spouse and you fight right before a concert and you're like, "urggg I really don't feel like playing this right now" and sometimes it makes me play better haha. Some of my best concerts are after I had a big fight with someone. You just have a certain kind of energy and I remember some concerts going really well and sometimes it has the opposite effect. (13)

John aims for simplicity in his performance experience, reminding himself why he is there and that the performance is not about him. Having little else to think or worry about is his attempt at self-management.

> John: I think just focusing on the music again, falling in love with it as it is going on… I wasn't

> trying to recreate something or produce something rather – like create the CD perfect performance here… but rather have a spontaneous reaction to the music. As if I would be playing it, being inspired by Brahms in that moment and just releasing whatever I felt he was trying to say… I think that was the key to that performance. (9)

Neither Petra nor Leevi mention any specific means of managing mental states while on stage. Petra relies solely on her confidence in preparation, while Leevi allows the event to unfold, hoping that the audience is captivated, which in turn drives his stability and control of the situation.

Psychological tools, self-care and having metacognitive awareness are skills developed through years of practice and performing. One's responses to a number of both positive and negative experiences through performance experience create a perspective on managing various elements in their own way. These skills are constantly developing, even for the most experienced performers.

4.5.2 Subordinate theme: Performance context

The performance context can have many influences on the mental state of the performer, which in turn impacts in-the-moment individual responses. Performance context is influenced by several factors such as time, place, repertoire difficulty, atmosphere, and audience responses. In this subordinate theme, the participants reflect on the experiences of performance contexts. The examples given by the participants are landmarks in their performance journeys. The fact that they are able to reminisce with such detail only adds to the significance of the specific experiences concerning lasting perspectives that shape future approaches on performing and one's mental state.

Robert compartmentalizes types of performances and deals with each differently. He discerns between concertos, solo recitals, competitions and ensemble playing. He mentions that his mental state is different in each scenario. These conditions affect the intensity of his flow experiences, and varying pressure promotes clutch in cases such as competitions, whereas a regular recital is more relaxed.

> Robert: I have very different approaches, my mental state is different during each type of thing I do. So for example concerto is one thing, then chamber music is completely different. Playing with other people – other performers. And then solo playing and recitals and doing a whole program, going through the motions… and then finally also I have a very different sensation playing competitions and exams. (1)

Leevi describes a performance context with one of the most difficult piano concertos in the world. In particular, he refers to the dress rehearsal and his distaste of the space and effort required for a dress rehearsal – which included an audience. This space led to choking, which was not an ideal situation. However, despite such a negative experience so close to the actual concert, Leevi then states that he experienced clutch during the performance when it really counted.

> Leevi: During the Rach 3 piano concerto, I had both ”edges” of clutch in a single day… I instinctively do not like dress rehearsals. I never understood why orchestras need to play at like 10 in the morning and then again that evening… especially with something like Rach 3. It’s so massive and then you have to work out this energy twice in one day. So in the dress rehearsal, the conductor insisted I also do the cadenzas and just do a full run through – in that moment I was like: “Dammit!” And remember there was also an audience because it was a dress rehearsal… and it’s weird because I wasn’t, of course you are prepared but I wasn’t prepared for the… the space. I wasn’t prepared for: “OK, I’m going to perform now at 10 in the morning” – one of the most difficult piano concertos that there is. The whole situation caught me by surprise and haha I am just glad I got through it. (7)

Petra reflects on a solo recital with several elements that make it memorable. The experience is distinctive as it was a solo recital with a distinguished audience, and she was playing repertoire that she was uncomfortable with. She states that it was one of the most important concerts in her life. However, she was also very excited about this performance. Her emphasis on these elements displays the context as an influential factor, considering her recollection of a historical event in her career. The importance of the event, the audience, and the repertoire all contribute to purpose, meaning and pressure, which influences flow and clutch.

> Petra: It was a performance in front of a very distinguished audience, which usually results in anxiety. Because you know who is in the audience and of course you don't want to umm disappoint yourself and your audience. Ummm, I was very, I was looking forward to this performance. Very much so. It was a very big program, one of the biggest I have ever performed. I think what is of interest in this performance was that it contained repertoire I am still not very comfortable with. I always have to choose my repertoire very carefully. I am not as strong as many men are. I have to play performances that suit my body. And in that performance I played something that was… a bit heavier than what I usually tackled. (4)

John mentions that competitions are pinnacle moments in his music career. He describes a particular performance context characterized by a great deal of anxiety – more than he was used to before playing in competitions. He acknowledges that competitions opened the doors to his performance career and reflects on the difficulties and requirements for his postgraduate examinations. These events display much higher pressure levels than typical performance situations, resulting in more clutch and choke opportunities.

> John: the 3rd round – which we really did not think I would get into – was 60 mins. That was the first time that I really had to play for that amount of time. I was a big procrastinator in this because I really didn't think that I would get in so we started working on this rep very late and I was finishing memorizations like 2 weeks before this round was supposed to happen. This was nuts but probably one of the best times of my life and that when I had my first exposure to placing a performance over a long time. (2) I had to do my Masters, played in the Unisa competition again so with the Masters obviously we had 2 hour recitals. I had to do another Masters recital here (US) for my studies which was about an hour and 15 min. (2)

August discusses a unique performance context experience that even the most experienced performers may never encounter during their careers – a live broadcast from Chicago in the USA. His performance would be on display for anyone in the world. Its uniqueness amplifies the extreme pressure of this situation. He describes a vigorous preparation regime and the psychological difficulties of weighing the consequences of failure and success.

> August: It was at the Ravinia Festival, ummm 2017 I think it was. It was kind of a newer recital… but I had set up a number of practice runs of it so I'd played the whole program through about… at least 7 or 8 times in different venues before then. It was recorded live on the big radio station there in Chicago… so I knew it was going to be recorded and so there's a different kind of pressure with that. You know thinking, if I do crash like the whole world is going to hear it… the psychological games you have to kind of play with yourself to not let that… go wrong. It's a whole different issue. That performance went well because I had the experience.

This subordinate theme addressed how various performance contexts require different approaches to performance and its effects on the mental states of the individual performing.

4.6 Summary

This chapter presented a detailed IPA analysis of the research data captured from the interviews. Three superordinate themes emerged as a result of grouping ten identified subordinate themes, which were examined with support of quoted extracts taken from verbatim text transcriptions.

Chapter 5

Discussion

5.1 Introduction

This chapter will discuss the findings of optimal performance states in elite performing musicians and their experiences of flow and clutch mental states during performance in relation to existing literature. The analysed interview data will be presented in the context of the three superordinate themes: Performance-related flow experiences; The experience of clutch/choke during performance; and The impact of performance conditions and role of self on flow and clutch. The findings will then be contextualised against an Integrated Model of Flow and Clutch by Swann et al. (2017c).

5.2 Performance-related flow experiences

The findings of the first superordinate theme are discussed under the subordinate themes: Meaning and purpose of performance; Descriptions of in-flow experiences and the dimensions of flow; Prerequisites for flow; Distractors from flow; and The elusive nature of flow.

5.2.1 Meaning and purpose of performing

All of the participants identified with flow, which they felt provided meaning and purpose for performance. For these performers, to play music is to live. This finding that performance is a vehicle for meaning and purpose is generally reflected in studies on musicians (Ford et al., 2020). No other activity displays participant reports with such depth concerning personal investment and love for the task.

Performers draw on various aspects while performing that is considered the inspiration behind this deep sense of meaning and purpose. The ability to share something beautiful with an audience or other musicians is easily the most relevant; spirituality can be incorporated into the experience and specific repertoire.

5.2.2. Descriptions of in-flow experiences and the dimensions of flow

Participant's descriptions of in-flow experiences correlate with several dimensions of flow (Csikszentmihalyi, 1990; Jackson et al., 2004). The most prominent dimensions of flow among the pianists were loss of self-consciousness, total concentration, sense of control, and autotelic experience. In direct contrast to the findings of Sinnamon et al. (2012), loss of self-consciousness features quite prominently in this study. Sinnamon et al. (2012) suggest that loss of self-consciousness conflicts with attention while performing on stage, and therefore detrimental to lengthy performance; however, perhaps this notion is misleading. Self-evaluation and self-criticism are not the same. Regarding the loss of self-consciousness dimension, attention to self-evaluation without being too critical is at the forefront of the flow experience. Due to years of experience under critical conditions, these experienced experts are less concerned with the objective correctness of playing – which has been identified as a hindrance more than a constructive thought process.

Flow as a physiological, embodied experience in this study's reports closely resembles the findings of Victoria Jaque et al. (2020) in that kinesthetic perceptual awareness during task completion is rewarding and gratifying. Embodiment is identified as the connection between kinesthetic feeling, cognitive function and emotions in this study and resembles the definition of embodiment in music by Leman and Maes (2014) – embodiment in music is the collective, interconnected dependencies between perception, bodily movement, and emotions. These findings contribute to embodiment theory, and future research can definitely focus on the connection between physical, mental and emotional processes during music performance.

Two of the participants described flow as transcendental, and this study more specifically links this to a spiritual experience. Transcendence correlates with the dimension loss of self-consciousness and is described as the next step that could potentially succeed flow (Bloom & Skutnick-Henley, 2005; Csikszentmihalyi, 1990). Bernard (2009) explains that transcendence a separate experience but is related to flow – during optimal performance, the performer can feel as though they are part of something greater than him/herself. Similar statements are presented in our findings. Interestingly, reported findings of transcendence in literature I have found is only

observed in musical contexts thus far (Bernard, 2009; Bloom & Skutnick-Henley, 2005), and it is a powerful way in which meaning and purpose is emphasized.

A very important finding from this study makes a note of a particular external factor that impacts the flow experience in musicians – the audience. All the participants mentioned the audience, and their involvement is a double-edged sword. Not only is it an essential function of the unambiguous feedback dimension of flow, but the awareness of the audience has the potential to inspire and motivate or cause a great deal of anxiety. Emotional contagion surfaced as a particularly unique result as the interaction with the audience is definitive of success - much like the fact that your audience is on the receiving end of your artistic output. It is about them, after all. This finding also speaks for the expertise of the sample group – who are not concerned with overcoming audience inspired anxiety but are more concerned with audience reception than personal success. Therefore, success becomes tied to audience involvement.

To extend the notion of sharing, the study found that synchronization with fellow performers was an experiential factor in flow. Not dissimilar from emotional contagion in Leevi's case, synchronization seems to imply several overlapping dimensions of flow. In other words, the dimensions clear goals, unambiguous feedback, complete concentration, and the autotelic experience are shared between multiple individuals performing together. Robert specifically discusses a sense of unity felt among fellow musicians as they work towards the same goal. Robert's descriptions are supported by Keller (2007), who discusses the aims of ensemble musicians in performance and mentions that the requirements of accurately performing such detail in sync far exceed the technical ability of the individuals in question. Recent similar results were shown in research by Kaye (2016) and Kolar and Čater (2018), who explored group flow experiences, although not in the music context. They too observed synchronous group flow amongst individuals taking part in the same task, although the reported intensity is higher in individual cases.

Some performers mentioned that playing repertoire that has been performed many times can be challenging and impact flow. It is ubiquitous for performers to play programs they are familiar with, and it is important not to stagnate technically, emotionally or musically.

Reinventing oneself in works they already know during preparation is perhaps more challenging than learning the music the first time around. This finding suggests that where flow may have occurred during the performance of a particular work, it may not occur again unless a new approach is taken to existing music. This possibly has something to do with the challenge-skill dimension of flow, whereby the performer may feel the task is too easy to complete having done so in past performances. No literature found on old and new repertoire suggests that this has an impact on flow or to what extent this factor could play a role.

5.2.3 Prerequisites for flow

This study found that performers agree that preparation is the most significant factor as a prerequisite for flow preceding the performance experience. Swann et al. (2015) also found that preparation is one of the most important facilitators of flow and is especially relevant in building confidence, maintaining focus, and specifically addresses how individuals evaluate themselves as a form of unambiguous feedback. It is common knowledge that the preparation process in music performance is one of the most focused and extensive preparation processes that individuals can undertake for a particular activity, and quality practice is emphasised over hours in front of the piano, as supported by Jørgensen (2008). The detail in which preparation influences flow according to our findings is more extensive than seen in supporting literature. A key finding is that the performers mentioned specific aspects of preparation, such as stamina practice versus short critical sessions for gaining score knowledge, memorisation and confidence gain, as factors contributing to initiating flow. Then, and equally as important, is mental preparation and strategic psychological preparation, which was also found by Swann et al. (2015). In these instances, compartmentalisation and routine flexibility need to be exercised. This finding suggests that should the performer address mental and psychological factors during preparation, setting the tone for flow can be practised and integrated into the preparation process in an attempt to make it a familiar, if not a habitual, occurrence in performance.

Another finding is that the participants mentioned the role of a good formative teacher in laying the foundation for flow experiences. Teachers should not only be knowledgeable of the demands of the craft but sensitive to performance conditions. Positive early performance experiences were particularly important. All of the participants address the role of their teachers

in promoting the conditions that set them up for success, from adequate exposure to effective practice regimes and systems. This finding resonates with Bakker (2005), who suggests fostering flow in young musicians is more likely with a teacher who experiences flow in their teaching themselves. Per O'Niell's (1999) findings, this study found it is especially important that students encounter these positive experiences in healthy environments.

The role of repertoire as a prerequisite for flow was an important finding, particularly the works of the *Romantic era*. The findings concur with Bloom and Skutnick-Henley (2005), who suggest that more emotional music (a particular trait of Romantic music) is more likely to evoke flow. The emotional emphasis of the content helps performers invest in the task more meaningfully with less effort. No other sources I could find mention the impact of specific repertoire on mental states, and this is certainly an avenue for future research.

Final findings on the prerequisites for flow involve comfort with the instrument, performance venue and the situational atmosphere at a particular performance. Although this study set out to review a single event for each participant, their experience in many performances proved more valuable. No sources that I could find mention the impact of nuances such as a venue, lighting, the weather or the time on flow. These details are quite anomalous as it is specific to each individual, so it is hard to draw conclusions on such findings; however, it can be stated that these factors do play a part in the overall experience and whether or not one can experience flow more easily, if at all.

5.2.4 Distractors from flow

Findings on factors that distract performers from flow are divided into internal distractors and external distractors.

The study found that external distractors such as noises from the audience, lights, weather, or unideal time of day are typically avoided at any cost, and unfortunately, they are quite common. Swann et al. (2015) and Jackman et al. (2020) concur with this finding in that they too believe these distractors are avoided at any cost. What this study did not find was a form of positive distraction, as stated by Swann et al. (2017c), whereby the external factor in question aided in

dealing with the elusivity of flow. Specific thoughts or experiences, such as the weather or focus on the room temperature, keep the mind off of flow and one's mental state, especially if these distractors are pleasant or well-received. I suggest that factors such as atmosphere, venue, time, weather and the audience may play this role during performance if the performer has this far a reach in spatial awareness.

This study found that internal distractors such as anxiety, fear, negativity, negative perfectionism, and self-criticism play a much larger role in keeping a performer from flow, and these distractors are much more difficult to handle in-the-moment. Anxiety, fear, negativity, negative perfectionism, and self-criticism are a few examples and are synonymous in sport (Swann et al., 2017c). Most importantly, this study found that trauma and self-doubt are the biggest internal factors that impact flow.

5.2.5 Elusivity of flow

The findings of this study concur with most current research in that flow is an elusive state that should not be at the forefront of one's attention (Csikzsentmihalyi, 1990). This result is not surprising, but in a performance context, the connection between flow and one's best playing makes it especially fragile. Interestingly, it is the part or section that follows a particularly difficult or central passage of music where flow is lost. At this moment, the relief and short-term goal completion can cause one to become more aware and lose the flow state. Interestingly, this finding resembles the clutch state more specifically, as reported by Swann et al. (2017c). Once the fixed goal is complete (such as a difficult passage or section of music), one is potentially no longer in that mental space as the objective has been overcome. The problem that separates the findings of Swann et al. (2017) and the findings of this study is that the stages between these fixed goals in the sporting context do not involve the need to maintain an optimal performance state – such as running to the next obstacle. In music performance, no passage on an instrument is simple enough to allow it to "play itself" as one could run efficiently with no need for higher cognitive function.

5.3 The experience of clutch/choke during performance

The findings from the second superordinate theme, experience of clutch/choke during performance, will be discussed under the following subordinate themes: Descriptions of clutch/choke during performance; Participants' divergent responses to clutch and choke; and Impact of pressure on clutch and choke.

5.3.1 Descriptions of clutch/choke during performance

It was clear that most of the participants in this study did not know about clutch and found it more difficult to understand than flow. Only two of the performers know about clutch and could describe their experiences with clarity. Unlike in sport, where the term has been used for many years, the antithesis of clutch, choke, was a concept the performers could identify with.

Two of the performers described clutch occurring in small bursts during performance, which were labelled as clutch points. Performance was also likened to multiple experiences forming part of a chain and subject to either a positive (clutch) or negative (choke) momentum. This novel finding is similar to descriptions by Swann et al. (2017b; 2017c) also describe the sudden, rapid nature of the clutch experience in a sports-based context. Unlike sports events, music performances are significantly longer and provide more opportunities for clutch and choke. The findings of this study concur with those of Swann et al. (2017b; 2017c; 2019), Schweickle et al. (2017), Jackman et al. (2020) that clutch occurs as part of deliberate effort and attention to fixed, clear goals within the performance. In music performance, clutch occurrence requires very specific goals ("the next 4 bars need to be perfect", "I need to control the fast tempo in this movement", "this is a complex chord progression") as opposed to open-ended, exploratory goals for flow (doing well, getting through it, see how it goes), which Swann et al. (2017c) discusses with reference to The Integrated Model of Flow and Clutch in sport. Similar to the description of clutch in the sport context, as discussed by Swann et al. (2017a) concerning performing under pressure, the two performers described clutch as an intense, euphoric and gratifying experience that presents itself in pressure situations.

5.3.2. Participants' divergent responses to clutch and choke

Once the performers were a little more familiar with the concept of clutch, not all the performers perceive clutch as a positive experience. This finding contrasts with Swann et al. (2017c), who find clutch a positive psychological experience. Of our expert sample group, the less experienced performers feel that clutch is a gamble and is approached defensively with caution. These performers feel pressure is to be avoided or even ignored where possible and a risk not worth taking. However, the more experienced performers feel that pressure inevitably occurs during performances and that embracing it leads to a greater appreciation and understanding of music and the performance experience.

An important finding is that performance experience plays a large role in understanding that there is a degree of manageable risk. The experienced performers know exactly where the potential pressure points are in their repertoire and are able to use these as clutch moments. They also understand that clutch moments are usually antecedent to flow experiences. There is no research in the music context to support this finding; however, the parallels with sport in experiences of clutch and flow is notable.

With pressure being the main influential factor in the clutch and choke experience, this study found that pressure comes from internal and external sources. In contrast with the findings of Swann et al. (2019), internal pressures were not decidedly the main sources of clutch related pressure. Expectation and judgment from the audience, which has previously been linked to anxiety, increase performance pressure. The pressure found in music performance is also extreme compared to that found in other careers. Music performance is not as forgiving of failure as is seen in other fields. Success, especially regarding clutch, is not derived from a sudden push at the end of an event or getting things right on the second or third try. A performer must succeed at every moment, and every turn as the overall impression dictates the result and not just the final outcome. It is not uncommon for a whole performance to be tainted by a single piece or section that only makes up five minutes of the entire event. In the event of such an occurrence and being aware of the repercussions, the pressure on the performer is even higher just to maintain what is left of the situation until the end – regardless of how well it goes. Clutch is described as perseverance through pressure which will be further discussed below as it is a definitive factor of clutch (Tan et al., 2021).

5.3.3 Impact of pressure on clutch and choke

All of the participants identified with pressure but are accepting of the fact that it is part of being a musician, concurrent with the findings of Buma et al. (2015). Where Buma et al. (2015) discuss the focus of attention while performing under pressure, the participants of the current study do not discuss such details. A finding concerning the two most experienced performers of the participants suggests that pressure is relative – much like their perceptions of the intensity flow and clutch. More specifically, cases in which the highest levels of pressure are involved is considered the most pressure one can endure in any career, short of putting one's life at risk. This finding concerns performance context directly, which found studies on music performance pressure do not address. Another novel finding questions the origins of pressure and why performing certain music for certain audiences creates more pressure? Perhaps the pressure is self-imposed. These questions are not answered in our findings, nor in any literature addressing performance pressure that I could find. Research on the subject would be beneficial.

With regards to clutch, this study found that participants see pressure as a negative element of performance that should be ignored – perhaps resulting in less clutch occurrence, as Swann et al. (2017a) suggest that acknowledgement of pressure increases effort, attention and challenge appraisal, which are conducive to clutch occurrence. Swann et al. (2017a) state that pressure directly impacts clutch occurrence as one perseveres under pressured situations. This finding is replicated in this study on music performers. Buma et al. (2015) explain that more pressure evokes more anxiety – a finding replicated in this study.

5.4 Coping skills and performance conditions

The findings from the third superordinate theme, coping skills and performance conditions, found that the performers rely on several coping skills and that these, along with performance conditions, impact experiences of flow and clutch. This superordinate theme will be discussed under the following subordinate themes: Psychological tools, physical self-care, and metacognitive awareness; and Performance context.

5.4.1 Psychological tools, physical self-care, and metacognitive awareness

An important finding is that experienced performers have developed several psychological tools and skills to manage their mental states during performance, which directly impacts their experiences of flow and clutch. These findings concur with those from Swann et al. (2015, 2017c) and Matei and Ginsborg (2017), who suggest that the role of psychological tools is evident and necessary. Matei and Ginsborg (2017) state that these tools are applied as preventative and curative measures for performance anxiety and stress; however, the attempt to obtain positive mindsets through such measures is seen in sport more than in music. Our results provide clarity on the subject as the participants have a metacognitive awareness of their internal state, which is mediated by physical management and self-care. Self-management includes eating well, getting enough rest and avoiding stimulants such as energy drinks or coffee.

Perhaps the most critical finding is that active self-evaluation during any music-related experiences (especially performances) is a necessary skill for long-term success. Swann et al. (2017c) suggested that this information, processed and integrated into future practice, can aid performers to induce mental states. Buma et al. (2015) and Bernard (2009) express a form of positive self-evaluation and observation as a means of obtaining optimal mental states and even transcendence. Actively addressing oneself physically and mentally is an important finding as a fine line is drawn between criticism and self-evaluation during performance. Self-talk is a very deliberate form of self-evaluation used to attempt to control one's thoughts and body.

Regarding mental states management, no studies that I could find support our findings that negative energy can be channelled into a positive experience. This approach shows a true mastery of self-control and focus on success. The influence of experience in this context cannot be overstated, as these skills need to develop and manifest over time. They need to be practised, and this is supported by the findings of Swann et al. (2015).

5.4.2 Performance context

This study found that various performance situations resulted in varying degrees of clutch and flow within the music field. These various scenarios are definitive of the pressure involved in the situation. Buma et al. (2015) and Cohen and Bodner (2019) concur with this statement regarding

performance pressure. What is lacking in the case of performance context is defining which performances constitute more pressure compared to others. Our findings suggest that competitive scenarios are perhaps the most stressful, followed by any performance that involves evaluation and then those with an educated audience or peers. The least pressured situations are those purposed purely for entertainment and to share. Perhaps this avenue has not seen much exploration as it is somewhat self-explanatory and is heavily subjective.

5.5 A discussion of flow and clutch states in relation to the Integrated Model of Flow and Clutch in sport

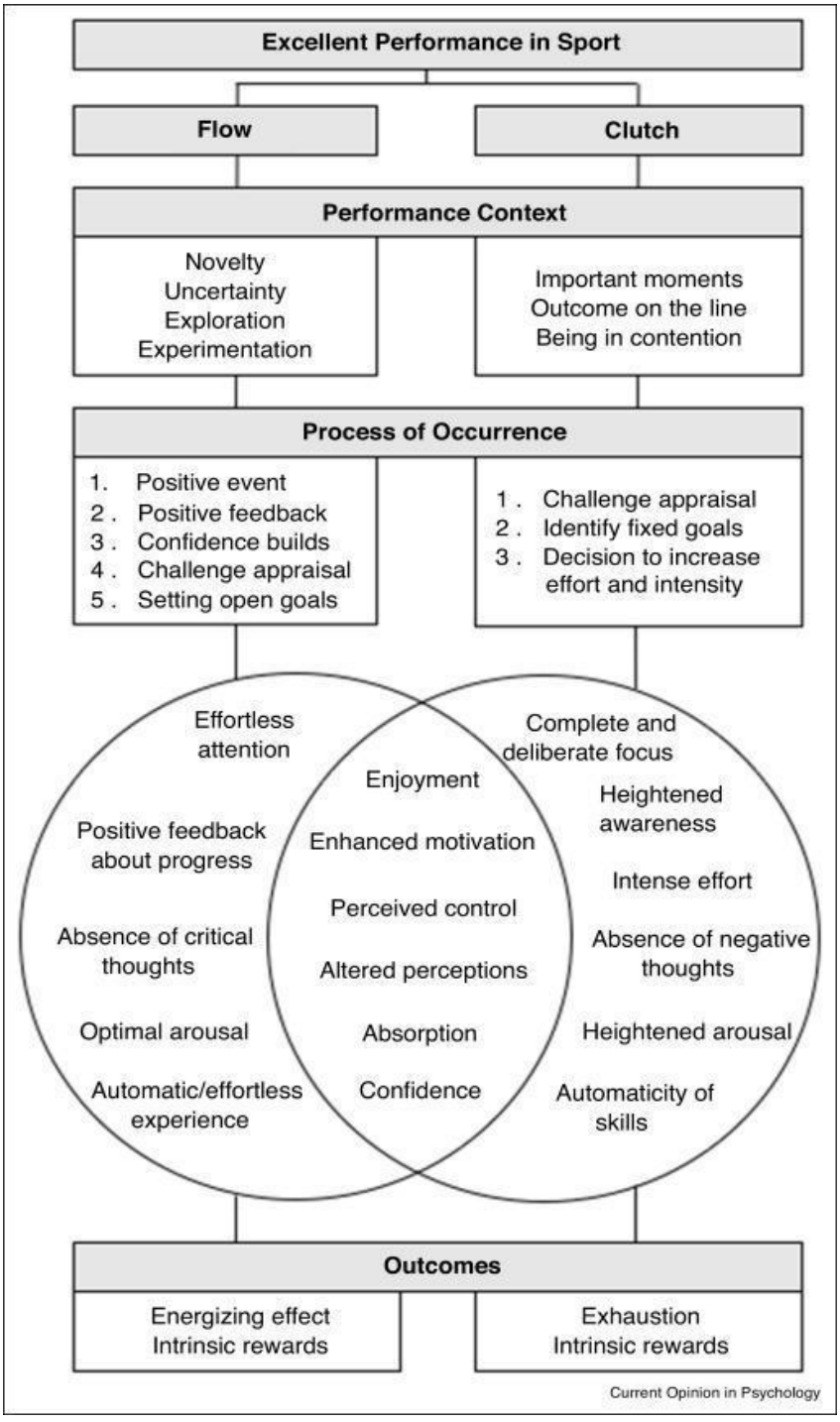
This section includes a brief discussion of the findings against the Integrated Model of Flow and Clutch in sport in relation to the findings of this study. It considers the usefulness of the framework to guide further understanding of clutch states in a music performance context. Further overlapping aspects in the literature will be discussed under the subheadings Performance context and process of occurrence, Outcomes of flow and clutch, Mental toughness and grit, Open and fixed goals, and Individual traits.

5.5.1 The Integrated Model of Flow and Clutch in Sport (Swann et al. 2017c)

Swann et al. (2017b, 2017c) proposed a refined model of flow and clutch in excellent performance in sport. Although only two participants clearly identified with clutch states described by Swann et al. in their performance and were able to articulate their experiences clearly, it has provided evidence that the Integrated Model of Flow and Clutch in sport, the first to offer a refined understanding of the psychological states, is useful a framework for understanding the results of this study in the music performance context (see Figure 5.1). Swann et al. (2017c) identified clutch as separate to flow and suggested several causal mechanisms.

Figure 5.1

Integrated Model of Flow and Clutch in Sport (Swann et al., 2017c, 94)



5.5.2 Performance context and process of occurrence

The results of this study can be compared with Swann et al.'s (2017c) model regarding performance context in that the two performers familiar with clutch identified it happening at key pressure moments during the performance. The findings regarding the mechanisms for flow and clutch and this study concur with Swann et al.'s (2017c) integrated model in a music performance context.

Concerning flow, absence of critical thoughts, automaticity and effortlessness was reported in some cases; however, deliberate focus and attention, effort, heightened awareness and avoidance of negative thoughts were emphasised at critical points during any given performance. Regarding overlapping elements of flow and clutch, the participants of the present study experienced enjoyment, enhanced motivation, perceived control, altered perception, absorption and confidence. Findings reported enjoyment and absorption as the most prominent facets of performance, and these experiences were the most significant indicators that individuals were in a positive mental state. Enhanced motivation during performance would succeed enjoyment and absorption through feedback. Enjoyment and motivation were reported to be linked with the role of the audience in performance. Perceived control and confidence were reported as a result of effective preparation.

5.5.3 Outcomes of flow and clutch

In accordance with Swann et al. (2017c), the performers acknowledged that clutch, although potentially exhausting, was intrinsically rewarding once achieved. All the performers indirectly identified with the energizing effect of flow, associating it with their best performances. One performer specifically mentioned that the flow experience was energizing. In Swann et al. ‘s (2017c) study, where new research is discussed in the scope of the previously constructed Integrated Model of Flow and Clutch, findings show that feeling energized is reported as a response to clutch. This contrasts with the findings of this study as our participant describes being energized by the flow experience. This finding suggests that individuals experience clutch during a flow experience.

5.5.4 Mental toughness and grit

Research has associated states such as mental toughness and grit with the occurrence of flow and clutch in sport and other domains, and found that self-doubt is eliminated through extensive long-term preparation (Jackman et al., 2020; Tan et al., 2021). The findings of this study resonate with this research in that the most experienced performers emphasised the importance of mental management and a developed sense of mental toughness, further evidenced by their perspective on clutch moments as opportunities. It is safe to say that the findings of this study reflect the results as seen in sports-related studies (Jackman et al., 2020; Tan et al, 2021). According to Jackman et al. (2020) mental toughness materialised as perseverance despite pressure, whereas the findings of the current study found that perseverance despite pressure was associated with clutch. Therefore, there seems to be a strong association between clutch and mental toughness. Developed mental toughness and grit is necessary to overcome obstacles during performance and will result in more flow and clutch experiences.

5.5.5 Open and fixed goals

The causes of flow and clutch in sport are only addressed in the context of the importance of clear goals. There are several similarities in the findings of this study and that of Schweickle et al. (2017) and Swann et al. (2017c) in that the distinction between fixed-goals and open goals influence the occurrence of clutch and flow in sport. In a music performance, the goals are certainly more open – given the complexity and length of repertoire; however, fixed goals are necessary during clutch moments. The performer defines clear, specific goals such as “the fast passage in octaves coming up should start by landing the first chord, followed by a forceful crescendo over four bars to end the phrase with as much energy and volume as possible”. The performer addresses any complexities or situational demands in-the-moment, such as an ideal venue or instrument, the atmosphere and interactions with the audience or colleagues. This element of performance is addressed explicitly by each participant in both flow and clutch related contexts. The nature of open and fixed goals in music performance deserves more attention, particularly in their light of genre and repertoire and the outcome of the goals on experiences of clutch and flow.

The potential to inadvertently document clutch occurrence during flow study, as Schweickle et al. (2017) suggest, is supported by the findings of this study. More experienced participants

believe that these optimal states are more likely to occur with deliberate input and attention both during preparation and during the event.

5.5.6 Individual traits

Tan et al. (2021) researched the effect of grit and growth mindset on flow as non-cognitive factors of the experience during performance. Various traits are associated with grit and growth mindset, and the authors found that four main traits are associated with experiences of flow and clutch. An internal locus of control drives the performer to success as they believe the outcome of events is in their own hands (Swann et al., 2017b, 2017c; Tan et al., 2021). The internal locus of control is connected to deliberate input, attention and awareness. All of the performers in this study displayed this trait, particularly the two most experienced, who exemplified a profound sense of perceived control and emphasised the need to take deliberate action.

The second trait is the need for achievement. In managing one's expectations and therefore influencing the challenge-skills dimension (Tan et al., 2021), individuals are more sensitive to the challenge factor if they need to achieve. All of the participants of this study exemplify this trait, strongly iterated their responses connected to meaning and purpose. The connection between the need for achievement and meaning and purpose of performing is distinct from what is seen in literature thus far. Individuals express a depth of elevation that is more closely connected to the philosophical underpinnings of flow than seen in other activities (Csikszentmihalyi, 1990).

The third trait, intrinsic motivation, is synonymous with expert musicians. The findings of this study concur with Tan et al. (2021), who explain how intrinsic motivation directly correlates with time spent on the task and is consequently associated with flow. Tan et al. (2021) also state that grit correlates with intrinsic motivation, implying that an individual with high intrinsic motivation is more likely to invest effort and attention into the activity for more extended periods of time. This point is especially relevant considering the number of years required to master music performance in the long term.

In further accordance with Tan et al. (2021), the final trait identified is emotional intelligence, whereby an individual is able to identify and regulate their emotions effectively. The degree to which this happens is a significant finding as these performers self-regulate their emotions on a moment to moment basis within an hour concert. This is particularly relevant with regards to the self-evaluation that takes place whereby personal success is identified throughout task completion. In non-ideal circumstances, the participants displayed a very structured and practised level of emotional control. Individuals with a high sense of emotional intelligence are likely to better regulate their emotions on this level, and the identification of this trait in the participants of this study is further explained by the maturity (both in age and experience) of our performers.

5.6 Summary

This chapter presented the findings of the study against existing literature on flow and clutch. The results reveal that flow and clutch experiences in a music context are predominantly similar to those found in other contexts such as sport. However, contextual differences between the tasks and task requirements show several distinctions that make the flow and clutch experiences in music performance unique. Furthermore, the findings are discussed against the research on flow and clutch in sport, particularly the proposed Integrated Model of Flow and Clutch by Swann, et al. (2017b, 2017c). Concurrent findings with Swann et al. suggest that the integrated model adequately represents flow as an antecedent of clutch, and results provide more detail on the flow experience in expert music performers and flow in music performance overall.

Chapter 6

Summary and Conclusions

6.1 Introduction

This study aimed to explore the relationship between clutch and flow mental states in expert performing musicians. The project examined the subjective lived experiences of these optimal performance states in five expert performers through the use of Interpretive Phenomenological Analysis of semi-structured interviews. This chapter includes a summary of the main research findings and conclusions concerning the primary and secondary research questions.

6.2 Addressing the research questions

Main research question: What are the lived experiences of flow and clutch states in expert musicians during performance?

The findings of this study reflect those of major contributors to the topic for the most part (Swann et al., 2017, 2019). Flow is an optimal performance state of calm, focused concentration on moment-to-moment situations in which performing musicians have the most enjoyable, embodied, fulfilling and meaningful experiences. Performers feel free to explore, and task completion feels effortless and the height of the flow experience is a transcendent one. Flow is the antecedent of clutch, which presents itself under more specific circumstances, and is characterised by deliberate and effortful attention as a response to more pressure within a situation. Clutch occurs at specific moments within an overall flow experience and is specifically concerned with the challenge-skill and unambiguous feedback dimensions of flow.

One of the more important findings to present itself from this study was participants' lack of understanding of clutch in contrast with flow. Therefore, clutch is closely related to flow enough to define it as a deeper, more specific component of flow. Enjoyment, enhanced motivation, perceived control, altered perception, absorption, and confidence are the mechanisms shared by

both the clutch and flow experiences and mainly represent the responses from the participants in this study.

The most important facet of the flow experience in experienced performers is a sense of meaning and purpose for performing. This is heavily influenced by the role of the audience who are included in an overall shared experience. This finding is not present in sports research. The experience of flow and clutch is a much more complex process for musicians compared to what is seen in sport – where most research on these subjects exist. The reasons for this is that requirements for task completion put performers through greater cognitive and psychological strain for longer periods of time. The emotional investment and vulnerability performers are exposed to is incredibly personal and is self-defining. Clutch in musical performance does not present itself in ways seen in sport, such as a last 'make or break' moment but is a moment-to-moment experience over time within an overall performance experience. The detail of optimal performance states in this context provides a great deal of insight on these concepts that cannot be observed in other settings such as sporting activities.

Clutch occurs in small intervals, as seen in sports research but presents itself more often in music performance. Potential for clutch has been labelled "clutch points" and these are verified as high pressure situations that, in succession can form a reinforcing momentum, driving continuous success throughout a single performance. Experienced performers are very aware of these "clutch points" and how to approach them. Divergent findings suggest that pressure situations are either negative or are perceived as opportunities.

During the early stages of my research, the impression I received was that flow and clutch occur in turn; however, this assumption was incorrect. Clutch has been identified as a succeeding element of flow. The two concepts are not only unexclusive but part of the same experience. Clutch is a potential portal to a deeper experience of flow.

Secondary research question: Which factors impact musicians' ability to experience flow and clutch?

Findings suggest that a great deal of preparation is necessary for flow and clutch to occur. Emphasis is placed on mental preparation and developing psychological coping skills in conjunction with musical and technical mastery of the music. Experience and exposure to situations are the best means for exercising established psychological tools and systems to get and maintain optimal performance states. These experiences are necessary for performers to become accustomed to what is expected of them. The role of a good teacher in creating the best foundation and adequately exposing students to environments that promote flow is an important factor in obtaining flow.

The development of psychological tools, constant implementation of them and active effort in evaluating oneself during performance is not only prevalent in more experienced performer's but is regarded as necessary to induce and even control one's mental state. Elements outside of actively making music such as health, self-care and positivity has an impact on one's ability to obtain flow. Trauma and self-doubt are the most significant factors that negatively affect a performer's ability to experience flow and clutch. Typical distractions and external influences, although evident, are not as impactful as the internal challenges that performers face during performance.

Traits such as grit and perseverance were shown to be an influential factor in the experiences of flow and clutch, however this study did not focus on traits and cannot make sound conclusions regarding these influences – more research is required for this. Performance context is shown to be a crucial influence of the potential for flow and clutch and to what extent these experiences manifest during a particular kind of music performance. Such detail on context specific tasks with a field has not been addressed in sports research discussed in this study. Although competitions were found to be most associated with high pressure, more research can focus on context specific performances.

Secondary research question: How does the flow and clutch experience influence performance outcomes?

As expected, flow and clutch positively impact performance outcomes. More important is that the experience of the sample group more clearly defines these experiences on a spectrum of intensity. Success is relative and highly subjective in the eyes of the performer and the perceptions of the audience. Flow and clutch are not definitive of success but are indicative of it, as success is most often accompanied by an individual's best performances and success. Certain facets of these experiences, although evident, are not as important one individual compared to another. The personal unique experience of flow is distinctive between any two performers. Flow and clutch are desirable because of the positive impact on performance outcomes in the short and long term. One emphasised finding is the energizing effect of flow and clutch, even during an exhaustive performance.

6.3 Limitations of the study

This study described the experiences of five expert pianists only, of whom only two identified with clutch. A larger sample with participants familiar with the concept of clutch would provide a better overview of clutch and flow in concert pianists. A further limitation was due to the fact that clutch as a concept has not been explored in the music context; hence, descriptions used in the sports literature were provided to explain this mental state. Hopefully, researchers will develop and validate quantitative measures for clutch, which would enable a benchmark for measuring the findings.

6.4 Recommendations for future research

In line with the suggestions of many optimal performance-related studies and the lack of research on clutch in music, future research should focus on qualitative perspectives of expert performers in other domains to explore the complex intricacies of these states. Furthermore, future studies could consider exploring the role of personality and the occurrence of flow and clutch in musicians. Future research could explore flow and clutch states in developing

musicians and consider the educational implications for young and advanced students of music, particularly in the contest of music performance anxiety. The value of focusing on optimal states would be to foster the best kinds of performance experiences without the excessive negativity rife in the music industry. Finally, research could explore the impact of repertoire on experiences of flow and clutch in music.

6.5 Conclusion

The findings of this study provide novel evidence of the lived experiences of flow and clutch states during performance in expert performing pianists. The study found that flow experiences correlate with findings of other studies; however, findings from some participants concerning clutch have provided new insights into this mental state – particularly concerning clutch as an element of flow. Although clutch is a novel term in music, there are definite overlaps in musicians' experience of the phenomenon compared to what is seen in sport, and this deserves further in-depth research. This research represents a step alongside many researchers and inspired individuals who are passionate about doing the best in their respective fields while addressing the human elements that make experiences enjoyable and fulfilling.

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Appendices

Appendix A: Letter of Information and consent form

February 2020

LETTER OF INFORMATION AND INFORMED CONSENT FORM

Research Title: Exploring flow and clutch states in performing music artists

Dear participant

Performing Arts psychology literature has seen much development with regards to optimal performance and mental states during performance over the past few years. The aim of the study is to explore the lived experiences of clutch and flow mental states in performing musicians. It also aims to identify associations, differences and similarities between the two mental states in musicians and their impact on optimal performance. I would like to invite you to take part in this study exploring flow and clutch in advanced performing musicians.

Data collection will consist of a semi-structured interview of about 45 minutes to an hour. The interview will be audio recorded. Should you agree to take part, a convenient place and time will be arranged.

Your participation is entirely voluntary and you may withdraw at any time. All information

will be treated as highly confidential and your anonymity is assured. Data will be used for academic purposes only, and it will be stored in electronic format on a password protected storage device at the Department of Music, University of Pretoria, Lynnwood road, Pretoria for a period of 15 years

Informed consent form

I HEREBY AGREE TO TAKE PART IN THE STUDY

_____ (signature)

Many thanks in advance

kflgersteling@gmail.com

Supervisor: **clorinda.panebianco@up.ac.za**

Appendix B: Excerpt of an analysed interview and coding

Researcher: Can you tell me a bit about your performing career, perhaps when you started playing as student?			
Participant: So I started at the age of 6 which means I have been playing for 3 decades. I can remember that my first concert was at around the age of 11. Umm… that was a very positive experience for me and something that made me feel at home and that was probably a very incentive moment for me to become a professional musician. But, I think when my real professional career started I was about 18 or 19, ummm… particularly when I had to play with orchestra. So, for example concertos – and the type of stress in that engagement because you are not in control of the thing yourself. You are very much reliant upon the orchestra and the conductor as well. So, that was a very important professional milestone for me to start doing this sort of thing. Because I felt it was something completely new and something that I would have to learn how to do and professionally how to adapt.	30 years playing First concert 11 Positive experience – incentive for career in music Professionalism with frequency of performance and playing with orchestra New type of stress management – reliant on conductor and orchestra Adapt to new circumstances	More experienced Connection to music Maturity New circumstances with experience Stress – stress management	Emotional connection to repertoire Technical difficulty Stress
Researcher: So in general, I would you describe your performances or how would you describe performing altogether?			
Participant: Yes so in conjunction with the first question – before we continue – I should probably add that over the course of time, I have very different approaches, my mental state is different during each type of thing I do. So for example concerto is one thing, then chamber music is completely different. Playing with other people – other performers. And then solo playing and recitals and	Different approaches over the course of time Different mental approach to type of scenarios (Concerto, Chamber, Solo, Competitions and exams)	Developed skills regarding mental psychology while playing Mental approach per performance situation	

doing a whole program, going through the motions… and then finally also I have a very different sensation playing competitions and exams. So… those are four very different scenarios of performance and obviously during my career I had the chance to hone my craft and my attitude and my experience of each of these four areas.			