Investigating the mechanisms of social support's effects on sport-related outcomes: A social identity approach

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Thesis Abstract

The purpose of this thesis was to conduct and report an original investigation into the mechanisms of social support's effects upon sport-related outcomes using the social identity approach, with a view to better understand what constitutes effective social support. Chapter 1 provides an introduction and overview of the thesis. Chapter 2 provides a literature review of extant social support and social identity literature in sport. In Chapter 3, I report longitudinal relationships between stress, dimensions of perceived support, and social identification as temporal contributors to the development of burnout dimensions. In Chapter 4, I report the main and interactive effects of stress, dimensions of perceived support, and social identification upon dimensions of burnout. In Chapter 5, a large qualitative investigation was conducted to investigate how social identity influenced the design, provision, and receipt of social support in a Rugby Academy. Chapter 6 provides a summary of the findings, along with a general discussion of the findings' implications, the thesis' limitations and strengths, recommendations for future research, and commentary on the significance of the findings. Overall, this thesis makes several original contributions to knowledge, ultimately demonstrating that a range of social identity processes influence the mechanisms underpinning the design, provision, and receipt of social support. This is done in ways that can be both more or less adaptive depending on (a) the context (e.g. levels of stress and/or shared social identification, geography, etc.), (b) aspects of social support (e.g. perspective and dimension of social support), and (c) sport-related outcomes of interest (e.g. dimensions of burnout, whether the outcome is considered adaptive and/or meaningful to group members, etc.). These conclusions would emphasise that a better understanding of what constitutes effective social support could be gained by making bespoke (e.g. context-, dimension-, and outcome-specific) assessments and predictions of the identity-based implications behind social support.

Table of Contents

List of Publications and Conference Presentations from this Thesis

Manuscripts in Preparation

CHAPTERS 3 and 4. Hartley, C., Murray, R. & Coffee, P. (in preparation). You need to be 'one of us' to support me' unless I really need help! Effects of social identification, perceived support, and stress on burnout.

CHAPTER 5. Hartley, C., Coffee, P. & Abhyankar, P. (in preparation). A provider-recipient perspective on how social identity influences the design, provision, and receipt of social support.

Oral Conference Presentations

CHAPTERS 3 and 4. Coffee, P. & Hartley, C. (2019). *You need to be 'one of us' to support me' unless I really need help! Effects of social identification, perceived support, and stress on burnout* [Conference presentation]. 2nd International Conference on Social Identity in Sport, Stirling.

CHAPTER 5. Hartley, C. & Coffee, P. (2019). *A provider-recipient perspective on how social identity influences the design, provision, and receipt of social support* [Conference presentation]. 2nd International Conference on Social Identity in Sport, Stirling.

List of Tables

CHAPTER 3 – Study 1

CHAPTER 4 – Study 2

CHAPTER 5 – Study 3

List of Figures

CHAPTER 2 – Literature Review

CHAPTER 3 – Study 1

CHAPTER 4 – Study 2

CHAPTER 5 – Study 3

Chapter 1

Introduction and Overview of Thesis

"Support has to come from the right voice"

- Anonymous

Relevance of Thesis

Many high-level athletes attribute their ability to perform at the highest level to the 'team behind the team' – the social support received from friends, family, teammates, coaches and support staff amongst others (Rees, 2016). Consider, for example, the following extract from research by Greenleaf, Gould and Dieffenbach (2001), quoting an Olympic gold medallist:

> *"The support from my friends and family had a real positive influence… knowing that they're there and they're behind you no matter what"* (p. 167).

There is an abundance of literature and empirical evidence which supports the theoretical and observed benefits of social support upon sport-related outcomes. For instance, social support may have both direct (Freeman & Rees, 2008, 2009; Gillet, Vallerand, Amoura & Baldes, 2009; Gould, Greenleaf, Chung & Guinan, 2002; Rees & Freeman, 2010) and indirect effects on performance (Bakker, Oerlemans, Demerouti, Slot, & Ali, 2011; Defreese & Smith, 2013; Freeman, Coffee & Rees, 2011; Freeman & Rees, 2010; Rees & Freeman, 2009).

The impact of social support in sport also extends beyond athletic performance and success. Competing in high-level sport typically poses a range of stressors not experienced by the general population (e.g. risk of injury, deselection, high training loads, etc.; Rice et al., 2016; Sarkar & Fletcher, 2014). For elite athletes in particular, there are additional stressors and consequences associated with increasingly subsuming one's life to sport. For example, increasingly high levels of sport commitment may contribute towards a lack of educational attainment, poor dual career progression, and a narrowing of one's personal identity and available group memberships (e.g. Adams, Coffee & Lavallee, 2015; Debois, Ledon, Argiolas & Rosnet, 2012; Lavallee, 2019; Park, Lavallee & Tod, 2013; Willard & Lavallee, 2016). As such, the stressors associated with the sport environment, and the consequences thereof, may have negative implications for the mental health, wellbeing, and welfare of athletes more generally (Moesch et al., 2018; Schinke, Stambulova, Si & Moore, 2017). In this regard, social support has come to be regarded as a key resource for managing the deleterious effects of stressors and for promoting various health and wellbeing-related outcomes in sport (Gouttebarge et al., 2016; Rees, 2016; Uphill, Sly, & Swain, 2016).

While increasing levels of support may allow for beneficial sport-related outcomes it may, however, sometimes prove to be ineffective (Lakey, 2010). Indeed, social support has been noted to have neutral or even deleterious effects (for example, by increasing levels of athlete burnout and dropout; Hartley & Coffee, 2019; Sheridan, Coffee & Lavallee, 2014). In the broader psychology literature, there is also evidence to suggest that social support can draw attention to a recipients' incompetence, undermine goal-pursuit, and damage self-esteem (e.g. Bolger & Amarel, 2007; Fitzsimons & Finkel, 2011; Gleason, Iida, Shrout, & Bolger, 2008; Rafaeli & Gleason, 2009). This places the study of social support in sport at a juxtaposition, where it can be both a source of stress and the key to overcoming it (Hartley, Haslam, Coffee, & Rees, 2020). Yet due to the extant literature's poor understanding of the mechanisms underpinning the effects of social support, it is still unclear what makes social support effective (Sarason & Sarason, 2009; Thoits, 2011; Uchino, Bowen, Carlisle & Birmingham, 2012). As such, in recent years the UK Government posed research questions around ways of improving the effectiveness of social support to better safeguard the wellbeing of athletes ('Sporting Future: A new strategy for an active nation', HM Government, 2015; Grey-Thompson, 2017). If athletes are to be effectively supported, then a clearer understanding of when, how, and why social support operates as it does is needed. This is reflected in the principal aim of this thesis.

Research Purpose and Rationale

Although there is plentiful evidence linking social support to sport-related outcomes (Lakey & Cohen, 2000; Raedeke & Smith, 2001), we still have a poor understanding of when, how, or why social support is related to these outcomes (Rees, 2016; Saltzman & Holahan, 2002; Sarason & Sarason, 2009). Advancing our understanding of the psychological mechanisms underpinning social support's effects ('how' and 'why'), as well as the conditions needed for social support to be effective ('when') thus reflects an important research endeavour (Thoits, 1995, 2011; Uchino, 2004; Uchino et al., 2012). The theoretical and applied implications of such an advancement will ultimately serve to inform the development of future research and theory-led interventions to improve the effectiveness of social support. The principal aim of this thesis was therefore to conduct an investigation into the mechanisms of social support's effects upon sport-related outcomes, with a view to better understand what constitutes effective social support.

In order to understand the mechanisms of social support's effects and the conditions needed for social support to be effective, it may be necessary to investigate a broad range of

these effects and conditions, as common and/or unique mechanisms may underlie them. One way this can be achieved is by investigating a range of performance and non-performance sport-related outcomes (e.g. athletic functioning across various life domains; Henriksen, Stambulova, & Roessler, 2010; Stambulova & Wylleman, 2014; Wylleman, Reints, & De Knop, 2013). For example, recent mental health reviews in sport (Moesch et al., 2018; Schinke et al., 2017) have indicated that having supportive and empowering environments with strong interpersonal attachments are more likely to lead to positive athletic wellbeing (with a lack thereof leading to athletic illbeing; Cowen, 1991; Defreese & Smith, 2014). One such proximal correlate of athletic wellbeing is sport-related burnout (Amorose, Anderson-Butcher, & Cooper, 2009; Ntoumanis, Taylor, & Thøgersen-Ntoumani, 2012).

Formed in reaction to stress, sport-related burnout is a syndrome consisting of a collection of distinct symptoms, namely a reduced sense of accomplishment, a devaluation towards sport and continued participation, as well as physical and psychological exhaustion. Collectively, these indicators of burnout may form the burnout syndrome and lead to sport withdrawal (Ntoumanis et al., 2012; Raedeke, Lunney & Venables, 2002). While stress is considered to be a key antecedent to burnout formation (alongside other contributing factors; Gustaffson, DeFreese & Madigan, 2017; Raedeke, 1997), social support is typically considered an effective resource for reducing the risk of burnout (Eklund & Defreese, 2015; Gustaffson et al., 2017). For example, social support has been shown to buffer the deleterious effects of stress and reduce levels of burnout in sport (Bianco & Eklund, 2001; Defreese & Smith, 2013, 2014; Hartley & Coffee, 2019). Therefore, as well as studying other sport-related outcomes of relevance, the study of social support mechanisms can be informed by investigating social support's relationship with burnout (as a proximal correlate of athletic wellbeing and illbeing). Doing so will also provide indications of where and how future research may investigate the mechanistic effects of social support upon other sport-related outcomes (e.g. by using more in-depth methods).

As will be elaborated upon in Chapter 2, existing theoretical approaches to the study of social support in sport makes investigating its underpinning mechanisms a challenging endeavour due to the limited ways in which social support is conceptualised and explained (Hartley et al., 2020). As such, the social identity approach (as specified by both social identity and self-categorization theories; Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher & Wetherell, 1987) offers a suitable theoretical framework which can sensitively explain when, how, and why social support is likely to exert both beneficial and deleterious effects (Thoits,

2011). Self-categorisation theory (Turner et al., 1987; Turner, Oakes, Haslam & McGarty, 1994) posits that self-categorising oneself as a group member (i.e. adopting a social identity) influences how the self is defined (i.e. in group-like social terms), and accordingly influences how stressful stimuli are perceived (i.e. due to a manipulation of perceived internal coping resources; Lazarus & Folkman, 1984). Furthermore, social identity theory (Tajfel, 1972; Turner, 1982) posits that the nature of shared social alliances might shape people's social support behaviours (Haslam, 2004; Postmes, 2003), by helping them to achieve agreement over desirable social support behaviours (Haslam, Turner, Oakes, McGarty & Reynolds, 1998), and by motivating them towards providing and receiving social support more favourably amongst ingroup members (Haslam, O'Brien, Jetten, Vormedal, & Penna, 2005; Haslam, Reicher & Levine, 2012). As such, the social identity approach posits the experience of sport-related stress and social support to be bound-up with the contextual social dynamics of salient group membership (Rees, Haslam, Coffee & Lavallee, 2015). Furthermore, due to the social identity approach's focus on individuals within *groups*, it is also able to richly conceptualise how the *design*, *provision*, and *receipt* of social support within groups contributes to its underpinning mechanisms. The social identity approach, therefore, offers a comprehensive framework for explaining when, how, and why social support is likely to exert certain effects upon sport-related outcomes.

The principal aim of this thesis was therefore to conduct an investigation into the mechanisms of social support's effects upon sport-related outcomes using the social identity approach, with a view to better understand what constitutes effective social support. This purpose was achieved by using mixed methods in an explanatory sequential design (i.e. quantitative and then qualitative; Brannen, 2004) to investigate the relationships between social support, social identity, and a range of sport-related outcomes (e.g. dimensions of burnout as proximal correlates of athletic wellbeing). This was appropriate as the quantitative strand served to explore and conceptualise when and how social support is likely to exert certain effects upon dimensions of burnout. This subsequently guided decisions (e.g. informing the choice of study setting, samples and methods; Hesse-Biber, 2010) about further in-depth qualitative investigation in Chapter 5, in order to provide a more nuanced understanding of when, how, and why social support is likely to exert certain effects upon a broader range of sport-related outcomes.

The above makes an original and unique contribution to knowledge by being the first programme of research to demonstrate when, how and why group-based identity processes

influence the effects of helping behaviour in sport. Specifically, these contributions include demonstrations of how the effects of social support are related to and influenced by a range of social correlates (e.g. stress experienced, social identification, identity content), when social support is likely to exert beneficial versus deleterious effects, and why social identity processes influence these effects. This has implications for how to better conceptualise and study the effects of social support in future research, and how to enhance the effectiveness of applied social support practice and interventions.

Thesis Structure

The scope of research questions answered in this thesis were aimed at investigating the relationships between social support, social identity, and a range of sport-related outcomes (e.g. such as perceived support upon dimensions of burnout). Specifically, these research questions were designed to explore and explain the underlying mechanisms of these relationships by investigating the influence of social identity processes upon social support. The remaining chapters in this thesis include a literature review of relevant research, three chapters describing original empirical research, and a final chapter providing a general discussion of the implications arising from this thesis. These chapters are described in greater detail as follows.

Chapter 2

In Chapter 2, I provide a review of the literature relevant to the purpose of this thesis. Firstly, the extant conceptual and theoretical literature available on social support in sport is summarised. Secondly, existing evidence with regards to social support in sport is summarised and critiqued, along with current approaches to understanding underlying mechanisms of social support. Finally, the social identity approach is introduced, and the relevance of this theoretical framework to the study of social support in sport is highlighted in relation to the research questions and study design utilised in this thesis.

Chapter 3

In Chapter 3 (entitled '*Temporal contributions of stress, social identification, and dimensions of social support to the development of burnout dimensions across 6-months*') I report a 6-month longitudinal study which used three measurement occasions to investigate the relative impact of stress and specific dimensions of social support (e.g. different types of supportive behaviours; Hassell, Sabiston, & Bloom, 2010) as temporal contributors to the formation of burnout dimensions over time. The first aim of this study was to investigate the

developmental trajectories of burnout dimensions; the second aim was to investigate the dimensional main effects of stress, social identification and dimensions of social support upon dimensions of burnout across time, and; the final aim was to investigate if these trajectories were related to the temporal contributions of stress, social identification and dimensions of perceived support (in other words, if the intercept and/or slope of individual burnout dimensions existed as a function of these variables). This investigation served to explore and conceptualise how social support and social identification were related to a sport-related outcome of relevance. Accordingly, the findings were used as a basis to investigate potential underlying mechanisms amongst these variables in Chapter 4.

Chapter 4

In Chapter 4 (entitled '*Interactions of social support and social identification on the stress-burnout relationship: A conjunctive moderation perspective*'), I report a cross-sectional study investigating the conjunctive moderation effects between stress, social support, and social identification upon dimensions of burnout. This study afforded the opportunity to build on Chapter 3 and further investigate how social support and social identification are associated with sport-related outcomes. Specifically, certain dimensions of social support may be more strongly associated with the stress-burnout relationship under conditions of shared social identities (and have either facilitative or debilitative effects upon the stress-burnout relationship). Accordingly, the purpose of this study was to compare the main and interactive effects for dimensions of social support and stress (stress-buffering) and social identification (conjunctive moderation) upon dimensions of burnout. This investigation served to explore and conceptualise potential underlying mechanisms amongst these variables (e.g. when, how, and why social support and social identification are related to a sport-related outcome of relevance), which subsequently guided decision making about where and how a comprehensive qualitative investigation in Chapter 5 could offer the richest insights to further explain these mechanistic effects.

Chapter 5

In Chapter 5 (entitled '*A provider-recipient perspective on how social identity influences the design, provision, and receipt of social support*'), I report a large qualitative investigation into how social identity influences the design, provision, and receipt of social support. This comprehensive investigation was achieved using qualitative methods with three different sub-populations in the context of a nationwide Rugby Academy programme –

specifically, semi-structured interviews and focus groups were conducted with stakeholders, teams of support staff, and players. Data were analysed using thematic analyses in an attempt to explain how social identity might influence the design, provision, and receipt of social support upon a broader range of sport-related outcomes. This investigation served to further explain the findings from Chapters 3 and 4, and provide further insights into when, how, and why social support is likely to exert certain effects.

Chapter 6

Chapter 6 provides a summary of the findings arising from Chapters 3-5, with a general discussion of the theoretical and applied implications when considering these findings in conjunction with one another and the extant literature. This Chapter also includes commentary about the strengths and weaknesses of this thesis throughout with recommendations for future research. This is concluded with commentary on the significance of this body of work with regards to its unique and distinct contribution to knowledge.

Chapter 2

Literature Review

In the first part of this Chapter the extant empirical and theoretical literature available on social support in sport is summarised. Second, an overview of existing evidence, approaches, and limitations with regards to understanding mechanisms of social support in sport is provided. Finally, the social identity approach is introduced, and the relevance of this theoretical framework to the study of social support in sport is highlighted in relation to subsequent research questions and study design.

Defining the Construct

Simply speaking, social support refers to the network of socially supportive relationships surrounding an individual or team, often where there is an exchange of resources intended to enhance the wellbeing of the recipient (Shumaker & Brownell, 1984). However, this network and exchange of resources has more recently been recognised as a complex and multidimensional construct, involving multiple processes (Bianco & Eklund, 2001; Holt & Hoar, 2006; Rees, 2007). This supportive network is now considered to consist of conceptually distinct, yet interrelated sub-constructs of perceptual, structural, and functional aspects of interpersonal relationships (Cohen, 1988; Cohen & Wills, 1985; Lakey, 2010).

Perceptual Aspect

Perhaps the least studied aspect of social support, the perceptual aspect refers to the way an individual appraises both the amount and quality of support available to them (Holt & Hoar, 2006; Vangelisti, 2009; Vaux, 1992). For example, this may include the meaning an athlete attributes to their coach's supportive behaviours, which may influence how an athlete rates those supportive behaviours (Barnes & Duck, 1994; Cohen & Wills, 1985). These idiosyncratic differences in how athletes experience social support may result in athletes rating the same support behaviours differently (Lakey & Drew, 1997). These relational differences in support perceptions have been captured using generalisability studies in sport (Coussens, Rees & Freeman, 2015; Rees, Freeman, Bell, & Bunney, 2012), showing that athletes may systematically differ in their perceptions of coach competency and ratings of coach support.

Structural Aspect

The structural aspect of social support refers to the 'framework' of social ties an individual is connected to; the existence, type, and number of social interconnections in an athlete's support network (Cohen, 1988; Cohen & Janicki-Deverts, 2009; Holt & Hoar, 2006; Lakey, 2010). Structural support is most often measured in terms of social integration, which

consists of the extent to which an athlete belongs to different groups and the degree of utility experienced by them (Stroebe & Stroebe, 1996). For example, an athlete may belong to both regional and national teams, but may most frequently utilise the support provided by their regional team.

There are a variety of measures for social integration which can be used in isolation or in conjunction with one another including, for example, role differentiation (number of relationships), social participation (degree of engagement with these relationships), and perceived integration (how embedded individuals *feel* in these relationships; Brisette, Cohen, & Seeman, 2000). In general psychology, research has demonstrated there to be a variety of beneficial health and wellbeing-related outcomes for individuals who score highly on social integration (Uchino et al., 1996), such as living longer lives (Berkman & Syme, 1979; Holt-Lunstad, Smith & Layton, 2010), enhanced resistance to disease (Cohen, 1994), and lower levels of anxiety and depression (e.g. Cohen, Doyle, Skoner, Rabin, & Gwaltney, 1997; Cohen & Wills, 1985). Furthermore, the importance of social integration has also been extended to the context of sport, with many athletes emphasising its importance to their success (Hassell et al., 2010).

However, the mere presence and frequency of socially supportive ties does not necessarily equate to beneficial outcomes (Rees & Hardy, 2000; Rueger, Malecki, Pyun, Aycock, & Coyle, 2016). Indeed, some social ties may prove to be more harmful than helpful (Cruwys, Haslam, Dingle, Haslam & Jetten, 2014). For example, qualitative research reported that the presence of certain coaches may impair, rather than benefit, an athlete's performance (Kristiansen & Roberts, 2010). Clearly, there is a distinction between the mere existence of social ties and the particular functions served by those social ties (Burleson & MacGeorge, 2002).

Functional Aspect

The functional aspect of social support is perhaps the most studied aspect, and refers to the particular functions served by an individual's interpersonal relationships (rather than their mere presence; Cohen, 1988). In other words, rather than having a redundancy of social ties at their disposal, it may be sufficient for an athlete to have a few 'functional' ties which provide for all of their support-related needs (e.g. Abgarov et al., 2012; Sanders & Winter, 2016). Indeed, socially supportive relationships may provide a variety of beneficial functions for cognitive, emotional, and behavioural outcomes (Rees, 2007), such as improved self-esteem,

emotional regulation, and coping resistance (Heller & Rook, 2001). However, athletes should not only experience these beneficial functions from the actual receipt of support, but also from the perception that others are available to provide the support if and when needed. Therefore, functional support is often further divided into perceived support and received support (Cohen, Gottlieb & Underwood, 2000; Freeman & Rees, 2008; Holt & Hoar, 2006).

Perceived and received support. Perceived support refers to the subjective perception of support being available from one's friends, family, team-mates and coaches who may provide assistance *if needed* (Rees & Freeman, 2010). For example, if an athlete experiences a performance-slump, knowledge that others are there to provide support if needed may be sufficient to end the slump without actually receiving any support (Madden, Kirkby & McDonald, 1989; Sarason et al., 1990). In contrast, received support refers to support *actually received*; the specific helping and supportive actions provided by friends, family, team-mates and coaches (Rees & Freeman, 2010). For example, when athletes are under stress, it may be necessary for them to actually receive some form of support to alleviate that stress (Bianco & Eklund, 2001). Both perceived support and received support have been assessed in terms of quantity and satisfaction (Cohen et al., 2000; Freeman, Rees & Hardy, 2009; Holt & Hoar, 2006).

The term 'enacted support' is also sometimes used to refer to support actually received and has been used somewhat interchangeably with 'received support' (Barrera, 1986; Finch et al., 1997). However, 'received support' specifically refers to the *recipient's perception* of the social resource exchange (Dunkel-Schetter & Bennett, 1990; Sarason, Sarason & Pierce, 1990; Uchino, 2009). This is distinct from 'enacted support', which specifically refers to *any* social resource exchange (Goldsmith, 2004). For parsimony, the term 'received support' will be used throughout the remainder of this thesis, referring to the receipt of supportive acts as interpreted by the *recipient*.

Perceived and received support typically share as little as 12% common variance (Haber, Cohen, Lucas, & Baltes, 2007), and show different relationships with outcome variables (Barrera, 1986; Freeman & Rees, 2008; Lakey & Cohen, 2000; Rees & Freeman, 2007; Uchino, 2009). This may be because perceived support is based on individual perceptions of support availability which are shaped over time. In contrast, judgements about received support are usually made in context (Uchino, 2009). Perceived and received support are thus considered distinct constructs (Dunkel-Schetter & Bennett, 1990; Helgeson, 1993; Wethington

& Kessler, 1986), and researchers have stressed the importance of being clear in one's conceptualisation and measurement of social support to capture this distinction (Bianco & Eklund, 2001; Holt & Hoar, 2006).

Dimensions of functional social support. There has been agreement in both sport (Rees & Hardy, 2000) and general social psychology (Cutrona & Russel, 1990) that functional support may be further divided into four dimensions. Although the precise wording of these dimensions may differ between domains of psychology, the following four dimensions have been widely adopted in sport (Rees & Hardy, 2000): emotional, esteem, informational, and tangible support. Emotional support refers to the provision of comfort and security (e.g. causing an athlete to know they are loved and cared for). Esteem support refers to attempts made at bolstering and reassuring an athlete's sense of competence (Freeman et al., 2014; Rees & Hardy, 2004). Informational support refers to guidance and instruction (e.g. regarding failures, performance slumps, as well as technical issues with training and competition; Rees & Hardy, 2000). Finally, tangible support refers to concrete instrumental assistance, where resources and conditions necessary for athletic functioning are facilitated by the support provider (e.g. financial support, transport to and from training venues; Cutrona & Russel, 1990; Freeman et al., 2014; Rees & Hardy, 2004; Rees, Hardy, & Freeman, 2007).

These dimensions are not always mutually exclusive. For instance, a teammate can provide both esteem and informational forms of support to an athlete by discussing both how and when they previously executed a sport-related skill correctly. As such, high inter-correlations are sometimes noted between these dimensions (e.g. Freeman et al., 2014). Nonetheless, emotional and esteem support are theorised to be useful in a range of achievement contexts, whereas informational and tangible support are theorised to be more useful in particular situations (Cohen & Wills, 1985). Indeed, unique associations have been found between certain dimensions of support and outcome variables such as self-confidence, performance, and dimensions of burnout (Freeman et al., 2011; Freeman & Rees, 2009; Hartley & Coffee, 2019; Lu et al., 2016; Rees & Freeman, 2007).

Associations with Outcome Variables

Historically, social support has been linked to a host of beneficial health and wellbeing-related outcomes in many fields of research (e.g. Caplan, 1974; Cobb, 1976; House, 1981; Moss, 1973). As such, over the past 40 years social support has come to be regarded as a key component of interpersonal relationships (Burleson & MacGeorge, 2002) and is considered a

key psychological resource for physical and mental health (Cohen, 2004; Cohen & Wills, 1985; Cohen et al., 2000; Lane & Fink, 2015; Liu, Li, Ling & Cai, 2016; Thoits, 1995; Uchino, 2004, 2009).

In the broader literature, higher levels of social support have been associated with beneficial health-related outcomes such as improved immune functioning, recovery from surgery and disease, preventative health behaviours, and reduced blood pressure (Chronister, Frain, Chou, & da Silva Cardoso, 2008; Cohen, 2004; Greenglass, Firskenbaum, & Burke, 1996; O'Donovan & Hughes, 2008; Reblin & Uchino, 2008; Schwarzer & Leppin, 1991; Uchino, Cacioppo, & Kiecolt-Glaser, 1996; Wills & Shinar, 2000). Indeed, meta-analytic evidence suggests that integration within socially supportive networks predicts mortality (rates and all-causes) more strongly than traditional risk factors such as obesity (Barth, Schneider, & von Kanel, 2010; Holt-Lunstad, Smith, & Layton, 2010), and social support may reduce the risk for a range of diseases such as cancer and asthma (Clawson, Borrelli, McQuaid & Dunsinger, 2016; Harper et al., 2016; Pinquart & Duberstein, 2010).

With regards to mental health and wellbeing more broadly, higher levels of social support have been associated with enhanced self-esteem (Kang, Jeon, Kwon & Park, 2015; Liu et al., 2016), improved coping with stress and adverse events (Winefield, Delfabbro, Winefield, Plueckhahn, & Malvaso, 2015), and the learning and transfer of skills (Chiaburu, van Dam, & Hutchins, 2010; Cohen & Janicki-Deverts, 2009; Thoits, 2011; Uchino, 2004; Umberson & Montez, 2010). Higher levels of social support have also been associated with reduced risks for work-related burnout (Hamama, 2012), age-related cognitive decline (Ellwardt, Aartsen, Deeg & Steverink, 2013), PTSD (Fredette, Palardy, Rizkallah, El-Baalbaki, & Guay, 2016), depressed mood (Clawson et al., 2016), and other psychological disorders (e.g. Sherman, Kim, & Taylor, 2009; Viswesvaran, Sanchez, & Fisher, 1999).

Similarly, in sport, social support is recognised as a key performance and wellbeing related variable for athletes (Bianco & Eklund, 2001; Chen, 2013; Connaughton, Wadey, Hanton, & Jones, 2008; Kristiansen & Roberts, 2010; Rees, 2016; Rees & Hardy, 2000), as it has been consistently associated with an array of beneficial sport-related outcomes (Holt & Hoar, 2006; Jowett & Lavallee, 2007; Rees, 2007; Sheridan et al., 2014). Notably, social support has shown beneficial associations with Olympic performance (Gould et al., 2002), objective performance (Freeman & Rees, 2008, 2009; Gillet et al., 2009; Rees et al., 2007; Rees & Freeman, 2010), as well as a host of performance-related indices. For example, social

support has been beneficially associated with self- and collective-efficacy (Coffee, Freeman, & Allen, 2017; Rees & Freeman, 2009), self-confidence (Freeman et al., 2011; Freeman & Rees, 2010; Holt & Hoar, 2006; Rees & Freeman, 2007), team cohesion (Gardner, Shields, Bredemeier, & Bostrom, 1996), flow (Bakker et al., 2011; Rees & Hardy, 2004; Rees, Ingledew, & Hardy, 1999), self-talk (Zourbanos et al., 2011), faster return from injury (Raedeke & Smith, 2004; Rees, Mitchell, Evans, & Hardy, 2010; Smith, Smoll, & Ptacek, 1990), improved training adherence (Way, Jones, & Slater, 2012), commitment to sport (Young & Medic, 2011), and self-determined motivation and behaviours (Alvarez, Balaguer, Castillo, & Duda, 2009; Defreese & Smith, 2013).

Social support is also considered to play a preventative or protective role in sport contexts, as it is associated with a reduced risk for negative career transitions (Park et al., 2013; Willard & Lavallee, 2016), injury (Bianco, 2001; Carson & Polman, 2012), injury-related stressors, and cognitive interference during performance (Hatzigeorgiadis & Biddle, 2000; Sarason, Levine, Basham, & Sarason, 1983; Sarason & Sarason, 1986). However, this does not imply that social support universally results in beneficial outcomes. There may even be instances where social support fails to be beneficial, or is even harmful (Brock & Lawrence, 2009; Haslam et al., 2012; Kellezi & Reicher, 2012). For example, in health research, a meta-analysis of over 60,000 participants found 16% of cases to show negative correlations between social support and measures of health and coping (Schwarzer & Leppin, 1991). In general psychology, social support has been demonstrated to undermine goal-pursuit, to draw attention to a recipients' incompetence, and to damage self-esteem (e.g. Bolger & Amarel, 2007; Fitzsimons & Finkel, 2011; Gleason, Iida, Shrout, & Bolger, 2008; Rafaeli & Gleason, 2009). Similarly, in sport, qualitative research has indicated that it is possible to receive 'too much support' (Knight & Holt, 2014), as it may exacerbate maladaptive responses to injury, dimensions of burnout, and dropout from sport (Gould, Tuffey, Udry, & Loehr, 1996; Sheridan et al., 2014; Udry, Gould, Bridges, & Tuffey, 1997).

Associations with sport-related burnout. As discussed in Chapter 1, the study of social support's mechanisms can be informed by investigating burnout as a sport-related outcome of relevance (as it is a proximal correlate of athletic illbeing; Amorose et al., 2009; Madigan, Stoeber, & Passfield, 2015; Ntoumanis et al., 2012; Raedeke & Smith, 2001). Athletes typically experience stress from a variety of sources during their career, such as intense training (Manzi et al., 2010; Scott, Lockie, Knight, Clark, & Janse de Jonge, 2013) and other organizational and personal stressors (Fletcher, Hanton, & Mellalieu, 2006; McKay,

Niven, Lavallee, White, 2008; Sarkar & Fletcher, 2014). There is a wealth of evidence linking stress to a reduction in athletes' performance and wellbeing (e.g. DiBartolo & Shaffer, 2002; Humphrey, Yow, & Bowden, 2000), and eventually to the experience of the burnout syndrome (Cresswell, 2009; Cresswell & Eklund, 2006; Gould et al., 1996; Gustafsson, Kentta, & Hassmen, 2011; Lu et al., 2016; Raedeke & Smith, 2004). As discussed in Chapter 1, this involves feelings of devaluation or resentment towards sport, a reduced sense of accomplishment or amotivation, and physical and/or psychological exhaustion which may lead to withdrawal from sport (Eklund & Cresswell, 2007; Maslach, 1993; Raedeke & Smith, 2009; Raedeke et al., 2002). Collectively, these symptoms form the multidimensional burnout syndrome.

Burnout has gathered considerable interest within the sport psychology literature (Eklund & Cresswell, 2007; Goodger, Gorely, Lavallee, & Harwood, 2007), and there have been several conceptualisations of what causes symptoms of burnout. For example, maladaptive responses to the stress associated with training and competing (Smith, 1986); social structures which cultivate unidimensional athletic identities and perceived external control (Coakley, 1992); and maladaptive sport commitment profiles (e.g. perfectionistic concerns; Madigan et al., 2015; Raedeke, 1997). Contemporary stress and recovery perspectives conceptualise burnout as the product of psycho-socio-physiological stresses (Gould et al., 1996) combined with insufficient recovery and a lack of ability to cope with these factors (Kallus & Kellmann, 2000; Kentta & Hassmen, 1998).

Although the above perspectives on burnout differ, they are complimentary in the sense that the social context is salient in each perspective (e.g. Gustafsson et al., 2011). Indeed, while athletes may encounter stress, stress does not necessarily lead to burnout (Lu et al., 2016), as social factors may protect them. Relevant to this thesis, social support may buffer the deleterious effects of stress and reduce levels of burnout in sport (Defreese & Smith, 2014; Hartley & Coffee, 2019), as social support tends to be negatively associated with dimensions of burnout (Bianco & Eklund, 2001; Defreese & Smith, 2013; Freeman et al., 2011; Gustafsson, Hassmen, Kenta, & Johansson, 2008; Huynh, Xanthopoulou, & Winefield, 2013; Lu et al., 2016). However, more longitudinal studies are warranted as much of the extant literature has been cross-sectional to date (Isoard-Gautheur, Guillet-Descas, Gaudreau, & Chanal, 2015; Lundkvist et al., 2018).

Theoretical Perspectives to the Study of Social Support

While there is no definitive theory of how social support operates, stress and coping perspectives have informed most approaches to the study of social support in sport. Within these perspectives, Lazarusian transactional theories of stress have received much attention (Cox, 1978; Lazarus, 1999; Lazarus & Folkman, 1984), where perceived and received support are thought to play unique roles along the causal chain from stressor to outcome (i.e. with regards to stress appraisal and coping; Cohen & Wills, 1985). More recently, the revised theory of challenge and threat states in athletes (Meijen, Turner, Jones, Sheffield & McCarthy, 2020) has also posited that perceived social support and the broader social environment are inherent during stress reappraisal (i.e. with regards to the evaluation of situational demands versus available resources and the subsequent expression of challenge and threat states). Across both perspectives, social support is posited to play a prominent role in the process of stress appraisal and coping (Blascovich, 2008; Kirsch & Lehman, 2015).

Specifically, the transactional theories of stress and social support (Bianco & Eklund, 2001; Cohen & Wills, 1985; Lazarus, 1999) posit that when a stressor (i.e. stressful event) is encountered, perceived support may intervene through psychological or cognitive pathways by directly influencing one's perceived capability and resources to cope (i.e. primary stress appraisal; Barrera, 1986; Cohen et al., 2000). For example, the perceived availability of help and support in the presence of a stressor may be enough to enhance one's perception of goal congruence during primary stress appraisal (i.e. that conditions are nonetheless conducive to success) and subsequently instigate a challenge state (as opposed to a threat state; Freeman & Rees, 2009; Meijen et al., 2020). Once the sensation of stress is experienced, however, perceived and received support may intervene as a transactional coping resource, thereby buffering the deleterious effects of stress (Bianco & Eklund, 2001; Cohen et al., 2000; Schwarzer & Leppin, 1991). This stress-buffering effect may happen, for example, through the reappraisal of stress based on an evaluation of situational demands versus available resources (Meijen et al., 2020), and/or by altering one's affective, psychological, or behavioural coping reactions to the stressor (i.e. secondary stress appraisal; Cohen et al., 2000; Cohen & Wills, 1985; Lazarus & Folkman, 1984). In this regard, Lazarusian perspectives conceptualise perceived support as being part of the *primary* stress appraisal process, with both perceived and received support being part of the *secondary* appraisal (coping) process (Bianco & Eklund, 2001; Lazarus & Folkman, 1984). In contrast, the revised theory of challenge and threat states in athletes places more emphasis on the degree to which resultant challenge and threat *states*

are moderated by the iterative reappraisal of situational demands versus available coping resources (i.e. a threatening stressor may not necessarily result in poor performance due to the perception of available support resulting in a beneficial evaluation of available resources; Meijen et al., 2018; Slater et al., 2018).

Models of Social Support

Informed by stress and coping perspectives, three principal models have emerged to guide social support research in sport: (1) the main effects model; (2) the stress-buffering model, and; (3) the optimal matching model (Bianco & Eklund, 2001; Cohen et al., 2000; Cohen & Wills, 1985; Cutrona & Russell, 1990).

Main effects. The main effects model proposes social support to have a direct effect on outcomes, irrespective of whether an individual is under high or low levels of stress (Bianco & Eklund, 2001; Cohen & Syme, 1985; Cohen & Wills, 1985; Freeman & Rees, 2010). For example, the mere belief that an athlete's teammates, friends or family are 'on-hand' to provide support if needed may be enough to elicit beneficial outcomes (e.g. a reduction in reduced sense of accomplishment and devaluation symptoms; (Hartley & Coffee, 2019)). A main effects model is typically demonstrated through a statistical main effect of social support upon outcomes – thereby also being referred to as 'direct effects' (Cohen & Wills 1985; Holt & Hoar, 2006).

Stress-buffering. The stress-buffering model proposes social support to be related to performance outcomes *as a function of stress*. In other words, social support is only deemed beneficial for individuals under high levels of stress (the support therefore 'buffers' the effect of stress on outcomes), whereas social support is considered relatively unimportant for those not experiencing stress (Bianco & Eklund, 2001; Cohen et al., 2000; Cohen & Wills, 1985). This model is closely aligned with the stress appraisal and coping perspectives discussed previously (e.g. Cox, 1978; Lazarus, 1966; Lazarus & Folkman, 1984; Meijen et al., 2020). For instance, the revised theory of challenge and threat states in athletes posits that psychosocial factors such as social support may buffer threat states during reappraisal due to an enhanced perception of available resources from one's social group in relation to situational demands (e.g. thereby helping to reappraise and operationalise a threat state as being surmountable; Meijen et al., 2020). Stress-buffering is typically demonstrated when a stress-support interaction explains greater amounts of variance over and above the effects of stress or social support already accounted for (typically operationalised using moderated hierarchical

regression analysis; Biddle, Markland, Gilbourne, Chatzisarantis, & Sparkes, 2001; Jaccard, Turrisi, & Wan, 1990).

Optimal matching. Tied more specifically to the stress-buffering model, the optimal matching model (also referred to as a hypothesis) attempts to explain the conditions needed for social support to be effective (Cutrona & Russell, 1990). It theorises that distinct stressors will require specific needs for effective coping, and the effectiveness of social support may therefore depend on the extent to which specific dimensions of support are matched to the demands of the stressor (Cohen & McKay, 1984; Cohen & Wills, 1985; Cutrona & Russell, 1990). In this regard, a good match may facilitate an athlete in achieving optimal stress-reduction and sport-related benefits (Berg & Upchurch, 2007; Holt & Hoar, 2006).

Perceived controllability of the stressor plays an important role in this regard. Cutrona and Russell (1990) have suggested that problem-focused coping (e.g. achieved through informational and tangible forms of support) may be best suited to controllable stressors, as it may enhance one's ability to cope and address the root of the problem. For example, coping with a small injury may be seen as controllable, and therefore elicit a need for problem focused coping in the form of seeking informational support from a physiotherapist. In contrast, emotion-focused coping (e.g. achieved through emotional and esteem dimensions of support) may be best suited to uncontrollable stressors, as it may assist with coping and emotional recovery from the problem's consequences (Mitchell, Evans, Rees & Hardy, 2014; Uchino, 2004). For example, coping with a career-ending injury may be perceived as uncontrollable, and optimally matched support may come in the form of emotional support from friends and family.

Unfortunately, while the optimal matching hypothesis offers an appealing explanation of when stress-buffering is likely to occur (Rees & Freeman, 2010), it has received little empirical support (Burleson, 2003; Burleson & MacGeorge, 2002). This may be due to its theoretical assertions being somewhat limiting and restrictive (Hartley et al., 2020). Indeed, social interactions are complex (Hobfoll & Stephens, 1990), where the same dimensions of support may achieve divergent outcomes, and likewise, different dimensions may achieve convergent outcomes (and this may change across time and context; Burleson & MacGeorge, 2002; Viswesvaran et al., 1999).

Empirical Evidence

Despite the theoretical pathways discussed above being congruent with views in general and social psychology (Dunkel-Schetter & Bennett, 1990), there is limited empirical evidence to support them. For instance, although perceived support is theorized to act primarily through main effects and received support through stress-buffering (Bianco & Eklund, 2001), perceived support is more consistently associated with both main and stress-buffering effects (Cohen et al., 2000; Freeman et al., 2011; Freeman & Rees, 2008, 2009, 2010; Rees & Hardy, 2004). In contrast, there is only limited evidence for received support as a stress-buffer (Hartley & Coffee, 2019; Mitchell et al., 2014; Rees & Freeman, 2007; Rees et al., 2007). It is also worth mentioning that existing approaches to the study of social support fail to account for the fact that social support may have neutral or even deleterious effects on stress (it may even be the source of it; Kristiansen & Roberts, 2010; Sheridan et al., 2014; Uchino, 2004).

Perceived support is also more consistently associated with outcome variables than received support (Freeman & Rees, 2008, 2009; Hartley & Coffee, 2019; Rees & Freeman, 2007; Rees & Hardy, 2004; Wethington & Kessler, 1986). For example, in sport research, perceived support has been associated with more challenge appraisals (Freeman & Rees, 2009), feelings of being in a flow state (Bakker et al., 2011), resilience (Sarkar & Fletcher, 2014), self-confidence (Rees & Freeman, 2007) and performance (Boat & Taylor, 2015; Freeman & Rees, 2009). Received support has also been associated with outcome variables in sport, albeit less consistently so. For example, higher levels of received support have been associated with a better use of self-talk (Zourbanos et al., 2011), enhanced recovery from hardship (Wadey, Evans, Hanton, & Neil, 2012), and positive beliefs about adolescent sport (Lubans, Morgan, & McCormack, 2011). It could be that perceived support is more consistently associated with outcome variables due to its 'trait-like' quality over time, which could foster persistent perceptions of control and support availability amongst certain individuals (i.e. compared to received support which may be more context-dependent; Uchino, 2009).

Social Support Mechanisms

Almost two decades ago, Lakey and Cohen (2000) argued that while there is plentiful evidence linking social support to outcomes, there is not enough research investigating *how* social support is related to those outcomes (Saltzman & Holahan, 2002; Sarason & Sarason, 2009; Steffens, Jetten, Haslam, Cruwys, & Haslam, 2016). As such, there is a theoretical need to understand the psychological mechanisms linking social support to sport-related outcomes (e.g. Freeman & Rees, 2009; Thoits, 2011; Uchino et al., 2012), as this may serve to explain

the inconsistencies observed in the literature (as discussed above). As discussed in Chapter 1, the applied implications from advancing knowledge in this area would also have timely and potentially important implications for better understanding and improving the effectiveness of social support in sport.

It is likely that social support contributes to sport-related outcomes through a variety of cognitive, emotional, behavioural, and physiological mechanisms (Cohen et al., 2000; Lakey & Cohen, 2000; Lane & Fink, 2015). For example, self-efficacy has been shown to mediate the relationship between social support and performance (Rees & Freeman, 2009), and coping styles have been shown to partially mediate the effects of social support upon indicators of subjective wellbeing (Liu et al., 2016). Furthermore, cognitive abstraction (i.e. being primed to think about support in either abstract or concrete terms) has also been shown to influence cognitive and affective processes that moderate perceptions of social support effectiveness (Lee & Ybarra, 2017). As discussed previously, it is also possible that social support exerts its effects through stress appraisal and coping-related pathways (Lazarus, 1999; Lazarus & Folkman, 1984). For example, Freeman and Rees (2009) demonstrated that social support may induce more challenge and less threat appraisals through facilitating perceptions of enhanced situational control (i.e. enhancing perceived capabilities and resources to cope; Jones & Hardy, 1990; Lazarus & Folkman, 1984).

Mechanisms of social support may also be influenced by the systemic design of support, the support provider, the recipient's interpretation of support, and other situational factors more generally (Haslam et al., 2012; Holt & Hoar, 2006; Thoits, 1995). For example, provider-recipient factors such as gender, age, rapport, mood, and perceived expertise may all have moderating effects upon social support (Bianco, 2001; Hassell, et al., 2010; Hayward, Knights, & Mellalieu, 2017; Judge et al., 2012; Kristiansen & Roberts, 2010). This reflects considerations for optimal matching (Cutrona & Russell, 1990), where the effectiveness of social support may depend on context (i.e. whether it matches up with the particular needs of the individual or situation; Berg & Upchurch, 2007). Relatedly, the prevailing social environment might constrain and limit social support in particular ways (e.g. social identities might moderate the effectiveness of social support; Haslam et al., 2012). For example, athletes may be limited to receiving social support from the groups they are a part of (e.g. from their teammates; DeFreese & Smith, 2013; Freeman & Rees, 2010) and in particular ways (e.g. as determined by systemic and stakeholder influence; Cruickshank & Collins, 2013; Fletcher & Wagstaff, 2009).

Limitations in the Literature

Issues Regarding Measurement and Conceptualisation

Issues regarding measurement of social support may have hindered the emergence of more consistent findings to date (Freeman et al., 2014; Freeman et al., 2011). For instance, numerous concerns regarding literature synthesis have been raised regarding the variety of idiosyncratic measures created for social support research in sport (Holt & Hoar, 2006; Vangelisti, 2009). There has also been an inconsistent use of aggregate versus differentiated measures in extant literature, meaning it is difficult for consistent trends to emerge regarding social support's relationships with sport-related outcomes (Freeman & Rees, 2008; Hartley & Coffee, 2019). While the use of aggregate measures may reduce the risk for Type 1 Error and improve parsimony by placing the primary focus on the differences between perceived and received support (Rees & Freeman, 2007), discrepancies may exist in the presence and magnitude of dimensional associations between social support and sport-related outcomes (e.g. such as dimensions of burnout; Hartley & Coffee, 2019). Conversely, fully differentiated approaches may allow for more nuanced examinations into social support's effects upon sport-related outcomes and allow for greater explanatory power and subsequent intervention design (Bandura, 1997; Cohen & McKay, 1984; Cutrona & Russell, 1990; Freeman et al., 2014).

Considering the above, there have been calls for researchers in sport to consistently adopt validated, sport-specific, and theory-based measures of social support (Bianco & Eklund, 2001; Holt & Hoar, 2006; Rees, 2007). Accordingly, a diversified array of dimensional measures have been developed in recent years to investigate both perceived and received support in sport (e.g. Coffee et al., 2017; Freeman et al., 2014; Freeman et al., 2011). Due to their multidimensional structure and sport-specificity, these measures allow for theoretically interesting questions to be investigated (Cohen et al., 2000), such as which dimensions of social support are most beneficial and under what conditions (Thoits, 1995).

Furthermore, whether main or stress-buffering effects occur may depend on whether social support is assessed in terms of support quantity, network size, or general satisfaction with support (Cohen & Wills, 1985; Defreese & Smith, 2013; Harper et al., 2016). Accordingly, researchers have been advised to broaden their conceptualisation and assessment of social support (Lakey, 2010). For example, by extending the conceptualisation of social support from the individual- to the group level (e.g. Coffee et al., 2017), and utilising qualitative methods to investigate social support (e.g. Alvarez et al., 2009; Kristiansen &

Roberts, 2010). Diversifying our conceptualisation of social support in this manner could aid investigations into underlying mechanisms by highlighting, for example, how situational or social factors influence social support exchanges (DeFreese & Smith, 2013; Hassell et al., 2010).

Issues Regarding Theoretical Approaches

As mentioned in the Empirical Evidence section (see above), existing theoretical approaches to the study of social support in sport makes the investigation of underpinning mechanisms a challenging endeavour for several reasons. First, existing approaches to the study of social support acknowledge that there is inconsistent evidence to support their core hypotheses (e.g. stress buffering, optimal matching). Second, existing approaches fail to explain instances where social support might, in fact, be the *source* of stress and deleterious outcomes (e.g. Arnold, Fletcher & Daniels, 2013; Sheridan et al., 2014). Third, existing approaches are unable to conceptualise and account for the fact that the effects of social support are almost always situated within and constrained by wider situational factors (e.g. provider characteristics, prevailing social identities, etc.; Hartley et al., 2020; Haslam et al., 2012). As mentioned previously, athletes may be limited to receiving social support from the groups they are a part of (e.g. from their teammates; DeFreese & Smith, 2013; Freeman & Rees, 2010) and in particular ways (e.g. as determined by systemic and stakeholder influence; Cruickshank & Collins, 2013; Fletcher & Wagstaff, 2009). Fourth, these situational factors are also likely to impact upon the outcomes of social support exchanges. For instance, the social context is salient in most perspectives of burnout (Gustafsson et al., 2011; Raedeke, 1997; Smith, 1986), and it may thus be important to consider the social implications behind providing social support to alleviate its deleterious effects.

In order to thoroughly investigate the mechanisms of social support's effects upon sport-related outcomes, this requires a theoretical framework which can to address the above limitations by sensitively explaining when, how, and why social support is likely to exert certain effects (Thoits, 2011), and which can also conceptualise these mechanisms in social terms (Hartley et al., 2020; Rees et al., 2015). The following section will argue that the social identity approach offers a suitable framework to achieve this.

The Social Identity Approach

In recent years, sport research has drawn upon the principles of social identity theory and self-categorization theory (collectively termed the social identity approach; Haslam, Fransen & Boen, 2020; Tajfel & Turner, 1979; Turner et al., 1987; Turner et al., 1994) to investigate a variety of sport-related phenomena (e.g. Slater, Barker, Coffee & Jones, 2015; Slater, Coffee, Barker & Evans, 2014). The key tenet of the social identity approach is that individual behaviour rarely operates in isolation of the social context and group memberships. In this regard, social identity theory (Tajfel & Turner, 1979) has become the dominant perspective in social psychology for the study of groups, and emphasises the importance of group-memberships and group processes in understanding, predicting, and explaining group- and individual-level behaviours and cognitions (Turner et al., 1987). In short, the social identity approach offers a comprehensive framework for understanding how individual psychology contributes to (and is structured by) the dynamics of group life.

Social Identity Theory

Social identities are prominent in many areas of life, as there are many social contexts where people define themselves collectively ('us') rather than individually ('me'; Tajfel & Turner, 1979). In sport, a social identity may refer to the extent that an athlete identifies with their sport, perhaps in the form of their role as an athlete (e.g. footballer) or their role as a team member (e.g. defender; Brewer, Van Raalte & Linder, 1993; Slater et al., 2014). Importantly, a social identity is not the mere virtue of an athlete being externally seen as a group member (e.g. '*he looks like a member of Stirling Rowing Club'*). Rather, a social identity refers to the athlete's own psychological internalization of being a group member (e.g. he himself perceives, thinks, and acts as a member of Stirling Rowing Club; Turner, 1982). This internalisation of being a group member therefore includes an individual's self-knowledge of belonging to the group, the extent to which they see their sense of self as part of the group, and the emotional value and significance attached to that group membership (Tajfel, 1972). Therefore, social identities create a subjective lens through which judgments about individuals, interactions, and situations are made (Haslam, Jetten, O'Brien & Elissa, 2004). Social identities also influence how individuals perceive, relate, and behave towards members of their own social group (the 'ingroup') and members of other social groups (the 'outgroup').

Self-Categorisation Theory

Self-categorisation theory (Turner et al., 1987; Turner et al., 1994) extends social identity theory by specifying what occurs at the individual level during group behaviour. It contends that individuals are ultimately motivated to define *themselves* positively. However, in many contexts, individuals will depersonalise and self-stereotype, where they define themselves in group-like terms. For example, athletes may consider 'me' and 'the team' to be interchangeable when they have self-stereotyped themselves to be a member of a particular football team (Tajfel & Tuner, 1979). In these contexts, depersonalised individuals will ultimately be motivated to define their *ingroup* positively.

Ways that the ingroup (and thus depersonalised self) can be defined positively is through enhancing or maintaining self-esteem by positively differentiating the ingroup from the outgroup on some valued dimension (Tajfel, 1972). For example, classic studies of minimal group differences demonstrated that individuals are likely to exhibit biased in-group favouritism even when arbitrary group membership is assigned (i.e. through the assignment of monetary points; Tajfel, 1978; Turner, 1975). In this way, self-categorisation theory explains how self-stereotyping as a group member is the basis for mutual social influence (Turner, 1991), where the relationship between two individuals can be influenced by the extent to which they have self-stereotyped themselves to be members of the same social group (Turner et al., 1987). One way that intergroup dynamics and mutual social influence can be operationalised is through the provision of social support (indeed, the assignment of monetary points may be considered a form of tangible support).

Finally, the extent to which an individual defines themselves either collectively or individually will depend on two aspects of social identity saliency (Postmes, Haslam, & Swaab, 2005; Postmes & Jetten, 2006; Oakes, Haslam, & Turner, 1994). First, historical significance refers to the extent that the ingroup is central to an individual's self-definition (i.e. the importance of being a group member as determined by heritage, tradition, etc.). Second, contextual salience refers to the extent that the prevailing social context allows for meaningful comparisons to be made to the outgroup (i.e. in other words, if the prevailing social context emphasises relevance between the ingroup and comparison outgroup on some valued dimension; Bruner, 1957; Oakes, 1987).

Social Identity and Social Support

The social identity approach has been used to enhance our understanding of social support in health and wellbeing research (Haslam, Jetten, Postmes, & Haslam, 2009; Reicher

& Haslam, 2006), and has more recently been applied to the study of social support in sport (Rees et al., 2015). For example, shared social identities have been shown to underpin the provision and receipt of social support (Levine, Prosser, Evans & Reicher, 2005; Rees et al., 2013), and may provide 'common ground' for effective social support to occur (Haslam et al., 2012). The social identity approach therefore provides an appropriate theoretical framework for the study of social support mechanisms in sport, as these mechanisms are likely structured by both social identity and self-categorization processes (Haslam et al., 2012; Rees et al., 2015).

The social identity approach would posit that the experience of stress and social support is structured and underpinned by self-categorisation and social identity processes (see Figure 2.1; Gallagher, Meaney, & Muldoon, 2014; Haslam, 2004; Haslam et al., 2004). This is because, theoretically, whether or not a stimulus is deemed threatening to the self depends on how the self is defined (i.e. in personal versus group-like terms). If the self is defined in 'group' terms (Tajfel & Turner, 1979), this will impact upon primary stress appraisal by influencing whether or not a stressor is deemed stressful for 'the group'. Furthermore, this will also impact upon secondary stress appraisal by influencing a self-stereotyped individual's perceived resources (i.e. social support) and ability to cope with stress ("*do 'we' have the ability to cope?*"; Levine & Reicher, 1996; Rees et al., 2015). Indeed, shared social identities have been associated with higher levels of perceived (e.g. Frisch, Häusser, van Dick, & Mojzich, 2014; Guan & So, 2016; Haslam et al., 2005; Lavallee, Sheridan, Coffee & Daly, 2019) and received support (e.g. Rees et al., 2013).

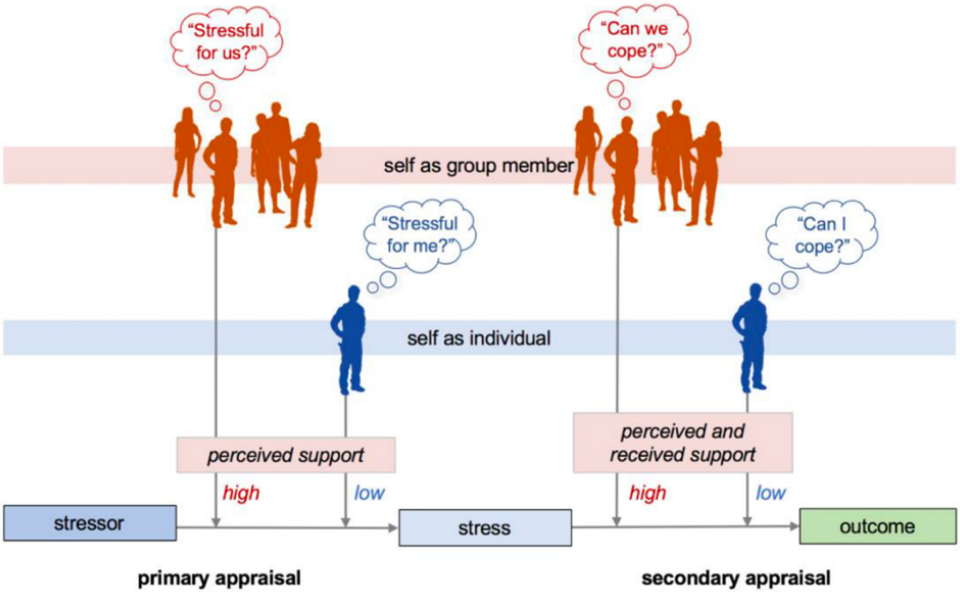

Figure 2.1: The social identity approach to conceptualising how the experience of stress and social support is structured and underpinned by self-categorisation and social identity processes (Hartley et al., 2020).

Considering that depersonalised individuals will ultimately be motivated to define their ingroup positively (Turner et al., 1987), they will also be motivated to reach agreement and co-ordination over what constitutes favourable social support exchanges (i.e. consensualisation; Haslam et al., 1998). This level of agreement might provide 'common ground' for providers to give a higher quality and quantity of support to ingroup members, and allow recipients to interpret those initiatives more favourably (Haslam, 2004; Postmes, 2003). To explain, this may be due to the creation of shared perceptions regarding group values and interests (Adarves-Yorno, Postmes & Haslam, 2006), resulting in social support exchanges characterised by, for example, superior empathy, communication, and trust (Foddy, Platow, & Yamagishi, 2009; Taylor, 2007). Accordingly, individuals may be more satisfied with social support perceived to be available and actually received from ingroup members (Coussens et al., 2015; Haslam et al., 2005; Tajfel & Turner, 1979), and such social support may prove to be more effective (Freeman et al., 2014; Holt & Hoar, 2006).

Conversely, however, it would be erroneous to assume that shared social identities will *always* lead to beneficial social support exchanges. When individuals self-identify with particular groups (Turner et al., 1994), that group membership will shape and influence their perception of the social support behaviours considered effective (Adarves-Yorno et al., 2006; Turner, 1999; Turner et al., 1987). Specifically, if and to the extent that those social support behaviours are seen to 'reinforce' or legitimise a desirable defining feature of the ingroup (also referred to as identity content – the defining values, norms and ideals which characterise the meaning of that group; Cerulo, 1995; Butler, Mckimmie & Haslam, 2018). Engagement with certain types of social support may thus be considered ineffective or even harmful if those types of support are deemed to be counter-firming (i.e. non-normative or atypical) to the group's identity. Research available on identity-based threat suggests this is driven by concerns that engagement with certain forms of 'atypical' social support (e.g. mental health support) could threaten a defining characteristic of the ingroup (e.g. 'toughness' of athletes), and may therefore evoke embarrassment and social disapproval from other ingroup members (Tarrant & Campbell, 2007; Wainwright, Fox, Breffni, Taylor, & O'Connor, 2017). Accordingly, group identification, identity content, and perceptions of identity-based support threat could conflict with people's willingness and decisions to seek and engage with social support depending on the specific nature of that support (Butler et al., 2018).

Considering the above, the social identity approach helps to address some of the limitations in the extant social support literature discussed previously. First, by specifying that

whether or not the experience of stress and social support is deemed deleterious or beneficial may depend on the identity-based dynamics of group life (Haslam et al., 2012; Rees et al., 2015). In this way, the social identity approach can explain the inconsistences observed in the literature to date by predicting when social support is likely to buffer the effects of stress, and when it is likely to be the source of stress (e.g. Butler et al, 2018). Second, it offers a comprehensive framework to conceptualise and account for the influence of situational factors (e.g. provider characteristics, prevailing social identities, etc.). For example, due to the social identity approach's focus on individuals within groups, it is able to conceptualise how the design, provision, and receipt of social support within groups contributes to the mechanisms of social support's effects. As such, this makes the social identity approach an appropriate theoretical framework for explaining when, how, and why social support is likely to exert certain effects upon sport-related outcomes (Hartley & Coffee, 2019; Rees et al., 2015).

Throughout the remainder of this thesis, the social identity approach will be used as a theoretical framework for guiding and interpreting the study of social support mechanisms upon sport-related outcomes. As discussed throughout subsequent chapters and summarized in the final discussion chapter, the findings of this thesis extend theoretical knowledge with regards to how social identity influences the mechanisms of social support's effects upon sport-related outcomes, and provide implications for better understanding what constitutes effective social support exchanges.

Chapter 3

Temporal contributions of stress, social identification, and dimensions of social support to the development of burnout dimensions across 6-months

Introduction

As introduced in Chapters 1 and 2, sport participation commonly involves exposure to a range of stressors (Fletcher et al., 2006; Sarkar & Fletcher, 2014). This has the potential to lead to symptoms of burnout and negatively impact upon the psychological wellbeing of athletes (Gustaffson et al., 2017; Udry et al., 1997). In contrast, social correlates of the sport experience, such as social support, have the potential to protect athletes from the deleterious effects of stress and symptoms of burnout (Defreese & Smith, 2014; Hartley & Coffee, 2019; Lu et al., 2016). Accordingly, investigating the relationship between social support and dimensions of burnout will inform the study of social support mechanisms by providing an insight into how and which dimensions of social support are beneficial. However, the development of burnout is very individualistic (Isoard-Gautheur et al., 2015), and there may be other situational factors (e.g. levels of stress) or social correlates that contribute to the development of burnout dimensions over time (e.g. levels of social identification; Defreese & Smith, 2013, 2014; Gustaffson et al., 2017; Rees et al., 2015). Furthermore, a lack of dimensional-level and longitudinal investigations has prevented researchers from developing more nuanced understandings of when, how, and which of these constructs might be related to one another. Developing a more nuanced understanding of how the above constructs contribute to the development of burnout dimensions over time may signpost relationships of interest to be pursued in subsequent research. As such, the purpose of the present study was to investigate how stress, dimensions of social support, and social identification contribute longitudinally to the development of burnout dimensions across three time points.

Considering the above, this Chapter provides an original and unique contribution to knowledge by presenting the first empirical and longitudinal study to demonstrate if and how stress, specific dimensions of perceived social support, and social identification are related to one another and contribute to the development of burnout dimensions over time. These original insights contribute towards and align directly with this thesis' original and unique contribution to knowledge by investigating if and how the effects of social support are related to and influenced by a range of social correlates in sport. Any dimensional nuances observed in this study would also provide theoretical and empirical rationale for probing these longitudinal relationships further in subsequent research (i.e. Study 2).

As discussed in Chapters 1 and 2, athlete burnout is defined as a stress-related syndrome characterised distinctly by the following symptoms; a reduced sense of accomplishment,

devaluation, and exhaustion (Eklund & Defreese, 2015; Gustafsson et al., 2011). However, longitudinal evidence suggests that dimensions of burnout may not develop in tandem (Isoard-Gautheur et al., 2015). It has been theorised that a reduced sense of accomplishment may precede the formation of exhaustion and devaluation (Gustafsson et al., 2017), while Lundkvist and colleagues found that exhaustion negatively predicted devaluation across a 6-month period (but this association faded over a subsequent 12-month period; 2018). While stress is considered to be a key antecedent to the development of burnout, the development of individual dimensions may result from several contributing factors (Gustaffson et al., 2017; Raedeke, 1997). For example, social structures which cultivate unidimensional identities, a perceived external control of participation (Coakley, 1992), and maladaptive sport commitment profiles and responses to stress (Madigan et al., 2015; Raedeke, 1997). However, it is unclear if and how these contributing factors influence the development of individual burnout dimensions. Accordingly, there is value in gaining a clearer understanding of the developmental trajectories of each burnout dimension, and how independent variables contribute to the unique developmental trajectories of each dimension. Therefore, the first aim of the present study was to investigate the developmental trajectories of burnout dimensions across three time-points, while the second aim was to investigate how stress contributes temporally to the development of burnout dimensions across three time-points.

Considering the significant social dimension related to the experience of stress and dimensions of burnout formation (Defreese & Smith, 2013, 2014), there is value in investigating the contributing effects of social support to the development of burnout dimensions. Indeed, social support is typically associated with lower levels of burnout in sport (Bianco & Eklund, 2001; Cresswell, 2009), and may be considered an effective resource for reducing the risk for developing it (Eklund & Defreese, 2015; Gustaffson et al., 2017). In this regard, comparisons have been made between social support at a global level upon dimensions of burnout (e.g. Defreese & Smith, 2013, 2014), and there have been investigations into the relative impact of specific dimensions of social support upon global burnout (e.g. Lu et al., 2016). However, as discussed in Chapter 2, global conceptualisations of social support and burnout ignores the possibility that certain dimensions of social support might be more strongly associated with certain dimensions of burnout, and there may be discrepancies in the magnitude of these contributions. To the author's knowledge, only two studies have observed discrepancies in the presence and magnitude of dimensional associations between social support and burnout (Freeman et al., 2011; Hartley & Coffee, 2019), yet this has not been

investigated longitudinally. As such, there is value in gaining a better understanding of how specific dimensions of social support contribute to the unique developmental trajectories of burnout dimensions. The third aim of the present study was, therefore, to investigate how individual dimensions of social support contribute temporally to the development of burnout dimensions across three time-points.

Further to the individual effects of stress and social support, there are other potentially important contributing factors that should be investigated with regards to their influence upon the development of burnout dimensions (Gustaffson et al., 2017). The social identity approach would argue that the experience of stress and social support is bound up with the dynamics of group life, as specified by both social identity and self-categorisation theories (see Chapter 2 for an elaboration on this; Haslam et al., 2012; Rees et al., 2015). Furthermore, there is considerable evidence which suggests that multiple group memberships are associated with a range of beneficial wellbeing-related outcomes and can be a source of resilience to help cope with deleterious outcomes (Haslam et al., 2009; Jones & Jetten, 2011). As such, the extent to which individuals meaningfully identify with their social groups (and the social identities associated with those group memberships) may uniquely influence the development of different burnout dimensions over time (e.g. higher levels of social identification may protect against the formation of some burnout dimensions). Therefore, the fourth aim of the present study was to investigate how social identification contributes temporally to the development of burnout dimensions across three time-points.

In order to develop a more nuanced understanding of how stress, dimensions of social support, and social identification might contribute to the development of burnout dimensions, researchers need to carefully consider the most appropriate perspective of social support (i.e. perceived versus received support). This is because perceived support is theorised to influence sport-related outcomes differently compared to received support, and each perspective may thus hint at different underlying mechanisms (Bianco & Eklund, 2001; Rees, 2007). As discussed in Chapter 2, researchers have found perceived support to be more consistently associated with main effects, stress-buffering effects, and outcome variables compared to received support (e.g. Boat & Taylor, 2015; Freeman & Rees, 2008, 2009, 2010; Defreese & Smith, 2013; Hartley & Coffee, 2019).

Perceived support is posited to influence primary stress appraisal in terms of perceived resources to cope (Lazarus & Folkman, 1984), while perceived and received support are

theorised to influence secondary coping behaviours in response to stress experienced (Bianco & Eklund, 2001; Rees, 2007). In this regard, high levels of social identification may theoretically be more strongly associated with the perceived availability of support, because self-categorising as a group member is likely to influence an individual's perceived availability of coping resources due to defining the self in *social* terms (as opposed to purely *personal* terms; Bianco & Eklund, 2001; Hartley et al., 2020; Rees et al., 2015). Indeed, an intervention study by Lavallee and colleagues (2019) showed how increases in perceived availability of social support upon reduced intentions to drop out of sport were mediated by levels of social identification over a period of 24 weeks. In contrast, the effects of received support might be more contextually dependent upon salient support availability, irrespective of whether support providers have a shared social identity (Uchino, 2009). This highlights the value of focusing on a singular perspective of social support (i.e. perceived support) to develop a more nuanced understanding of how these variables contribute to the development of burnout dimensions.

The purpose of the present study was to investigate how stress, dimensions of perceived support, and social identification contribute longitudinally to the development of burnout dimensions across three time points. This was with a view to developing a more nuanced understanding of how these independent variables contribute to the development of burnout dimensions over time, as this may signpost relationships of interest to be pursued in subsequent research. The first hypothesis was that dimensional differences would be observed between the developmental trajectories for burnout dimensions. The second hypothesis was that differences would be observed between the individual contributions of stress, dimensions of perceived support, and social identification as temporal contributors to dimensions of burnout (i.e. that levels of burnout would exist as a function of these variables). Finally, it may be possible that the intercepts and/or slopes of these variables predict changes in the formation of burnout dimensions over time, which would provide an insight into how and when perceived support is likely to exert certain effects upon sport-related outcomes. Therefore, the third hypothesis was that the *development* of burnout dimensions would be related to stress, dimensions of perceived support, and social identification as temporal contributors (specifically, that the intercept and/or slope of individual burnout dimensions would exist as a function of these variables).

Method

Participants

To determine the minimal sample size needed to predict dimensions of burnout using the polynomial temporal contributions of stress, dimensions of perceived support and social identification (while allowing for fixed and random effects), a power analysis using G*Power 3.1 (Faul, Erdfelder, Buchner & Langet, 2009) was performed to detect small-to-medium effect sizes (i.e. Cohen's F^2 = 0.02-0.15 based on conventional power = 0.80 at alpha = .05; Cohen, 1988). Assuming an attrition rate of up to 50% due to the multi-wave longitudinal design (as seen in similar research by Defreese and Smith; 2014), the target sample size was identified as ranging from 279 (for medium effects) to 721 participants (for small effects). For this study, the final sample consisted of 320 athletes (145 male) ranging in age from 18 to 68 years (*M* age = 25.78 years, *SD* = 10.67), partaking in a range of 39 different sports (25 individual sports). The competitive levels of participants ranged from recreational (*n* = 39), club (*n* = 118), regional (*n* = 60), national (*n* = 53), to international standard (*n* = 50).

Measures

All Cronbach alphas were above the satisfactory .70 threshold (Cronbach, 1952), and are provided in Table 3.1.

Stress. Participants were asked to indicate the degree of stress experienced, measured using four sources of stress commonly drawn upon within the sport literature (e.g. Freeman & Rees, 2008, 2010; Hartley & Coffee, 2019): high performance concerns from others, injury concerns, stamina/fitness concerns, and doubts about current form. As used by Freeman and colleagues, and given that there may be individual differences in the extent and timeliness of stress reactions (Lazarus & Folkman, 1984), the stem for each item was: *"Please indicate how stressed you felt as a result of the following situations over the past two weeks*". Participants were required to respond on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*a lot*). Item responses were summed to create a total score of stress.

Perceived support. The 16-item Perceived Available Support in Sport Questionnaire (the PASS-Q; Freeman et al., 2011) was used to assess perceived support. The PASS-Q has demonstrated good reliability and validity indices across independent samples (Boat & Taylor, 2015; Freeman et al., 2011). The stem for the PASS-Q is: "*Please indicate to what extent you have these types of support available to you*". Participants were required to respond on a 5-point Likert scale, ranging from 0 (*not at all*) to 4 (*extremely*). In line with the established factorial structure of the PASS-Q, dimensional item responses were averaged to create subscale (dimensional) scores for emotional, esteem, informational, and tangible perceived support.

Social identification. Given there were no a-priori reasons to expect different effects on the individual components of social identification, social identification was assessed using the recommended Four-Item measure of Social Identification (FISI; Postmes, Haslam, & Jans, 2012). The FISI is an adaptation of the scale reported by Doosje, Ellemers and Spears (1995), and shows good cross-sectional and longitudinal internal-reliability, and correlates highly with each of the components in Leach and colleagues' (2008) 10-item social identification scale (Reysen Katzarska-Miller, Nesbit & Pierce, 2013). The reference group for social identification was specified on the FISI as: *"others in my sport"* (e.g. *"I identify with others in my sport"*; item 1) and *"a member of my sport"* (e.g. *"I see myself as a member of my sport"*; item 2). Participants were required to indicate their level of agreement to four statements by responding to a 7-point Likert scale, ranging from 0 (*strongly disagree*) to 7 (*strongly agree*). Item responses were averaged to create a single score of social identification.

Dimensions of burnout. Dimensions of athlete burnout were assessed using the 15-item Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001), which has demonstrated good construct and structural validity in independent samples (Cresswell & Eklund, 2006; Raedeke & Smith, 2009). The stem for the ABQ is: "*Please indicate the extent to which you are currently experiencing each feeling*". Participants were required to respond on a 5-point Likert scale, ranging from 0 (*almost never*) to 4 (*almost always*). In line with the established factorial structure of the ABQ, dimensional item responses were averaged to provide subscale scores for reduced sense of accomplishment, devaluation, and emotional and physical exhaustion.

Procedure

After obtaining ethical approval from a General University Ethics Panel, participants were recruited opportunistically using snow-ball sampling with the use of recruitment posters and online announcements. After informed consent had been provided, participants were either provided with an email link to the questionnaire or completed a paper-and-pencil version containing the (randomised) scales described above at three equally spaced measurement waves (each approximately 2-months apart; see Appendix 1). Questionnaires were matched using unique participant response numbers.

Analyses

First, to examine the proportion of variation in the outcome that was due to between- vs within-persons, the intra-class correlation (ICC) was calculated from a null model (i.e. with no predictors). Secondly, growth curve multilevel models (MLMs; Kwok et al., 2008) were fitted for each dependent variable (i.e. each dimension of burnout) using maximum likelihood estimation in the Mixed Models function in SPSS, whilst simultaneously assessing the covariates for dependent variables. MLMs were well suited due to accounting for dependency in repeated-measures data within longitudinal designs, whilst allowing for the investigation of both between- and within-person predictors of change in dependent variables (Singer & Willett, 2003). Measurement occasions for stress, perceived support, and social identification were treated as Level-1 within-person predictors of burnout, whereas individuals were treated as Level-2 between-person predictors, as this would explain both within- and between-person changes in burnout over time. Finally, random intercepts were specified to allow for between-person variability with regard to burnout baseline values.

Considering that previous longitudinal research did not find any longitudinal interactive effects for social support upon the formation of burnout dimensions (e.g. Defreese & Smith, 2014) and the lack of theoretical basis for limiting the choice of exploratory dimensional-level analyses, this study investigated the main effects for all dimensions of perceived support upon all dimensions of burnout (i.e. 12 models in total). Although potentially inflating the risk for Type 1 Error, this number of models and method is similar to those computed in similar repeated-measures MLM research (e.g. Defreese & Smith, 2014). Separate models were therefore estimated for all dimensions of perceived support (emotional, esteem, informational, tangible) upon all dimensions of burnout (reduced sense of accomplishment, exhaustion and devaluation), with all predictors being grand-mean centred before their inclusion in each model (i.e. averages were calculated based on *all* time points rather than *within* time points).

Model building strategy. Starting with a null model, a fixed effects model was first specified, followed by gradually introducing polynomial growth curves, and then specifying random intercepts and slopes in order to compare the fit and parsimony of each model as additional parameters were added (Field, 2016; Raudenbush & Bryk, 2002; Twisk, 2006). Model building proceeded in an exploratory fashion using the principle of parsimony to guide decision making and eventually settle on a final model. Using maximum likelihood estimation, each subsequent model was evaluated for fit by looking at a combination of fit indices (Kline,

2005), including significance in log-likelihood change and reduction in AIC and BIC fit indices (Harrison et al., 2018). For example, growth curves were specified based on expected trajectories from previous literature and from plotting the developmental trajectories of the individual burnout dimensions (see Figure 3.1; Kwok et al., 2008). Specifically, a quadratic term was included for all models due to previous evidence of parabolic trajectories for reduced sense of accomplishment (e.g. Isoard-Gautheur et al., 2015) and because the plot over time (Figure 3.1a) indicated a rise and then fall in reduced sense of accomplishment (the quadratic term also significantly improved model fit). Stress, dimensions of perceived support, and social identification variables were included as time-varying covariates, which were assessed concurrently, to provide a more sensitive and realistic assessment of covariate effects for these unstable state-like variables (Kwok et al., 2008). Although random slopes were specified for each model, there were non-significant changes in log-likelihood and AIC/BIC indices. As such, random slopes were excluded from all models (thereby resulting in a default identity covariance structure). Model fit was further assessed through simulation (Zuur & Ieno, 2016), whereby after 10,000 model simulations the fit was visually compared to the real response data, with the expectation that the simulated model would encompass the observed trend in the real data (with deviations outside the observed distribution being indicative of poor fit; Kéry, 2010).

Results

Descriptives are shown in Tables 3.1 and 3.2, while the growth curve models for each dimension of burnout are presented in Tables 3.3 – 3.5.

Preliminary Data Screening

Data were screened for missing values, and except for data missing as a result of non-response to an entire survey wave, the study variables exhibited a proportion of missing data no greater than 3.8% for any one variable at Wave 1 (Little's MCAR test, $\chi 2$ (2222) = 2593.20, $p < .01$), 16.3% at Wave 2 (Little's MCAR test, $\chi 2$ (1075) = 1241.01, $p < .01$), and 5.5% at Wave 3 (Little's MCAR, $\chi 2$ (296) = 263.67, $p = .91$; see Table 3.1 for summary). Although data were not missing completely at random for Waves 1 and 2, there was little reason to suspect that participants did not respond because of the particular responses they would give (e.g. maximum-likelihood estimated descriptive statistics differed little from the observed descriptives). Furthermore, the observed demographic variable means for those missing content-related data did not significantly differ from those for participants who provided all

data. Considering there were no cases where >50% of subscale scores were missing, no individual cases were deleted (Hawthorne & Elliot, 2005).

Participation across survey waves displayed attrition from Wave 1 (N = 320), to Wave 2 (n = 123; 62% attrition), and to Wave 3 (n = 73; 41% attrition). An advantage of multi-level modelling (MLM) is its robustness in handling missing data (e.g. from attrition; Kwok et al., 2008; Raudenbush & Bryk, 2002). To test if this attrition resulted in substantially different analyses, missing scores within an otherwise completed assessment wave were calculated using mean-imputation per subscale item at each time point independently. Resulting analyses did not differ substantially from the observed data. Therefore, participants with missing data were not excluded, and results are based on 320 valid cases that responded to any survey wave. Descriptive statistics and Pearson's bivariate correlations are displayed in Table 3.2.

For multivariate analysis, the assumption of no multicollinearity was met as no intercorrelations were above .80, all variance inflation factor (VIF) values were below 10, average VIF values were less than 2.1 (Tabachnick & Fidell, 2007), and tolerance values were all above .20 (Stevens, 1996). For each wave (i.e. between participants), the assumption of independent errors was met, as all Durban-Watson statistics were within the accepted range of 1 to 3. The assumptions of homoscedasticity, normally distributed errors and linearity were also met, as all residuals were normally distributed (Field, 2016). Finally, the distributions for all outcome variables and the estimated random effects from each model were normally distributed (Harrison et al., 2018). There were no other obvious violations of multivariate analysis assumptions or specific assumptions for multi-level modelling (Singer & Willett, 2003).

Temporal within- and between-person changes in burnout.

There was evidence of between-person variation (ICC for reduced sense of accomplishment = .63; exhaustion = .61, devaluation = .68), where higher ICC values indicate homogeneity within-individuals and heterogeneity between-individuals, suggesting dependency is present in the data and the use of MLMs were appropriate. This suggests that between 61% to 68% of the variance in dimensions of burnout were attributable to between-person differences (and measurement error).

Table 3.1

Means, standard deviations, and internal consistency reliability values for Study 1 (Chapter 3) variables by wave

Variable	Wave					
	1 (n = 320)		2 (n = 123)		3 (n = 73)	
	M (SD)	*α*	*M (SD)*	*α*	*M (SD)*	*α*
Perceived Emotional	3.66 (0.94)	.85	3.68 (1.02)	.91	3.76 (1.06)	.94
Perceived Esteem	3.49 (0.84)	.84	3.41 (0.97)	.90	3.51 (0.95)	.91
Perceived Informational	3.56 (0.92)	.83	3.29 (1.06)	.91	3.43 (0.93)	.88
Perceived Tangible	3.26 (0.97)	.77	3.12 (1.16)	.88	3.15 (1.03)	.82
RSA	2.58 (0.76)	.78	2.68 (0.84)	.83	2.49 (0.84)	.84
EXH	2.33 (0.84)	.87	2.34 (0.94)	.93	2.26 (0.93)	.92
DEV	2.10 (0.85)	.79	2.02 (0.84)	.82	1.96 (0.91)	.88
Stress	2.48 (0.85)	.77	2.50 (0.79)	.73	2.46 (0.87)	.77
FISI	5.99 (0.98)	.89	5.78 (1.21)	.90	5.67 (1.26)	.93

Note. RSA = Reduced Sense of Accomplishment, EXH = Exhaustion, DEV = Devaluation, FISI = Social Identification.

Table 3.2

Correlations among grand means of Study 1 (Chapter 3) longitudinal variables ($N = 320$)

	Variable	1	2	3	4	5	6	7	8
1	Perceived Emotional								
2	Perceived Esteem	.73**							
3	Perceived Informational	.46**	.66**						
4	Perceived Tangible	.62**	.65**	.67**					
5	RSA	-.22**	-.27**	-.23**	-.24**				
6	EXH	.06	-.02	-.12**	.03	.29**			
7	DEV	-.17**	-.24**	-.28**	-.15**	.54**	.37**		
8	Stress	.04	-.03	-.05	-.04	.26**	.30**	.13**	
9	FISI	.31**	.38**	.38**	.38**	-.34**	-.16**	-.35**	-.14**

*Note. *p < .05; **p < .01; RSA = Reduced Sense of Accomplishment, EXH = Exhaustion, DEV = Devaluation, FISI = Social Identification.*

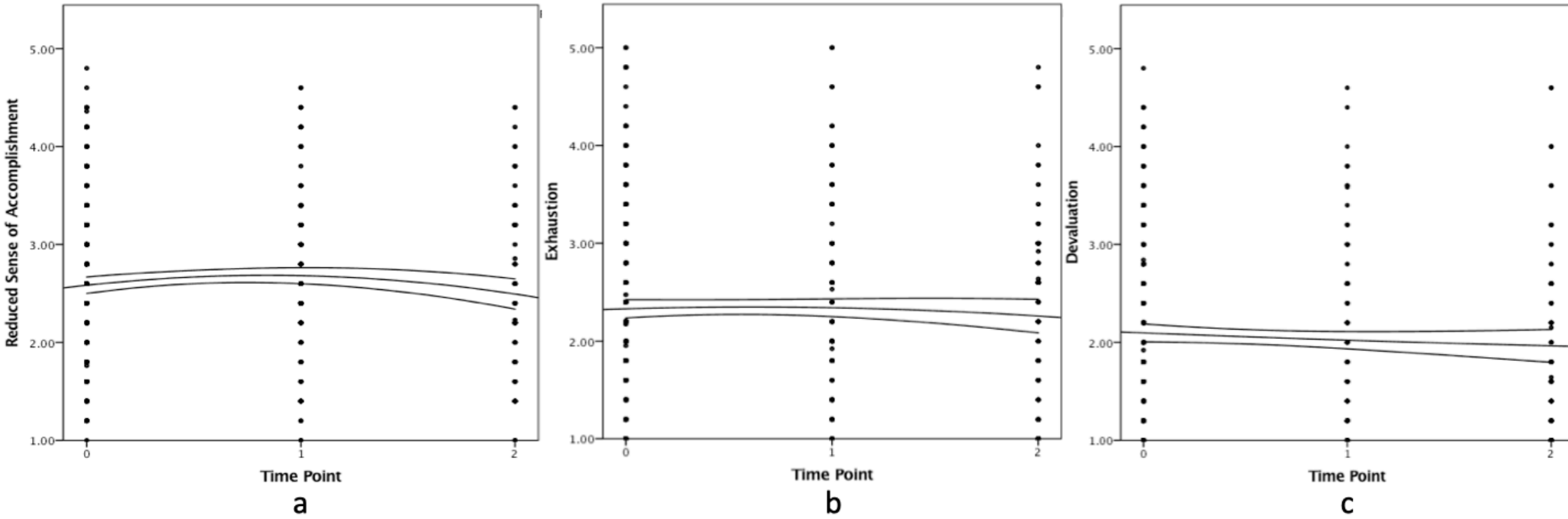

Figure 3.1: Study 1 (Chapter 3) developmental trajectories for (a) reduced sense of accomplishment, (b) devaluation, and (c) exhaustion dimensions of burnout over three time points.

In regard to the first hypothesis, dimensional differences were observed between the developmental trajectories for burnout dimensions. Based on the fixed effects growth curve model, both linear ($F(1, 238.07) = 5.00$, $b = .23$ ($SE = .10$), $p<.05$) and quadratic trends ($F(1, 225.58) = 5.40$, $b = -.12$ ($SE = .05$), $p<.05$) significantly described the outcome pattern in reduced sense of accomplishment over time, whereby scores in burnout experienced an initial increase from Time 0 to Time 1, followed by a decline from Time 1 to Time 2 (see Figure 3.1a). Neither linear nor quadratic trends significantly predicted the outcome patterns for exhaustion or devaluation (see Figures 1b and 1c), suggesting these scores remained constant across time points.

In regard to the second hypothesis, differences were observed between the individual contributions of stress, dimensions of perceived support, and social identification as temporal contributors to dimensions of burnout. Stress was found to be significantly positively temporally associated with reduced sense of accomplishment and exhaustion at all time points, indicating that higher levels of stress were (constantly) associated with higher levels of reduced sense of accomplishment and exhaustion, but not devaluation. For dimensions of perceived support, emotional and esteem support showed significant negative temporal associations with reduced sense of accomplishment and devaluation at all time points; informational support showed significant negative temporal associations with all dimensions of burnout; and tangible support showed significant negative temporal associations only with reduced sense of accomplishment. Furthermore, social identification was significantly negatively temporally associated with all dimensions of burnout at all time points.

In regard to the third hypothesis, the development of burnout dimensions were partially related to stress, dimensions of perceived support, and social identification as temporal contributors. Specifically, the variance component of the random intercept was significantly different from zero for reduced sense of accomplishment, exhaustion, and devaluation (confirmed by significance of changes in log-likelihood). This suggests that measures for all dimensions of burnout varied significantly between people. There were no significant individual variations in burnout trend (i.e. random slopes) for any models, meaning that all final models had a common slope for fitted covariates (i.e. fixed slope for the effect of stress, dimensions of perceived support, and social identification) fitted to random intercepts (i.e. for each individual). In other words, the intercept of individual burnout dimensions existed as a function of stress, dimensions of perceived support, and social identification.

Table 3.3

Study 1 (Chapter 3) growth model for reduced sense of accomplishment

Model	Model 1 Emotional		Model 2 Esteem		Model 3 Informational		Model 4 Tangible	
Parameter and Fit	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*
Fixed Effects								
Time	.23*	.10	.21*	.10	.20	.10	.22*	.10
Time*Time	-.12*	.05	-.12*	.05	-.11*	.05	-.12*	.05
Stress	.14**	.03	.14**	.03	.14**	.03	.14**	.03
Support	-.10**	.03	-.10**	.03	-.09**	.03	-.11**	.03
FISI	-.21**	.04	-.21**	.04	-.21**	.04	-.21**	.04
Random Effects								
Residual	.20**	.02	.20**	.02	.20**	.02	.20**	.02
Intercept	.31**	.04	.30**	.04	.31**	.04	.31**	.04
Model Fit								
AIC	1032.74		1031.78		1034.78		1031.98	
BIC	1066.71		1065.75		1068.75		1065.95	

*Note. Support = Perceived support, FISI = Social identification, AIC = Akaike information criterion, BIC = Bayesian information criterion. All coefficients are the parameter effect upon reduced sense of accomplishment whilst controlling for all other variables. *p < .05; **p < .01; ***p < .001.*

Table 3.4

Study 1 (Chapter 3) growth model for exhaustion

Model	Model 1 Emotional		Model 2 Esteem		Model 3 Informational		Model 4 Tangible	
Parameter and Fit	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*
Fixed Effects								
Time*Time	-.03	.02	-.03	.02	-.03	.02	-.03	.02
Stress	.19**	.04	.19**	.04	.19**	.04	.19**	.04
Support	.04	.04	-.02	.04	-.10*	.04	.01	.04
FISI	-.13**	.04	-.11**	.04	-.08*	.04	-.19**	.04
Random Effects								
Residual	.29**	.03	.29**	.03	.28**	.03	.29**	.03
Intercept	.38**	.05	.38**	.05	.39**	.05	.38**	.05
Model Fit								
AIC	1182.89		1183.90		1177.67		1183.93	
BIC	1212.61		1213.62		1207.39		1213.65	

*Note. Support = Perceived support, FISI = Social identification, AIC = Akaike information criterion, BIC = Bayesian information criterion. All coefficients are the parameter effect upon exhaustion whilst controlling for all other variables. *p < .05; **p < .01; ***p < .001.*

Table 3.5

Study 1 (Chapter 3) growth model for devaluation

Model	Model 1 Emotional		Model 2 Esteem		Model 3 Informational		Model 4 Tangible	
Parameter and Fit	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*
Fixed Effects								
Time*Time	-.02	.02	-.02	.02	-.02	.02	-.02	.02
Stress	.05	.03	.05	.03	.05	.03	.05	.03
Support	-.09*	.04	-.11**	.04	-.15**	.04	-.06	.04
FISI	-.21**	.04	-.20**	.04	-.19**	.04	-.22**	.04
Random Effects								
Residual	.23**	.02	.23**	.02	.22**	.02	.23**	.02
Intercept	.41**	.05	.40**	.05	.40**	.05	.42**	.05
Model Fit								
AIC	1129.94		1126.25		1118.89		1132.91	
BIC	1159.66		1155.97		1148.61		1162.64	

*Note. Support = Perceived support, FISI = Social identification, AIC = Akaike information criterion, BIC = Bayesian information criterion. All coefficients are the parameter effect upon exhaustion whilst controlling for all other variables. *p < .05; **p < .01; ***p < .001.*

Discussion

The purpose of the present study was to investigate how stress, dimensions of perceived support, and social identification contribute longitudinally to the development of burnout dimensions across three time points. This was with a view to developing a more nuanced understanding of how these independent variables contribute to the development of burnout dimensions over time, as this may signpost relationships of interest to be pursued in subsequent research.

The first hypothesis was supported, as dimensional differences were observed between the developmental trajectories for individual burnout dimensions. A quadratic growth curve predicted a rise and then fall in reduced sense of accomplishment, whereas no polynomial growth curves predicted changes in exhaustion or devaluation. This lends some support to recent theorising and findings from Isoard-Gautheur and colleagues (2015; Gustafsson et al., 2017; Lundkvist et al., 2018), where a change in reduced sense of accomplishment may precede the formation of exhaustion and devaluation. It could be that stress and other contributory factors (e.g. unidimensional identities, maladaptive commitment, etc.; Coakley, 1992; Raedeke, 1997) may initially lead to a reduction in perceived sport-related accomplishments (reduced sense of accomplishment). In combination with a reduced sense of accomplishment, stress and other contributory factors may then eventually contribute to physical and psychological exhaustion and a sense of devaluation towards continued sports participation (Lundkvist et al., 2018; Ntoumanis et al., 2012). While more longitudinal research would be needed to substantiate such claims, these findings offer an insight into the developmental trajectories and ordering of individual burnout dimensions over time.

The second hypothesis was supported, as differences were observed between the individual contributions of stress, dimensions of perceived support, and social identification as temporal contributors to dimensions of burnout (i.e. levels of burnout existed as a function of these variables). Specifically, stress was found to be a positive temporal contributor to levels of reduced sense of accomplishment and exhaustion across all times points. This is in line with previous research, as stress typically shows positive associations with global and dimensional measures of burnout (e.g. Hartley & Coffee, 2019; Lu et al., 2016). However, stress did not contribute to devaluation in this study, thereby only partially supporting stress-based models of burnout (e.g. Gustafsson et al., 2017). Considering that physical and psychological stressors and stress form ubiquitous components of the sport environment (Fletcher et al., 2006; Sarkar

& Fletcher, 2014, 2015), it may be that stress does not inherently (or initially) contribute to the formation of a cynical attitude, lack of concern for one's performance, and/or a sense of detachment from one's sport (devaluation; Gustaffson et al., 2017). This suggests that the impact of stress upon the formation of burnout dimensions may depend on interactions with other contributory factors (e.g. a moderating effect), although more dimensional-level research is needed to substantiate this.

Further to the second hypothesis, all dimensions of perceived support were found to be negatively temporally associated with reduced sense of accomplishment; whereas only emotional, esteem and informational support were (negatively temporally) associated with devaluation, and; only informational support was (negatively temporally) associated with exhaustion. This mixed pattern of dimensional associations supports notions that different dimensions of perceived support might have more adaptive relationships with certain dimensions of burnout. In conjunction with previous research, it seems that all dimensions of perceived support may more or less equally protect against reduced sense of accomplishment, and perceived informational support may more consistently protect against exhaustion, while associations with devaluation appear to be rather inconsistent (Freeman et al., 2011; Hartley & Coffee, 2019). Emotional and esteem forms of support are posited to be useful in a range of contexts (e.g. by protecting against a reduced sense of accomplishment and other deleterious outcomes; Cohen & Wills, 1985; Raedeke et al., 2002). In contrast, informational and tangible forms of support may be more effective for particular sport-related outcomes (e.g. protecting more specifically against physical and psychological exhaustion; Cohen & Wills, 1985; Freeman et al., 2011; Hartley & Coffee, 2019). This mixed pattern of dimensional associations suggests that different dimensions of perceived support might have more adaptive relationships with certain dimensions of burnout. Indeed, there may even be risks associated with providing types of support poorly matched to the demands of situation (Cutrona & Russell, 1990), as different dimensions of support have different effects upon sport-related outcomes (Freeman & Rees, 2009; Freeman et al., 2011; Hartley & Coffee, 2019; Lu et al., 2016).

Further still to the second hypothesis, social identification was found to be negatively temporally associated with all dimensions of burnout across all time points. This is in line with previous research highlighting the beneficial effects of social identification alone upon health-, wellbeing- and sport-related outcomes (e.g. Cruwys et al., 2014; Haslam, Cruwys, Milne, Kan & Haslam, 2016; Morgan, Fletcher, & Sarkar, 2013). For example, longitudinal work in theatre production teams has shown strong group identification to predict higher levels of work

satisfaction and lower risks for burnout (Haslam, Jetten & Waghorn, 2009). It could be that having a strong sense of social identity helps athletes to engender a sense of purpose, to derive a positive sense of self-esteem (i.e. due to promoting positive ingroup distinctiveness), and to enhance their perceived availability of social resources to cope with external challenges such as symptoms of burnout (e.g. Ellemers, De Gilder, & Haslam, 2004; Goodger et al., 2007; Lavallee et al., 2019; Rees et al., 2015; Tajfel & Turner, 1979). Furthermore, as specified above, it could be that the influence of stress and dimensions of perceived support upon the formation of burnout depends on interactions with other contributory factors such as social identification. Indeed, shared social identities have been shown to influence the effects of social support upon task performance and sport-related outcomes (e.g. Lavallee et al., 2019; Rees et al., 2013; Slater et al., 2013).

The third hypothesis was partially rejected, as the development of burnout dimensions were partially related to stress, dimensions of perceived support, and social identification as temporal contributors (specifically, only the intercepts for individual burnout dimensions existed as a function of these variables). The significant random intercepts for individual burnout dimensions suggested that baseline values for dimensions of burnout varied between people. Although this highlights the value in adopting a hierarchical approach to analysing the data (i.e. that MLM's were appropriate), a non-significant random slope suggests there were no significant individual variations (i.e. fluctuations) in dimensional-burnout trajectories between people. A common slope existed for all individuals, and an interaction between intercept and slope was therefore not possible. This implies that although the probability of burnout formation (i.e. intercept) existed as a function of these covariates, the developmental trajectory (i.e. slope) of burnout could not be predicted based on intercept values nor changes in slopes. This finding highlights the deleterious effects that stress, as well as the protective effects that perceived support and social identification may have upon the probability of burnout formation.

Considering the above, this chapter makes an original and unique contribution to knowledge by presenting the first empirical and longitudinal study to demonstrate how stress, specific dimensions of perceived social support, and social identification are related to one another. Specifically, that higher levels of individual burnout dimensions exist as a function of higher levels of stress, lower levels of dimensions of perceived support, and lower levels of social identification. The dimensional approach used in this study also makes an original and unique contribution to knowledge by demonstrating that the perception of support availability

has more or less adaptive effects depending on the type of perceived helping behaviour and outcome of interest (i.e. dimensions of perceived support and burnout). As such, this study provides theoretical and empirical rationale that a better understanding of when and how these effects occur can be gained through further probing in subsequent research (i.e. by investigating interaction effects in Study 2).

This study has several original and unique practical implications. While the experience of burnout is likely to vary between athletes and that experiencing higher levels of stress may worsen levels of burnout over time, practitioners may combat these deleterious effects by cultivating stronger perceptions of support availability and social identification. For example, providing athletes with consistent social support experiences on an ongoing basis – where specific support behaviours are carefully matched to the day-to-day demands of athletes' needs and lived experiences of stress (Cutrona & Russell, 1990) – may help to cultivate positive perceptions of support availability over time (Uchino, 2009). Similarly, by identifying, cultivating and embedding historically or contextually significant group memberships and group identities, coaches or leaders could embrace the beneficial and protective effects that a strong sense of social identification has to offer. This could be achieved in several non-exhaustive ways, for example: (1) by creating a stronger sense of "*Us*" through shared experiences that engender a sense of emotional attachment and significance with the group membership (e.g. through social events requiring the completion of superordinate tasks; Peters, Haslam, Ryan, & Fonseca, 2012; Sherif, Harvey, White, Hood & Sherif, 1961); (2) by highlighting group members' similarities to one another (e.g. by organising friendly intergroup competition), or; (3) by championing initiatives that advance the interests of the group (e.g. by attempting to address stressors such as a lack of transport or financial support; Fransen et al., 2014; Haslam et al., 2017).

Limitations and Strengths

Some limitations of the present study should be noted. First, as mentioned in Chapter 2, although dimensional-level investigations into perceived support and dimensions of burnout allow for the effects of specific supportive acts to be evaluated (Cutrona & Russell, 1990; Raedeke & Smith, 2009), they reduce parsimony for determining the differences between perspectives of support (i.e. perceived versus received; (Rees & Freeman, 2007)). Indeed, running multiple (i.e. dimensional) models may increase the risk for Type 1 Error. However, the number of models ran in this study is similar to those computed in previous research

investigating the effects of stress and social support upon dimensions of burnout over time (Defreese & Smith, 2014). Second, this study only investigated the effects of dimensions of perceived support. Perceived and received support are considered distinct constructs (Dunkel-Schetter & Bennett, 1990), sharing as little as 12% common variance (Haber et al., 2007) and demonstrate different relationships with outcome variables (Freeman & Rees, 2008; Rees & Freeman, 2007; Uchino, 2009). It is therefore possible that dimensions of received support may show different associations with stress and social identification upon dimensions of burnout (e.g. Hartley & Coffee, 2019).

To the author's knowledge, this is the only study in sport to have investigated the longitudinal relationships between stress, dimensions of perceived support, social identification, and dimensions of burnout in sport. The present study's strengths include its three time-point longitudinal design, and its reasonable sample size for inferring small to medium effect sizes (Cohen, 1988; Faul et al., 2009). Other strengths include its use of entirely dimensional-level measures derived for the sport context (Freeman et al., 2011; Raedeke & Smith, 2001), which reduces concerns over measurement error (Dunkel-Schetter & Bennett, 1990). The findings also highlight the importance of adopting multivariate conceptualisations of social support (e.g. Freeman et al., 2014; Freeman et al., 2011) and burnout (Eklund & Defreese, 2015; Gustafsson et al., 2017), as determining the relative impact of specific supportive acts (dimensions) upon different components of sport-related outcomes (dimensions of burnout) provide more nuanced understandings into how these variables are related to one another (Freeman & Rees, 2010; Hassell et al., 2010).

Future Research

This study has contributed towards developing a more nuanced understanding of how stress, dimensions of perceived support, and social identification contribute longitudinally to the development of burnout dimensions, and has signposted relationships of interest that may be pursued in subsequent research. First, there is value in attempting to replicate the pattern of deleterious effects that stress, as well as the protective effects that dimensions of perceived support and social identification may have upon dimensions of burnout. Second, the impact of stress upon the formation of burnout dimensions may depend on interactions with other contributing factors, such as dimensions of perceived support (i.e. stress-buffering) and/or social identification (i.e. conjunctive moderation). Indeed, although athletes may encounter stress, they may not necessarily experience symptoms of burnout (as these social factors may

protect them; Cruwys et al., 2014; Defreese & Smith, 2013). Future research may therefore wish to investigate the nuances of both the main and interactive effects between stress, dimensions of perceived support, and social identification upon dimensions of burnout. Doing so would provide more nuanced understandings of when and how social support is likely to exert certain effects upon sport-related outcomes (e.g. when the effects of social support are likely to be facilitative or debilitative).

Conclusion

The results from this study provide longitudinal evidence that higher levels of individual burnout dimensions exist as a function of social correlates of the sport experience. Specifically, higher levels of stress, lower levels of dimensions of perceived support, and lower levels of social identification. This collectively highlights the deleterious effects that stress, as well as the protective effects that dimensions of perceived support and social identification may have upon the development of burnout dimensions. The multidimensional approach used in this study also suggests that different dimensions of perceived support might have more adaptive relationships with certain dimensions of burnout. These conclusions offer a more nuanced understanding of how these variables contribute longitudinally to the development of burnout dimensions over time. The pattern of findings observed in this study also suggest that more nuanced understandings of when and how social support is likely to exert certain effects upon sport-related outcomes could be gained by investigating how these variables interact with one another, as the impact of stress upon the formation of burnout dimensions may depend on interactions with other contributory factors (e.g. through moderating effects with dimensions of perceived support and/or social identification).

Chapter 4

Interactions of social support and social identification on the stress-burnout relationship: A conjunctive moderation perspective

Introduction

As discussed in previous chapters, the principal aim of this thesis was to conduct an investigation into the mechanisms of social support's effects upon sport-related outcomes using the social identity approach, with a view to better understand what constitutes effective social support. This endeavour can be informed by investigating the relationship between social support and dimensions of burnout (i.e. a proximal correlate of athletic wellbeing; Amorose et al., 2009; Ntoumanis et al., 2012), as this will inform the study of social support mechanisms by providing an insight into when, how and which dimensions of social support are beneficial. Chapter 3 provided longitudinal evidence that higher levels of individual burnout dimensions existed as a function of the independent effects from several correlates: higher levels of stress, lower levels for dimensions of perceived support, and lower levels of social identification. Chapter 3 also highlighted that dimensional nuances existed with regards to the deleterious and protective effects that these variables may have upon the development of burnout dimensions. Specifically, the impact of stress upon the formation of burnout may depend on the specific dimensions of social support in question, as some dimensions of perceived support had more adaptive relationships with certain dimensions of burnout. Furthermore, it was also posited that the impact of stress upon the formation of burnout dimensions may depend on interactions with other factors such as social identification and social support (and interactional differences may exist depending on the presence of specific dimensions of social support). As such, a more nuanced understanding of when, how, and which dimensions of social support are likely to exert certain effects upon sport-related outcomes could be gained by investigating how these variables interact with one another, and the social identity approach may be able to provide theoretical insights with regards to any dimensional differences observed. As such, the purpose of the present study was to investigate the main and interactive effects of stress and dimensions of perceived support (stress-buffering) and social identification (conjunctive moderation) upon dimensions of burnout.

Considering the above, this Chapter provides an original and unique contribution to knowledge by presenting the first empirical study to demonstrate when and how the effects of social support may be more or less adaptive depending on the prevailing levels of stress, social identification, type of perceived support, and outcome of interest. This study builds upon and further probes the longitudinal effects observed in Study 1 by testing interaction effects using an independent sample, and aligns directly with this thesis' original and unique contribution to knowledge by investigating when and how social support is likely to exert beneficial versus

deleterious effects. Any dimensional nuances observed in this Study would also provide theoretical and empirical rationale for further probing why certain effects occur in future research (i.e. Study 3).

As already mentioned in Chapters 2 and 3, sport participation commonly involves exposure to a range of sport-related stressors (e.g. concerns over performance, injury, etc.; Fletcher et al., 2006; Sarkar & Fletcher, 2014). Based on the transactional model of stress, exposure to stressors has the potential to result in stress (Cox, 1978; Lazarus, 1999), which in turn negatively impacts upon the psychological wellbeing of athletes and contributes to symptoms of burnout (Gustaffson et al., 2017; Ntoumanis et al., 2012; Raedeke et al., 2002; Udry et al., 1997). However, Study 1 (Chapter 3) found discrepancies to exist between the presence and magnitude of stress and different dimensions of burnout, and thus there is value in further investigating these relationships. Therefore, the first aim of the present study was to investigate the relationships between stress and dimensions of burnout.

As demonstrated in Chapter 3, stress might not equally contribute to all dimensions of burnout due to other social factors offering protective effects. Indeed, the extant literature has demonstrated how a range of social factors might contribute to symptoms of burnout in sport (Raedeke, 1997), such as unidimensional identities, a perceived external control of participation (Coakley, 1992), as well as maladaptive sport commitment and responses to stress (Madigan et al., 2015; Raedeke, 1997). In this regard, Chapter 3 and the extant literature have demonstrated how different dimensions of perceived support and social identification may have the potential to protect athletes from the deleterious effects of burnout dimensions (Eklund & Defreese, 2015; Goodger et al., 2007; Gustaffson et al., 2017). Given that Study 1 (Chapter 3) found dimensional discrepancies to exist between the presence and magnitude for different dimensions of perceived support and dimensions of burnout, there is value in further investigating these relationships. The second aim of the present study was therefore to investigate the relationships between dimensions of social support, social identification, and dimensions of burnout.

With regards to gaining a better understanding of the mechanisms of social support's effects upon sport-related outcomes and what constitutes effective social support, it is necessary to gain an understanding of *how* and *when* the aforementioned variables (e.g. stress, dimensions of social support, and social identification) are associated with sport-related outcomes (such as dimensions of burnout). Indeed, while athletes may encounter stressors, the

experience of stress appraisal (and subsequent coping with stress) may not necessarily result in burnout (Cox, 1978; Lazarus & Folkman, 1984), as social factors may intervene to protect against the effects of stress (Cruwys et al., 2014; Defreese & Smith, 2013; Hartley & Coffee, 2019). This relates to stress-buffering effects, where social support's effects upon sport-related outcomes may depend on the level of stress an athlete may be experiencing (see Chapter 2; Bianco & Eklund, 2001; Cohen et al., 2000; Cohen & Wills, 1985; Defreese & Smith, 2013; Hartley & Coffee, 2019). Relatedly, the social identity approach (Tajfel & Turner, 1979; Turner et al., 1987) posits that self-categorising oneself as a group member will influence how the self is defined and, in turn, influence both stress appraisal (i.e. '*can I cope?*' versus '*can we cope?*') and social support behaviours (Rees et al., 2015). Indeed, social identification has been shown to protect against elevated cortisol, stress, and symptoms of burnout in organisational (Haslam & Reicher, 2006) and sport settings (Goodger et al., 2007; Morgan et al., 2013), and to facilitate the provision of mutual social support (Haslam et al., 2005; Levine et al., 2005; Slater et al., 2013). The third aim of the present study was therefore to investigate the interactive relationships between (a) stress and dimensions of social support (i.e. traditional stress-buffering effects) upon dimensions of burnout, (b) stress and social identification upon dimensions of burnout, and (c) dimensions of social support and social identification upon dimensions of burnout.

Any interactive effects observed may be dependent on relevant situational factors. For instance, the presence and magnitude of stress-buffering effects for particular dimensions of social support may depend on whether the type of support matches up with the particular needs of the individual and/or situation (Berg & Upchurch, 2007; Holt & Hoar, 2006). Indeed, some dimensions of social support might even have deleterious effects under certain circumstances if they are poorly matched to the situational demands of stressors (Cutrona & Russell, 1990; Haslam et al., 2012; Kellezi & Reicher, 2012; Schwarzer & Leppin, 1991). As such, there is value in investigating variables that moderate the protective qualities (e.g. effectiveness) of social support upon stress and dimensions of burnout in sport, as this may provide a more nuanced understanding of social support's underpinning mechanisms.

In this regard, Smith and colleagues (1990) argue that a single moderator (e.g. social support) may fail to capture the complexity of behaviour and hinders our understanding of how another potential moderator may mask underlying effects (e.g. stress-buffering mechanisms). For example, received support has been shown to interact with resilience to influence the stress-burnout relationship (conjunctive moderation; Lu et al., 2016). Similarly, the nature and

content of shared social identities might facilitate or debilitate the impact of stress and social support (Hartley et al., 2020; Haslam et al., 2004; Haslam et al., 2005; Rees et al., 2015). For example, high levels of social identification may contribute to greater levels of stress resilience in teams (Morgan et al., 2013). Therefore, it is reasonable to assert that dimensions of social support and social identification may interact in a conjunctive manner to alleviate or worsen the stress-burnout relationship (e.g. by influencing adaptations to stress and dimensions of burnout; Fletcher & Sarkar, 2012; Galli & Vealey, 2008; Haslam et al., 2012). It seems there have been no investigations into such three-way interaction effects (conjunctive moderation) between stress, dimensions of social support, and social identification upon dimensions of burnout. Therefore, the final aim of the present study was to investigate the conjunctive (three-way) interactive relationships between dimensions of social support and social identification upon the stress-burnout relationships.

As discussed in Chapter 3, there are theoretical and empirical reasons for focusing on a singular perspective of social support to develop a more nuanced understanding of when, how, and which dimensions of social support are likely to exert certain effects upon sport-related outcomes. As identified previously, perceived support is theorised to influence sport-related outcomes differently compared to received support (Bianco & Eklund, 2001; Rees, 2007). Although perceived support is theorised to act primarily through main effects and received support as a stress-buffer (Bianco & Eklund, 2001), research has often found evidence for the converse. Perceived support is more consistently related to main and stress-buffering effects (Freeman & Rees, 2010; Rees & Freeman, 2007; Rees & Hardy, 2004; Rueger et al., 2016) and outcome variables compared to received support (Boat & Taylor, 2015; Defreese & Smith, 2013; Freeman & Rees, 2008, 2009, 2010; Hartley & Coffee, 2019; Lakey, 2010). Furthermore, social identification may be more strongly associated with perceived availability of support, as perceived group membership is likely to shape an individual's stress appraisal and perceived availability of coping resources through the self-categorization process (Bianco & Eklund, 2001; Lavallee et al., 2019; Rees et al., 2015). In contrast, the effects of received support might be more contextually dependent upon salient support availability (i.e. irrespective of whether support providers have a shared social identity; Uchino, 2009).

The purpose of the present study was to investigate the main and interactive effects of stress and dimensions of perceived support (stress-buffering) and social identification (conjunctive moderation) upon dimensions of burnout. Using a 3-Step moderated hierarchical regression analyses, it was first hypothesised that (at Step 1) higher levels of stress would be

associated with higher levels of burnout dimensions. Second (at Step 1), it was hypothesised that differences would be observed between the individual contributions of dimensions of perceived support and social identification upon dimensions of burnout. Third (at Step 2), it was hypothesised that differences would be observed between the interactive effects of (a) stress and dimensions of perceived support (i.e. stress-buffering) upon dimensions of burnout, (b) stress and social identification upon dimensions of burnout, and (c) dimensions of perceived support and social identification upon dimensions of burnout (respectively). Fourth (at Step 3), it was hypothesised that the deleterious main effects of stress upon dimensions of burnout would be moderated (i.e. either alleviated or worsened) by two variables in a conjunctive manner: (a) dimensions of perceived support, and; (b) social identification.

Method

Participants

Interaction tests commonly lack sufficient power due to product variables' reliabilities often equalling the product of the two preceding independent variables' reliabilities (and product variables tend to have non-normal distributions; Aiken & West, 1991; McClelland & Judd, 1993; O'Connor, 2006). Thus, the required effect size in hierarchical regression analyses such as these needs to be lower to detect significant interaction effects. A power analysis using G*Power 3.1 (Faul et al., 2009) was therefore performed to detect a small effect size when using main, disjunctive and conjunctive interactive effects to predict dimensions of burnout (i.e. Cohen's $F^2 = 0.02$ based on conventions for detecting small effects at power = .80 and alpha = 0.05; Cohen, 1988). This analysis suggested a target sample size of 721 participants. For this study, the sample consisted of 444 athletes (278 male) ranging in age from 14 to 68 years (M age = 25.89 years, SD = 10.32), partaking in a range of 45 different sports (25 individual sports). The competitive levels of participants ranged from recreational (n = 66), club (n = 126), regional (n = 97), national (n = 106), to international standard (n = 49). It should be noted that while the target sample size for detecting small effects was not reached, the number of participants recruited for this study exceeded those recruited in similar research (e.g. Lu et al, 2016) and those needed to detect medium effects (i.e. N = 103 at Cohen's $F^2 = 0.15$).

Measures

All Cronbach alphas were above the satisfactory .70 threshold (Cronbach, 1952), and are provided in Table 4.1.

Stress. Participants were asked to indicate the degree of stress experienced, measured using four sources of stress commonly drawn upon within the sport literature (e.g. Freeman & Rees, 2008, 2010; Hartley & Coffee, 2019): high performance concerns from others, injury concerns, stamina/fitness concerns, and doubts about current form. As used by Freeman and colleagues, and given that there may be individual differences in the extent and timeliness of stress reactions (Lazarus & Folkman, 1984), the stem for each item was: "*Please indicate how stressed you felt as a result of the following situations over the past two weeks*". Participants were required to respond on a 5-point Likert scale ranging from 1 (not at all) to 5 (a lot). Item responses were summed to create a total score of stress.

Perceived support. The 16-item Perceived Available Support in Sport Questionnaire (the PASS-Q; Freeman et al., 2011) was used to assess perceived support. The PASS-Q has demonstrated good reliability and validity indices across independent samples (Boat & Taylor, 2015; Freeman et al., 2011). The stem for the PASS-Q is: "*Please indicate to what extent you have these types of support available to you*". Participants were required to respond on a 5-point Likert scale, ranging from 0 (*not at all*) to 4 (*extremely*). In line with the established factorial structure of the PASS-Q, dimensional item responses were averaged to create subscale (dimensional) scores for emotional, esteem, informational, and tangible perceived support.

Social identification. Given there were no a-priori reasons to expect different effects on the individual components of social identification, social identification was assessed using the recommended Four-Item measure of Social Identification (FISI; Postmes et al., 2012). The FISI is an adaptation of the scale reported by Doosje and colleagues (1995), and shows good cross-sectional and longitudinal internal-reliability, and correlates highly with each of the components in Leach and colleagues' (2008) 10-item social identification scale (Reysen et al., 2013). The reference group for social identification was specified on the FISI as: *"others in my sport"* (e.g. *"I identify with others in my sport"*; item 1) and *"a member of my sport"* (e.g. *"I see myself as a member of my sport"*; item 2). Participants were required to indicate their level of agreement to four statements by responding to a 7-point Likert scale, ranging from 0 (*strongly disagree*) to 7 (*strongly agree*). Item responses were averaged to create a single score of social identification.

Dimensions of burnout. Dimensions of athlete burnout were assessed using the 15-item Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001), which has demonstrated good construct and structural validity in independent samples (Cresswell & Eklund, 2006;

Raedeke & Smith, 2009). The stem for the ABQ is: "*Please indicate the extent to which you are currently experiencing each feeling*". Participants were required to respond on a 5-point Likert scale, ranging from 0 (*almost never*) to 4 (*almost always*). In line with the established factorial structure of the ABQ, dimensional item responses were averaged to provide subscale scores for reduced sense of accomplishment, devaluation, and emotional and physical exhaustion.

Procedure

After obtaining ethical approval from a General University Ethics Panel, participants were recruited opportunistically and through snow-ball sampling with the use of recruitment posters and online announcements. After informed consent had been provided, participants were either provided with an email link to the questionnaire or completed a paper-and-pencil version containing the randomised scales described above (see Appendix 1).

Preliminary Data Screening

Data were screened for missing values. While some participants did not complete parts of the survey and some information fields contained more missing values than others, the study variables exhibited a proportion of missing data no greater than 10% for any one variable (Little's MCAR test, $\chi 2\,(1629) = 1967.77, p < .01$). Although data were not missing completely at random, there was little reason to suspect that participants did not respond because of the particular responses they would give. Maximum-likelihood estimated descriptive statistics differed little from the observed descriptives. Furthermore, the observed demographic variable means for those missing content-related data did not significantly differ from those for participants who provided all data. Considering there were no cases where >50% of subscale scores were missing, no individual cases were deleted (Hawthorne & Elliot, 2005).

To include as many cases as possible, missing scores within an otherwise completed case were calculated using mean-imputation per subscale item. Resulting analyses did not differ substantially from those calculated using listwise deletion of missing cases. Therefore, participants with missing data were not excluded, and results are based on 444 valid cases. Descriptive statistics and Pearson's bivariate correlations are displayed in Table 4.1. For multivariate analysis, the assumption of no multicollinearity was met, as no intercorrelations were above .80, all variance inflation factor (VIF) values were below 10, average VIF values were less than 2.1 (Tabachnick & Fidell, 2007), and tolerance values were all above .20

(Stevens, 1996). The assumption of independent errors was met, as all Durban-Watson statistics were within the accepted range of 1 to 3. The assumptions of homoscedasticity, normally distributed errors and linearity were also met, as all residuals were normally distributed (Field, 2016).

Analyses

To the knowledge of the author, this study was the first to investigate conjunctive moderation effects with dimensions of perceived support upon reduced sense of accomplishment and exhaustion. Due to the pattern of findings from Study 1 (in Chapter 3), the present study only tested interaction effects between stress, dimensions of perceived, support and social identification upon (a) reduced sense of accomplishment and (b) exhaustion. This was because Study 1 did not find main effects for stress upon devaluation over time. Therefore, in the interest of promoting computational power and reducing risk for Type 1 Error, devaluation was not included in analyses. Concerns regarding the removal of devaluation from this study's analyses are discussed in Chapter 6 (general discussion).

Hierarchical regression analyses were used to assess main effects, two-way interaction effects (disjunctive moderation; stress-buffering), and three-way interaction effects (conjunctive moderation). To reduce the risk for multicollinearity, scores for all predictor variables were mean-centred before calculation of product terms (Finney, Mitchell, Cronkite, & Moos, 1984; Mitchell et al., 2014). Therefore, a total of four analyses were conducted with the standardized variables (stress, social identification, and four dimensions of perceived support; emotional, esteem, informational, and tangible) for each dependent variable (reduced sense of accomplishment and exhaustion, respectively). Therefore, the present study tested eight potential three-way interactions between stress, perceived support and social identification (for each dimension of perceived support) upon reduced sense of accomplishment and exhaustion, respectively (similar to the number of three-way interactions tested by Lu and colleagues; 2016).

For each model, the variables were entered in three steps. Step 1 was for the main effects of stress, (dimension of) perceived support, and social identification upon the respective dimension of burnout (i.e. separate models for reduced sense of accomplishment and exhaustion). Step 2 included two-way interaction terms between stress × (dimension of) perceived support, stress × social identification, and (dimension of) perceived support × social

identification. Step 3 included a three-way interaction term between stress × (dimension of) perceived support × social identification. An interaction effect was established if there was a significant ΔR^2 from Step 1 to 2, or from Step 2 to 3. For significant interactions, simple slopes analyses were conducted to compare slopes (Dawson-Richter tests were conducted for significant three-way interactions; 2006) and to plot interaction effects.

Results

Descriptives and correlations are presented in Table 4.1, regression results are presented in Tables 4.2 (reduced sense of accomplishment) and 4.3 (exhaustion).

Hierarchical regression analyses with stress, emotional support, and social identification predicting reduced sense of accomplishment and exhaustion. The main effects at Step 1 accounted for 24% of the variance in reduced sense of accomplishment ($F(3, 440) = 46.08$**; Cohen's $F^2 = 0.32$, a large effect) and 17% in exhaustion ($F(3, 440) = 30.15$**; Cohen's $F^2 = 0.20$, a large effect). There were also significant main effects for stress (positive) and social identification (negative) upon both reduced sense of accomplishment and exhaustion. Perceived emotional support only had a significant main effect (negative) upon reduced sense of accomplishment.

The two-way interactions at Step 2 explained 25% of the variance in reduced sense of accomplishment ($F(6, 437) = 24.11$**), and 18% of the variance in exhaustion ($F(6, 437) = 15.94$**), although ΔR^2 was non-significant in both cases.

The three-way interactions at Step 3 explained 25% of the variance in reduced sense of accomplishment ($F(7, 436) = 21.99$**; ΔR^2 *was* non-significant), and 19% of the variance in exhaustion ($F(7, 436) = 14.23$**; ΔR^2 was significant; Cohen's $F^2 = 0.01$, a small effect). There was a significant positive three-way interaction between stress, perceived emotional support and social identification upon exhaustion ($b = .08$*, $SE = .04$ [.01, .15]; see Figure 4.1), which was further interpreted using a Dawson-Richter test (2006) for significant difference between slopes (See Figure 4.2). There was a significant difference between the slopes for (1) high perceived emotional support-high social identification, and (2) high perceived emotional support-low social identification ($t = 2.83$, $p<.01$). The rest of the three-way interaction slopes were not significantly different from each other.

Table 4.1
Descriptive statistics for Study 2 (Chapter 4) cross-sectional dataset variables (N = 444)

	Variable	α	1	2	3	4	5	6	7	8
1	Emotional support	.87								
2	Esteem support	.84	.74**							
3	Informational support	.84	.46**	.55**						
4	Tangible support	.79	.63**	.67**	.63**					
5	EXH	.88	-.06	-.12*	-.06	.07				
6	RSA	.75	-.29**	-.32**	-.27**	-.25**	.41**			
7	Stress	.81	.10*	.04	.20*	.19**	.37**	.15**		
8	FISI	.90	.28**	.28**	.33**	.26**	-.18**	-.42**	.01	
	M		3.7	3.58	3.55	3.22	2.44	2.63	2.56	5.63
	SD		0.93	0.78	0.86	0.91	0.86	0.72	0.93	1.05

*Note. *p < .05; **p < .01; EXH = Exhaustion; RSA = Reduced sense of accomplishment; DEV = Devaluation; FISI = Social Identification.*

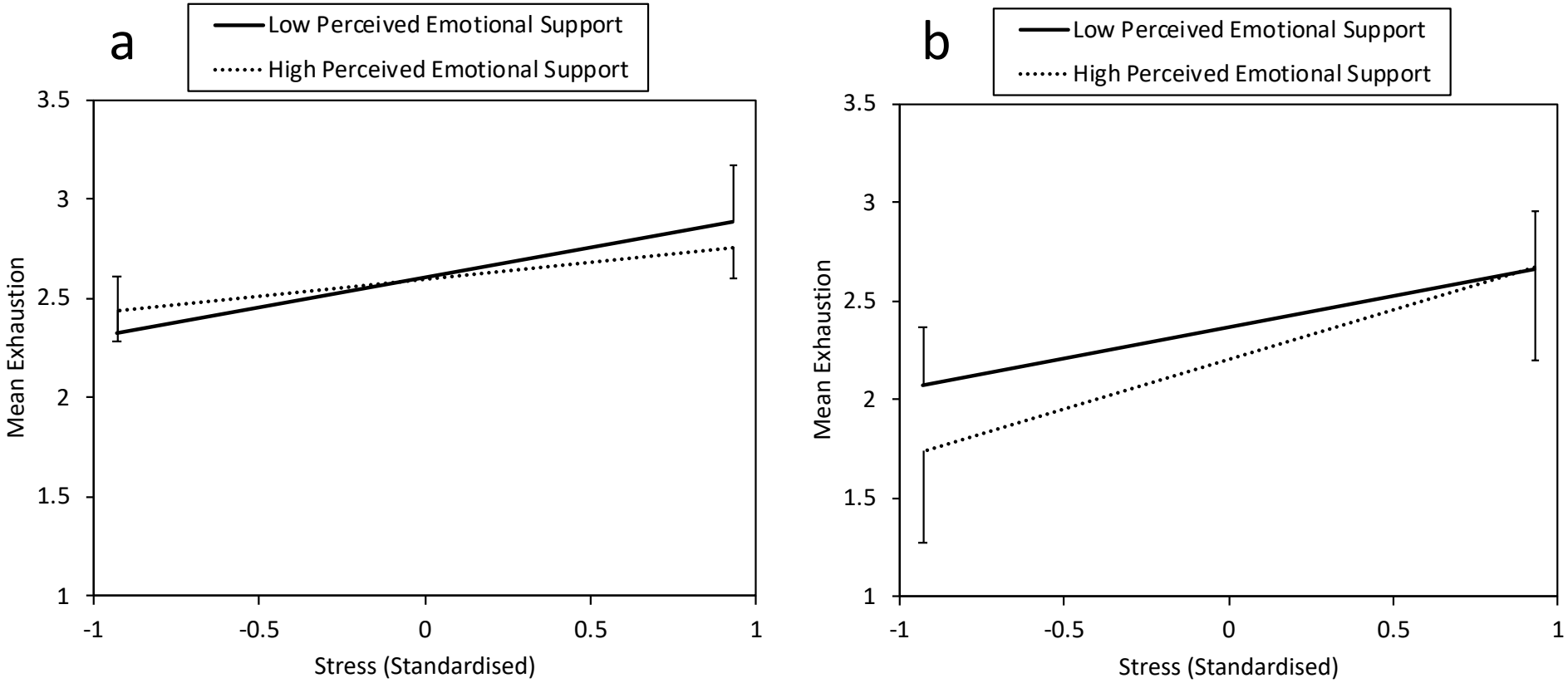

Figure 4.1: Study 2 (Chapter 4) Conjunctive (three-way) moderation of perceived emotional support upon the stress-exhaustion relationship, at (a) low levels (-1*SD*) of social identification, and (b) high levels (+1*SD*) of social identification.

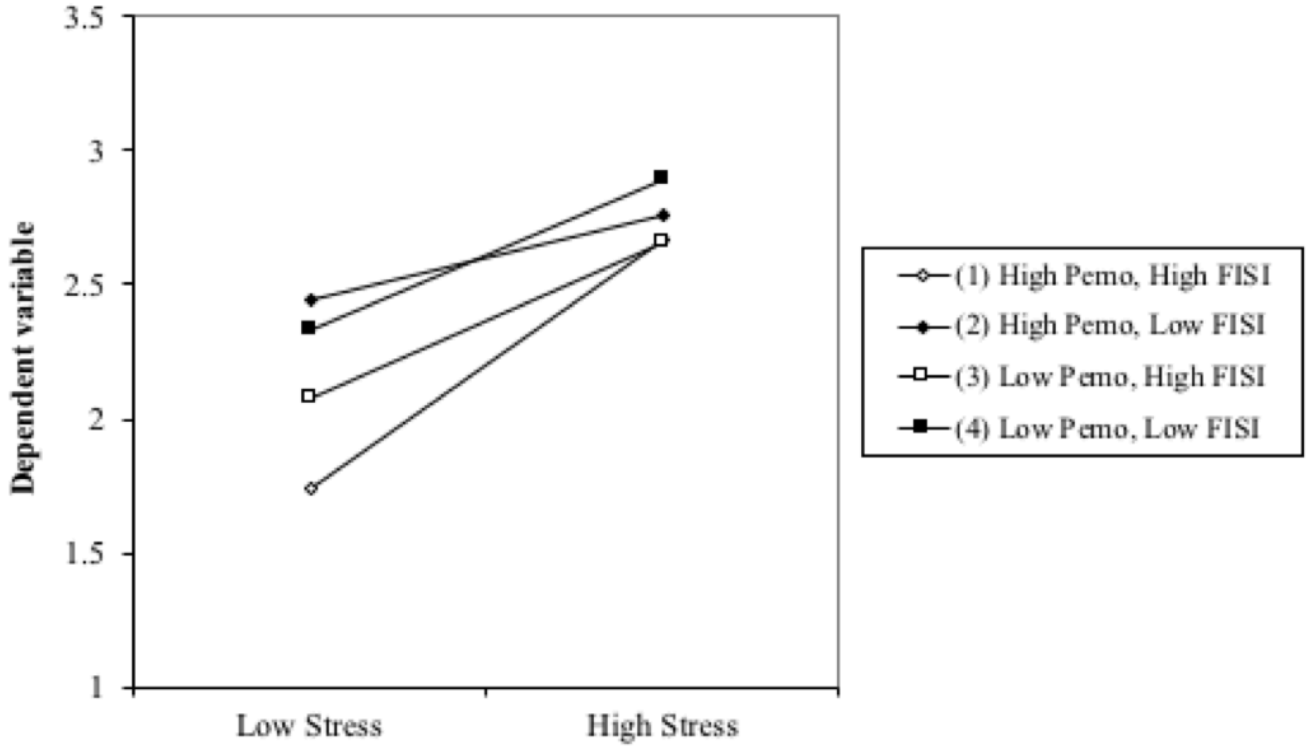

Figure 4.2. Study 2 (Chapter 4) Dawson-Richter (2006) test for slope difference

Pair of slopes	*t*-value for slope difference	*p*
(1) and (2)	2.83	.01
(1) and (3)	1.54	.12
(1) and (4)	1.46	.15
(2) and (3)	-1.08	.28
(2) and (4)	-1.19	.24
(3) and (4)	0.09	.93

Hierarchical regression analyses with stress, esteem support, and social identification predicting reduced sense of accomplishment and exhaustion. The main effects at Step 1 accounted for 25% of the variance in reduced sense of accomplishment ($F(3, 440) = 48.76$**; Cohen's $F^2 = 0.33$, a large effect) and 18% in exhaustion ($F(3, 440) = 31.28$**; Cohen's $F^2 = 0.22$, a large effect). There were also significant main effects for stress (positive) and social identification (negative) upon both reduced sense of accomplishment and exhaustion. However, perceived esteem support only had a significant main effect (negative) upon reduced sense of accomplishment.

The two-way interactions at Step 2 explained 26% of the variance in reduced sense of accomplishment ($F(6, 437) = 25.90$**) and 19% of the variance in exhaustion ($F(6, 437) = 16.78$**), although ΔR^2 was non-significant in both cases. No moderator effects were found for the three-way interaction terms at Step 3, as ΔR^2 was non-significant for both reduced sense of accomplishment and exhaustion.

Hierarchical regression analyses with stress, informational support, and social identification predicting reduced sense of accomplishment and exhaustion. The main effects at Step 1 accounted for 23% of the variance in reduced sense of accomplishment ($F(3, 440) = 44.40$**; Cohen's $F^2 = 0.30$, a large effect) and 17% in exhaustion ($F(3, 440) = 30.97$**; Cohen's $F^2 = 0.20$, a large effect). There were also significant main effects for stress (positive) and social identification (negative) upon both reduced sense of accomplishment and exhaustion. However, perceived esteem support only had a significant main effect (negative) upon reduced sense of accomplishment.

The two-way interactions at Step 2 explained 25% of the variance in reduced sense of accomplishment ($F(6, 437) = 24.34$**) and 20% of the variance in exhaustion ($F(6, 437) = 18.20$**), with a significant ΔR^2 in both cases (Cohen's F^2 was 0.02 for reduced sense of accomplishment and 0.03 for exhaustion, respectively representing small effects). There was a significant negative two-way interaction effect for the perceived informational support × social identification term upon exhaustion (see Figure 4.3 for an elaboration of significant simple slopes analysis). There were also significant positive two-way interaction effects for the stress × social identification term upon exhaustion (see Figure 4.4 for an elaboration of significant simple slopes analysis) and reduced sense of accomplishment (see Figure 4.5 for an elaboration of significant simple slopes analysis), respectively. No moderator effects were found for the

three-way interaction terms at Step 3, as ΔR^2 was non-significant for both reduced sense of accomplishment and exhaustion.

Hierarchical regression analyses with stress, tangible support, and social identification predicting reduced sense of accomplishment and exhaustion. The main effects at Step 1 accounted for 23% of the variance in reduced sense of accomplishment ($F(3, 440) = 44.48$**; Cohen's $F^2 = 0.30$, a large effect) and 17% in exhaustion ($F(3, 440) = 30.16$**; Cohen's $F^2 = 0.20$, a large effect). There were also significant main effects for stress (positive) and social identification (negative) upon both reduced sense of accomplishment and exhaustion. However, perceived esteem support only had a significant main effect (negative) upon reduced sense of accomplishment.

The two-way interactions at Step 2 explained 24% of the variance in reduced sense of accomplishment ($F(6, 437) = 23.39$**) and 18% of the variance in exhaustion ($F(6, 437) = 16.16$**), although ΔR^2 was non-significant in both cases. No moderator effects were found for the three-way interaction terms at Step 3, as ΔR^2 was non-significant for both reduced sense of accomplishment and exhaustion.

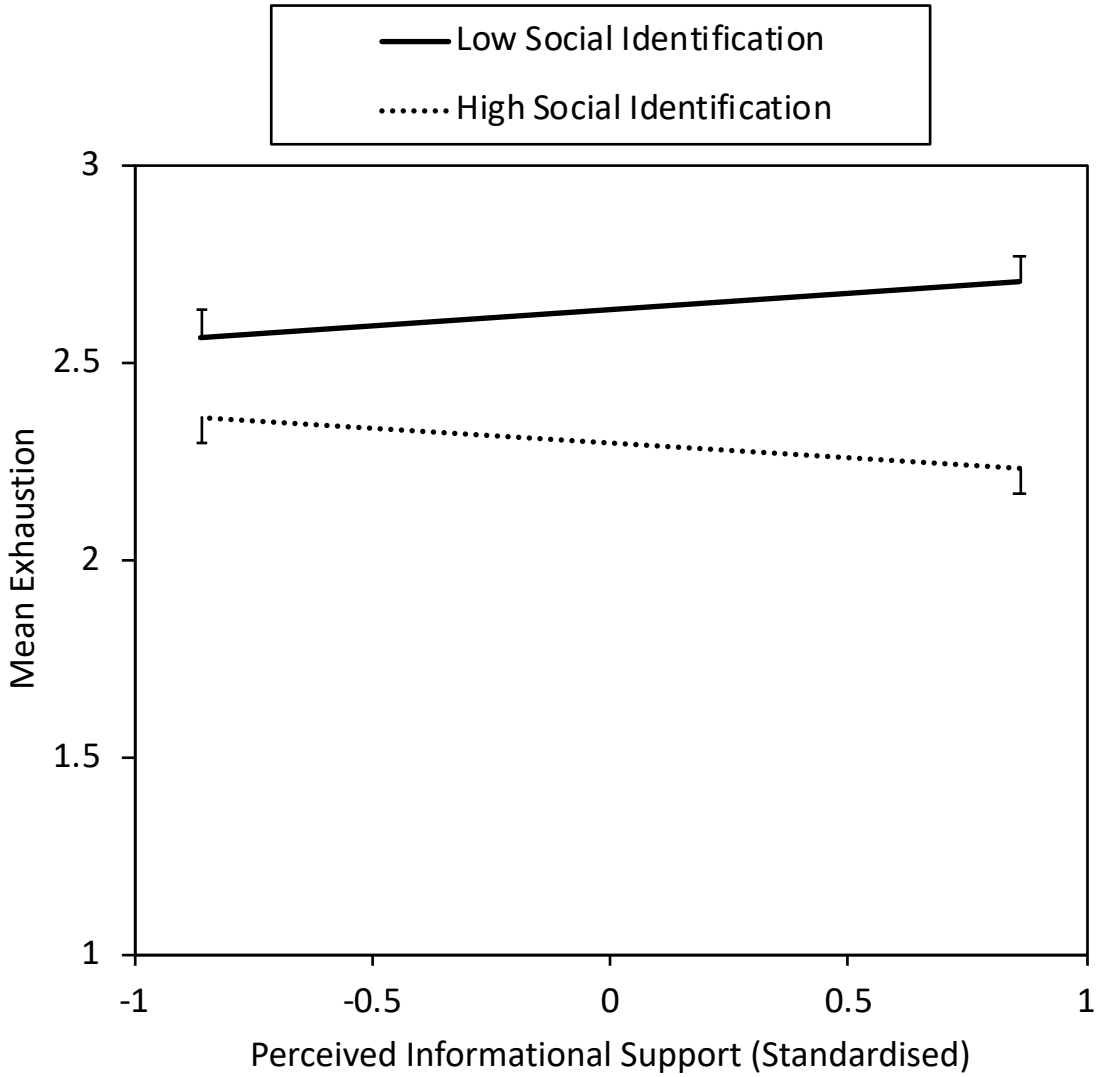

Figure 4.3: Study 2 (Chapter 4) interactive relationship between perceived informational support and social identification upon exhaustion. Simple slopes revealed that the relationship between perceived informational support and exhaustion was significantly different from zero beyond the range of +/-1*SD* from the mean of social identification.

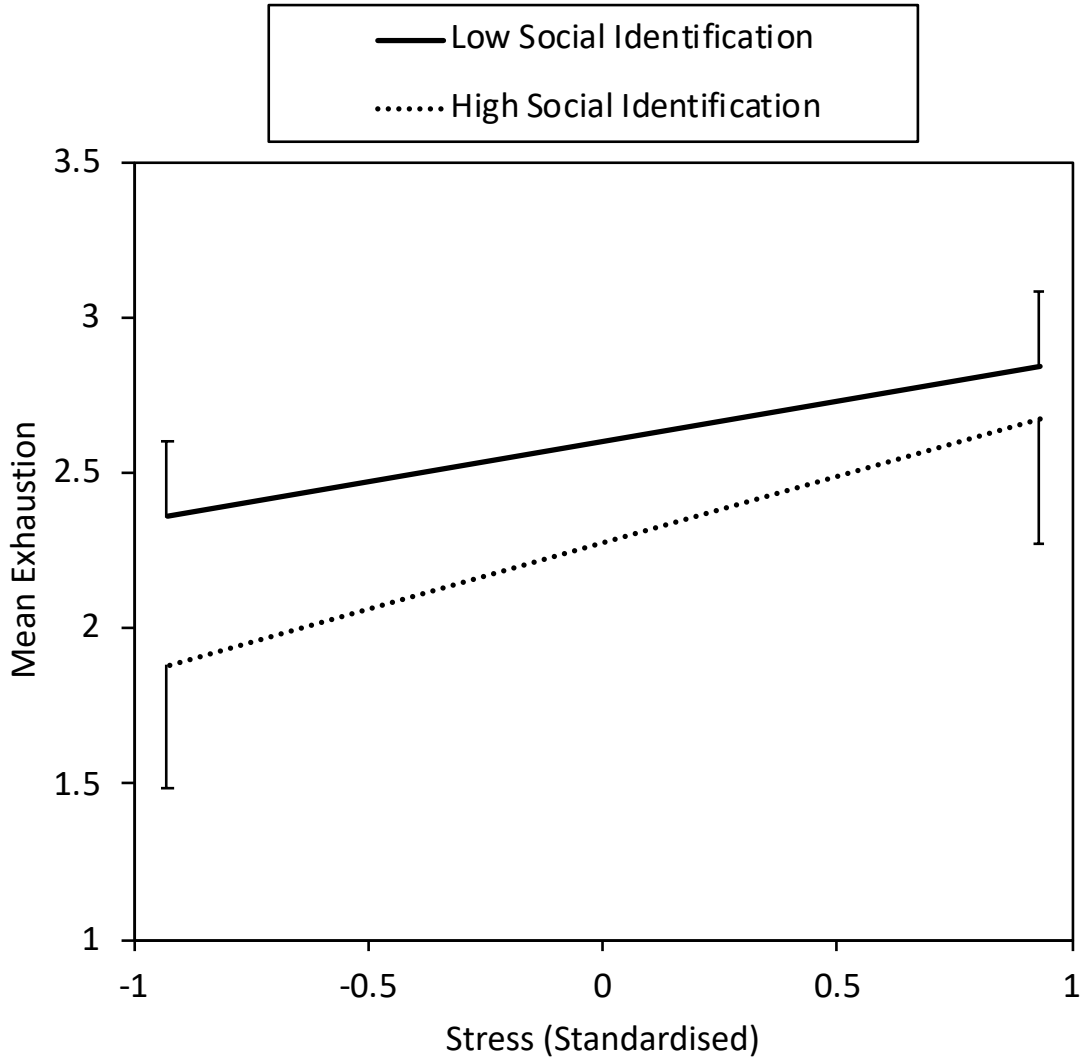

Figure 4.4: Study 2 (Chapter 4) interactive relationship between stress and social identification upon exhaustion. Simple slopes revealed that the relationship between stress and exhaustion was significantly different from zero both at high (+1*SD*; $t = 7.57$, $p < .05$) and at low levels of social identification (-1*SD*; $t = 4.27$, $p < .05$).

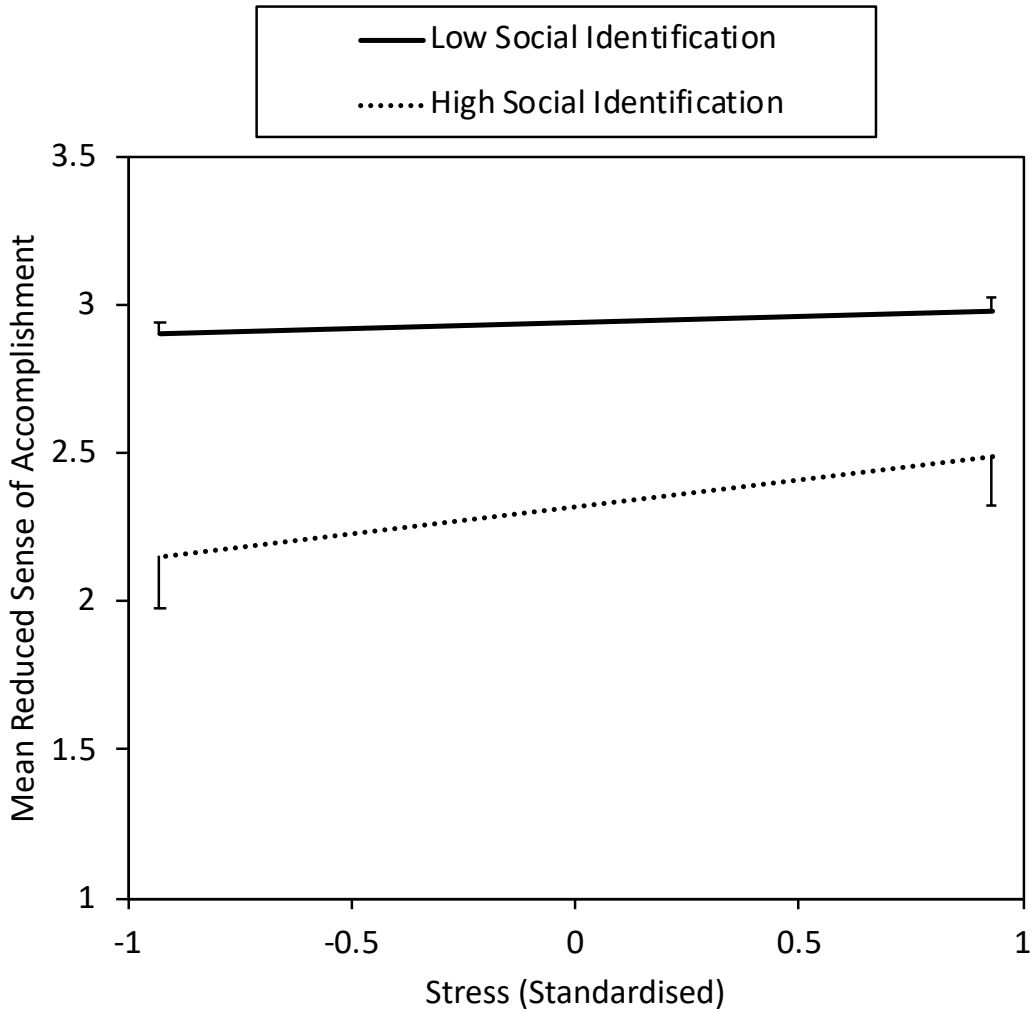

Figure 4.5: Study 2 (Chapter 4) interactive relationship between stress and social identification upon reduced sense of accomplishment. Simple slopes revealed that the relationship between stress and reduced sense of accomplishment was significantly different from zero at high (+1*SD*; $t = 3.99$, $p < .01$) but not at low levels of social identification (-1*SD*; $t = 1.18$, $p = 0.24$). Specifically, the relationship between stress and reduced sense of accomplishment differed significantly from zero at levels of social identification above -0.73 standard deviations from the mean.

Table 4.2

Study 2 (Chapter 4) conjunctive moderation analyses with stress, perceived social support, and social identification predicting reduced sense of accomplishment ($N = 444$)

Criterion Variable	Unstandardized regression coefficients									
Reduced Sense of Accomplishment	*F*	R^2	ΔR^2	Stress	FISI	Emo PS	Stress x FISI	Stress x Emo PS	FISI x Emo PS	Stress x FISI x Emo PS
Step 1	46.08**	.24	.24**	.13**	-.26**	-.15**				
Step 2	24.11**	.25	.01	.12**	-.27**	-.15**	.07*	-.01	-.03	
Step 3	21.99**	.25	.00	.12**	-.26**	-.16**	.07*	-.01	-.03	.03
Reduced Sense of Accomplishment	*F*	R^2	ΔR^2	Stress	FISI	Est PS	Stress x FISI	Stress x Est PS	FISI x Est PS	Stress x FISI x Est PS
Step 1	48.76**	.25	.25**	.12**	-.26**	-.17**				
Step 2	25.90**	.26	.01	.12**	-.26**	-.17**	.08*	-.04	-.04	
Step 3	20.67**	.26	.00	.12**	-.25**	-.22**	.08*	-.05	-.04	.03
Reduced Sense of Accomplishment	*F*	R^2	ΔR^2	Stress	FISI	Inf PS	Stress x FISI	Stress x Inf PS	FISI x Inf PS	Stress x FISI x Inf PS
Step 1	44.40**	.23	.23**	.14**	-.26**	-.14**				
Step 2	24.34**	.25	.02*	.13**	-.28**	-.14**	.06	.05	-.06	
Step 3	21.34**	.25	.00	.14**	-.26**	-.16**	.06	.07	-.06	.02
Reduced Sense of Accomplishment	*F*	R^2	ΔR^2	Stress	FISI	Tan PS	Stress x FISI	Stress x Tan PS	FISI x Tan PS	Stress x FISI x Tan PS
Step 1	44.48**	.23**	.23**	.14**	-.27**	-.14**				
Step 2	23.39**	.24**	.01	.14**	-.27**	-.14**	.08*	-.02	-.03	
Step 3	19.76**	.24**	.00	.14**	-.26**	-.15**	.08*	-.02	-.04	.03

Note: Main effects entered at Step 1. Main effects and two-way interactions entered at Step 2. Main effects, two-way interactions, and three-way interaction entered at Step 3; Degrees of freedom: Step 1 (3, 440), Step 2 (6, 437), Step 3 (7, 436); FISI = Social Identification; Emo PS = Emotional perceived support; Est PS = Esteem perceived support; Inf PS = Informational perceived support; Tan PS = Tangible perceived support. *$p < .05$, **$p < .01$.

Table 4.3

Study 2 (Chapter 4) conjunctive moderation analyses with stress, perceived social support, and social identification predicting exhaustion ($N = 444$)

Criterion Variable				Unstandardized regression coefficients						
Exhaustion	*F*	R^2	ΔR^2	Stress	FISI	Emo PS	Stress x FISI	Stress x Emo PS	FISI x Emo PS	Stress x FISI x Emo PS
Step 1	30.15**	.17	.17**	.32**	-.15**	-.04				
Step 2	15.94**	.18	.01	.32**	-.15**	-.04	.08	.01	-.03	
Step 3	14.23**	.19	.01*	.32**	-.15**	-.05	.08	.01	-.04	.08*
Exhaustion	*F*	R^2	ΔR^2	Stress	FISI	Est PS	Stress x FISI	Stress x Est PS	FISI x Est PS	Stress x FISI x Est PS
Step 1	31.28**	.18	.18**	.32**	-.14**	-.08				
Step 2	16.78**	.19	.01	.32**	-.14**	-.07	.07	.03	-.05	
Step 3	14.83**	.19	.00	.34**	-.14**	-.09	.07	.03	-.06	.02
Exhaustion	*F*	R^2	ΔR^2	Stress	FISI	Inf PS	Stress x FISI	Stress x Inf PS	FISI x Inf PS	Stress x FISI x Inf PS
Step 1	30.97**	.17	.17**	.33**	-.14**	-.07				
Step 2	18.20**	.20	.03**	.33**	-.16**	-.07	.09*	.04	-.11**	
Step 3	15.46**	.20	.00	.36**	-.15**	-.08	.10*	.05	-.12**	.00
Exhaustion	*F*	R^2	ΔR^2	Stress	FISI	Tan PS	Stress x FISI	Stress x Tan PS	FISI x Tan PS	Stress x FISI x Tan PS
Step 1	30.16**	.17	.17**	.31**	-.17**	.04				
Step 2	16.16**	.18	.01	.31**	-.17**	.04	.08*	.00	-.05	
Step 3	13.19**	.18	.00	.32**	-.17**	.04	.08*	.00	-.06	.04

Note: Main effects entered at Step 1. Main effects and two-way interactions entered at Step 2. Main effects, two-way interactions, and three-way interaction entered at Step 3; Degrees of freedom: Step 1 (3, 440), Step 2 (6, 437), Step 3 (7, 436); FISI = Social Identification; Emo PS = Emotional perceived support; Est PS = Esteem perceived support; Inf PS = Informational perceived support; Tan PS = Tangible perceived support. *$p < .05$, **$p < .01$.

Discussion

The purpose of the present study was to investigate the main and interactive effects of stress and dimensions of perceived support (stress-buffering) and social identification (conjunctive moderation) upon dimensions of burnout. The first hypothesis was accepted, as higher levels of stress were positively associated with higher levels of reduced sense of accomplishment and exhaustion at Step 1 in the analyses. This supports similar associations observed in previous research (e.g. Defreese & Smith, 2013; Hartley & Coffee, 2019; Lu et al., 2016) as well as stress-based models of burnout (e.g. Gustaffson et al., 2017). However, based on the findings from Study 1 (Chapter 3) and the extant literature, experiencing stress may not necessarily lead to burnout, as it may be influenced by other factors (e.g. a moderating effect by social support; Defreese & Smith, 2013; Hartley & Coffee, 2019).

The second hypothesis was partially accepted, as dimensional differences were observed between the individual main effects for dimensions of perceived support and social identification upon dimensions of burnout at Step 1 in the analyses. All dimensions of perceived support were negatively associated with reduced sense of accomplishment, while no dimensions of perceived support were associated with exhaustion. Taken in conjunction with the similar dimensional main effects observed in Study 1 (Chapter 3), this further supports the notion that some dimensions of perceived support might have more adaptive relationships with certain dimensions of burnout. Specifically, all dimensions of perceived support may show consistent (negative) associations with reduced sense of accomplishment, whereas fewer dimensions (e.g. only perceived informational support) may show consistent (negative) associations with exhaustion (Defreese & Smith, 2013, 2014; Freeman et al., 2011; Hartley & Coffee, 2019). Further to the second hypothesis, social identification was negatively associated with reduced sense of accomplishment and exhaustion. As discussed in Chapter 3, this is in line with previous research highlighting the beneficial effects that social identification may have directly upon health-, wellbeing- and sport-related outcomes such as burnout (e.g. Cruwys et al., 2014; Haslam et al., 2016; Morgan et al., 2013).

With regards to the contributing main effects at Step 1, it could be that knowing social support is available if needed combats feelings of inefficacy and the tendency to negatively evaluate ones' performance capabilities (i.e. reduced sense of accomplishment; Eklund & Defreese, 2015; Gustafsson et al., 2017; Raedeke et al., 2002). In contrast, knowing social support is available if needed might prevent exhaustion to a lesser extent, as physical

exhaustion represents a ubiquitous component of the sport environment. It may, therefore, depend on whether exhaustion is driven primarily by physical or psychological causes (Fletcher et al., 2006; Sarkar & Fletcher, 2014). Furthermore, having a strong sense of social identity might enhance an athlete's perceived availability of coping resources and their likelihood of adapting to deleterious sport-related outcomes such as dimensions of burnout (Hartley et al., 2020; Rees et al., 2015). Similar to Study 1 (Chapter 3), this implies that although increasing levels of perceived support may not translate into beneficial sport-related outcomes (as dimensional nuances may exist; Freeman et al., 2011; Hartley & Coffee, 2019), increasing levels of social identification may translate into beneficial outcomes more generally.

The third hypothesis was also partially accepted, as differences were observed between the interactive effects of (a) stress and dimensions of perceived support (i.e. stress-buffering), (b) stress and social identification, and (c) dimensions of perceived support and social identification upon dimensions of burnout (respectively) at Step 2 in the analyses. Specifically, no dimensions of perceived support were found to buffer the stress-reduced sense of accomplishment or stress-exhaustion relationships. This further contributes to the mixed evidence for a stress-buffering effect in sport more generally (Defreese & Smith, 2014; Rueger et al., 2016), despite perceived support being more consistently related to stress-buffering compared to received support (Freeman & Rees, 2010; Hartley & Coffee, 2019), and theoretical grounds for the stress-buffering effect to be seen in relation to burnout (Holt & Hoar, 2006). As outlined in the introduction to this chapter, it is possible that a second potential moderator (e.g. social identification) may mask underlying mechanisms (e.g. stress-buffering effects; Smith and colleagues, 1990).

Further to the third hypothesis, social identification was found to have significant interaction effects upon both the stress-reduced sense of accomplishment and stress-exhaustion relationships. Specifically, higher levels of social identification *strengthened* the positive relationships between stress and reduced sense of accomplishment, and stress and exhaustion (respectively). Somewhat surprisingly, this suggests that high levels of social identification actually *worsened* the impact of stress upon dimensions of burnout – which goes against the notion that having shared social identities may allow for more functional adaptations to stress and burnout (e.g. by favourably influencing how the self is defined and how stressful stimuli are perceived; Freeman & Rees, 2009; Lazarus & Folkman, 1984). As suggested by Hartley and colleagues (2020; Rees et al., 2015), this could be due to the experience of sport-related stress being bound-up with the social dynamics of group life. For example, depending on the

identity-based implications behind experiencing symptoms of burnout, higher levels of group identification might actually worsen the deleterious effects of stress due to signalling poor coping abilities, which may be threatening not just to the self but to the group as a whole (Levine & Reicher, 1996; Rees et al., 2015).

Further still to the third hypothesis, social identification was found to have a significant interaction effect upon the relationship between perceived informational support and exhaustion. Specifically, higher levels of social identification weakened the somewhat positive relationship between perceived informational support and exhaustion. This suggests that at higher levels of social identification, the perceived availability of informational support better protected against the deleterious effects of exhaustion. In line with the findings from Study 1 (Chapter 3), informational forms of support may be more effective for particular sport-related outcomes (e.g. by protecting specifically against physical and psychological exhaustion; Cohen & Wills, 1985; Freeman et al., 2011). However, it could be that for these forms of support (i.e. informational) to have their intended effects, they must be perceived to be available from a trusted source (i.e. an ingroup member). This aligns with Haslam and colleagues' assertions that shared social identities may be the basis for effective social support, due to providing ingroup members with a common point of reference that facilitates the communication and coordination of social support behaviours (Haslam, 2004; Haslam et al., 2012; Postmes, 2003). Conversely, therefore, when informational support is perceived to be available from someone whom an athlete does not identify with, it may prove to be ineffective (e.g. by increasing levels of physical or psychological exhaustion).

The fourth hypothesis was also partially accepted, as the deleterious main effects of stress upon dimensions of burnout were moderated by two variables in a conjunctive manner at Step 3 in the analyses. Specifically, the combination of perceived emotional support and social identification was found to interact in a conjunctive manner to influence the relationship between stress and burnout, where under conditions of high emotional support and high social identification, stress had a stronger positive relationship with exhaustion. In contrast, under conditions of high emotional support and low social identification, stress had a significantly weaker relationship with exhaustion. This three-way interaction potentially explains why certain dimensions of social support may be more or less consistently associated with stress-buffering effects (e.g. Defreese & Smith, 2013, 2014; Freeman et al., 2011; Hartley et al., 2019), as a disjunctive interaction effect (i.e. traditional stress-buffering) may be masked by a third moderator (such as social identification; Lu et al., 2016; Smith et al., 1990). This

conjunctive interaction effect also supports the notion that social identities may indeed form the basis for stress appraisal and group-based support (Rees et al., 2015) – even to the extent that perceiving support to be available from ingroup members may be damaging when it implies one is not coping (i.e. a 'social curse'; Butler et al., 2018; Kellezi & Reicher, 2011).

Similar to the disjunctive interaction effects discussed above, this paradoxical conjunctive moderation effect can be interpreted with reference to social identity theory and the optimal matching hypothesis. If an athlete is perceived by ingroup members to be struggling with an injury (i.e. an uncontrollable stressor in contexts where social identification is high), then those ingroup members might be particularly willing to provide emotional support if needed (as this type of support is ideally suited to uncontrollable stressors; Cutrona & Russell, 1990; Lazarus & Folkman, 1984). However, this may cause stress on the athlete's behalf, as perceiving emotional support to be available from one's ingroup might imply that one is seen to be struggling with a stressor. Indeed, this may cause concern regarding one's social standing in the group and trigger concerns over impression management, as athletes may wish to avoid being seen by fellow ingroup members to be struggling with an uncontrollable stressor (i.e. activating a type of identity-threat; Tarrant & Campbell, 2007). These psychosocial demands (i.e. ingroup dynamics as the basis for perceived support; Rees et al., 2015) may subsequently contribute to stress and a depletion of emotional and physical resources (i.e. exhaustion), despite physical exhaustion being a ubiquitous part of the sport environment.

Considering the above, this Chapter makes an original and unique contribution to knowledge by presenting the first empirical study to demonstrate that perceptions of helping behaviour can have more or less adaptive effects depending on a range of social correlates – notably the prevailing levels of stress, how strongly an individual identifies with their group, and the specific type of perceived social support and sport-related outcome (e.g. dimension of burnout). This contribution builds on and further probes the longitudinal effects observed in Study 1 by demonstrating when and how these variables are related to one another. This insight also provides theoretical and empirical rationale that a better understanding of why these effects occur could be gained through further qualitative probing in future research (i.e. Study 3).

This study has several original and unique practical implications. While stronger perceptions of support availability and social identification can protect against stress and burnout, they can also paradoxically worsen the effects of stress and burnout. As such, practitioners should consider whether cultivating stronger perceptions of support availability

and group identification might – in some contexts – perhaps *undermine* an athlete's sense of resourcefulness and reserve for dealing with sport-related stressors. To this end, practitioners could action more appropriate support-related decisions by endeavouring to understand the identity-based implications behind specific types of helping behaviour in their target group, as certain support behaviours might signal different messages amongst different groups of athletes. This could be achieved by engaging the target group of athletes in reflection and discussion to better understand what "*We*" perceive the purpose and implication of certain helping behaviours to be (e.g. in response to commonly encountered stressors). This may not only help to ensure that support behaviours are better matched to the needs faced by individual athletes (i.e. "*this support will be helpful to him/her*"; Cutrona & Russell, 1990), but also ensure that the identity-based implications of such support does not antagonise its effectiveness (i.e. "*this support will also be considered helpful to 'Us'*").

Limitations and Strengths

Some limitations of the present study should be noted. First, the use of a cross-sectional design prevents any causal inferences from being made, and additional longitudinal research is needed to substantiate the observations made in this study (e.g. investigating interaction effects over time). Second (and as discussed in Chapter 3), conducting dimensional-level investigations has several shortcomings: (a) this reduces parsimony for determining the differences between different perspectives of support (Rees & Freeman, 2007), and; (b) running multiple models may increase the risk of Type 1 Error. However, risk of Type 1 Error was reduced in this study by only investigating reduced sense of accomplishment and exhaustion as outcome variables, resulting in a similar number of models computed in previous social support research (see Chapter 6 for a discussion regarding the removal of devaluation in this study; Defreese & Smith, 2013; Hartley & Coffee, 2019; Lu et al., 2016). Third, despite perceived and received support being considered distinct constructs (Dunkel-Schetter & Bennett, 1990; Haber et al., 2007) and demonstrating different relationships with outcome variables (Freeman & Rees, 2008; Hartley & Coffee, 2019; Rees & Freeman, 2007; Uchino, 2009), this study only investigated perceived support. As discussed in Chapter 3, conducting simultaneous investigations into both perceived and received support would have significantly limited the computational power of the present study sample (thereby supporting the decision to focus on a singular perspective of social support).

The study's strengths include its use of multivariate conceptualisations of social support (e.g. Freeman et al., 2014; Freeman et al., 2011) and burnout (Eklund & Defreese, 2015; Gustafsson et al., 2017), as this allowed the relative impact of dimensions of perceived support upon dimensions of burnout to be determined (Hartley & Coffee, 2019). Furthermore, the present study's use of measures derived entirely for the sport context (Freeman et al., 2011; Raedeke & Smith, 2001) reduces concerns over measurement error (Dunkel-Schetter & Bennett, 1990; Holt & Hoar, 2006; Rees et al., 1999). To the author's knowledge, this study is also the first to investigate both disjunctive (i.e. two-way) and conjunctive (i.e. three-way) moderation effects for stress, dimensions of perceived support, and social identification upon dimensions of burnout in sport.

Future Research

The findings presented in this Study provide a more nuanced understanding of when, how, and which dimensions of social support are likely to exert both beneficial and deleterious effects upon sport-related outcomes. The study has demonstrated that dimensional differences may exist with regards to these effects, and that these effects can be further moderated by other situational factors (e.g. levels of social identification). In order to further investigate and explain when, how, and why social support is likely to exert these effects, it may be necessary to broaden the conceptualisation and assessment of how the dynamics of group life condition social support's effects upon a broader range of sport-related outcomes, as well as the identity-based implications behind this (Hartley et al., 2020; Rees et al., 2015).

In regard to the above, quantitative methods may pose limitations. Indeed, Studies 1 and 2 (i.e. Chapters 3 and 4) may be critiqued for over-relying on scalar-based measurements which only capture recipient-perspectives of social support. It is likely that both perceived and received support's effects upon sport-related outcomes are the product of mutual synergistic exchanges between provider and recipient (Hayward et al., 2017; Uchino, 2009). Social support is also often situated within wider social contexts and thus likely bound-up within and influenced by the prevailing social dynamics of group processes (as discussed in Chapters 1 and 2; Hartley et al., 2020; Haslam et al., 2012; Rees et al., 2015). This is because relevant situational factors (e.g. salient group membership) may affect the meaning of social support and hence influence its impact (Burleson & MacGeorge, 2002; Haslam et al., 2012; Viswesvaran et al., 1999). In order to capture this, there is value in researchers broadening their conceptualisation and assessment of social support (as discussed in Chapter 2; Lakey, 2010).

Relatedly, a more thorough understanding of when, how, and why social support is likely to exert certain effects may be gained from investigating a broader range of sport-related outcomes (i.e. beyond symptoms of burnout).

Adopting qualitative methods may address some of the above concerns. First, by allowing for both provider and recipient perspectives of social support to be captured. Second, qualitative methods may provide an insight into the 'how' and 'why' phenomenon (Gratton & Jones, 2010), by allowing the influence of situational factors (e.g. salient group membership) on social support's effects to emerge more extensively and in-situ (Sparkes & Smith, 2014). Third, qualitative methods may also allow for a broader range of performance and non-performance sport-related outcomes to be captured (e.g. holistic athletic development across psychological, psychosocial, academic-vocational, and financial life domains; Henriksen, Stambulova, & Roessler, 2010; Stambulova & Wylleman, 2014; Wylleman, Reints, & De Knop, 2013).

Conclusion

The results from this study demonstrate the unique pattern of main and interactive effects of stress and dimensions of perceived support (stress-buffering) and social identification (disjunctive and conjunctive moderation) upon dimensions of burnout. These findings confirm the observations from Study 1 (Chapter 3), by highlighting the deleterious associations that stress may have with reduced sense of accomplishment and exhaustion, as well as the beneficial associations that dimensions of perceived support may have upon reduced sense of accomplishment (whereas social identification may have beneficial associations with both reduced sense of accomplishment and exhaustion). However, the disjunctive moderation effects observed in this study further contribute to the mixed evidence for a stress-buffering effect in sport more generally. The disjunctive moderation effects also suggest that high levels of social identification may benefit the effects of perceived informational support upon exhaustion, yet *worsen* the effects of stress upon both reduced sense of accomplishment and exhaustion. Finally, the conjunctive moderation effect observed in this study offers further insights into how social identification may condition the influence of social support, where a stronger positive association between stress and exhaustion was seen when levels of perceived emotional support and social identification were high. By investigating how these variables relate to one another, these findings provide a more nuanced understanding of when, how, and which dimensions of social support are likely to exert certain effects upon sport-related

outcomes. Further insights could be gained by broadening the conceptualisation and assessment of social support – perhaps by utilising qualitative methods to capture both provider and recipient perspectives, the influence of situational factors, and a broader range of sport-related outcomes.

Chapter 5

A provider-recipient perspective on how social identity influences the design, provision, and receipt of social support

Introduction

As mentioned throughout the preceding chapters, the principal aim of this thesis was to conduct an investigation into the mechanisms of social support's effects upon sport-related outcomes using the social identity approach, with a view to better understand what constitutes effective social support. In Chapters 3 and 4, this was investigated by exploring when and how perceived support is likely to exert certain effects upon dimensions of burnout. Thus far, the experience of burnout symptoms seemed to be influenced by other contributory factors, as unique main and interactive effects were observed between stress, dimensions of perceived support, and social identification upon dimensions of burnout. Notably, the interactive effects observed in Chapter 4 suggest that social identities may indeed form the basis for stress appraisal and group-based support (Hartley et al., 2020; Rees et al., 2015), even to the extent that they might both *benefit* and *worsen* the effects of stress and social support upon dimensions of burnout. As such, investigating more closely how social identity influences social support may not only help to further explain the findings from Chapters 3 and 4, but may also help to explain when, how, and why social support is likely to exert certain effects. This could be achieved by broadening the conceptualisation and assessment of social support through the use of qualitative methods. Such methods would help to capture multiple perspectives of those involved in the design, provision, and receipt of social support, as well as the influence of situational factors, and a broader range of sport-related outcomes (Coussens et al., 2015; Hayward et al., 2017). The purpose of the present study was therefore to investigate how social identity influences the design, provision, and receipt of social support.

Considering the above, this Chapter provides an original and unique contribution to knowledge by presenting the first empirical study to demonstrate when, how and why group-based identity processes influence the effects of helping behaviour in sport. This Study builds on and further probes the findings from Studies 1 and 2 (and the extant literature) by using qualitative methods and a unique conceptualisation of social support to better understand and demonstrate *why* social identity processes may influence the effects of social support in sport (thereby aligning directly with the overall contribution to knowledge made by this thesis).

As outlined in Chapter 1, the import of social support upon sport-related outcomes is considerable (e.g. Rees, 2016). For example, social support has been shown to have beneficial effects upon both performance and performance-related indices (Bakker et al., 2011; Freeman & Rees, 2008, 2009; Gillet et al., 2009; Rees & Freeman, 2010), as well as presenting a key

resource for managing the deleterious effects of stress upon wellbeing-related outcomes in sport (Carson & Polman, 2012; Hartley & Coffee, 2019; Kong & You, 2013; Kristiansen & Roberts, 2010; Lu et al., 2016). In this regard, investigating a broad range of sport-related outcomes (e.g. performance and dual-career attainment; Lavallee, 2019) will allow researchers to develop a better understanding of when, how, and why social support is likely to exert certain effects across multiple domains (Thoits, 1995, 2011; Uchino, 2004; Uchino et al., 2012). For example, by investigating how social support can be used as a vehicle to promote learning and self-discovery experiences that facilitate the development of psychosocial life-skills (holistic development; Petitpas, Cornelius, Van Raalte & Jones, 2005). However, quantitative methods are limited by the number of variables that can be investigated (e.g. due to concerns over computational power) and are thus limited in their ability to investigate a broad range of ecologically valid sport-related outcomes. In contrast, qualitative methods may allow a broader range of sport-related outcomes to emerge more extensively and in-situ, while also providing an insight into the 'how' and 'why' phenomenon of social support's effects (Gratton & Jones, 2010; Sparkes & Smith, 2014).

Adopting qualitative methods may also allow for a more in-depth investigation into underpinning mechanisms by broadening the possibilities for how social support is conceptualised and assessed. For instance, because social identification may theoretically be strongly aligned with perceived availability of support (i.e. through influencing the appraisal of coping resources through the self-categorization process; Bianco & Eklund, 2001; Rees et al., 2015; Lavallee et al., 2019), only perceived support has been investigated up to this point in the thesis. Yet, as outlined in Chapter 2, social support is a complex and multidimensional construct, where functional support is typically divided into both perceived *and* received support (Lakey, 2010; Vangelisti, 2009). Accordingly, it is important to conceptualise and capture both of these perspectives, as perceived and received support are considered distinct constructs, may show unique relationships with outcomes, and/or interact under certain circumstances (Dunkel-Schetter & Bennett, 1990; Haber et al., 2007; Hartley & Coffee, 2019; Uchino, 2009). In this regard, adopting qualitative methods would allow for simultaneous investigations into the role of both perceived and received support upon sport-related outcomes.

An important limitation in the extant literature is that many researchers have focused on the *recipient's* experience of social support (e.g. Coffee et al., 2017; Defreese & Smith, 2013, 2014; Freeman et al., 2014; Freeman et al., 2011; Lu et al., 2016). However, it could be argued that the effects of social support upon performance and non-performance sport-related

outcomes are the product of a mutual synergistic exchange between both providers and recipients (Hayward et al., 2017; Uchino, 2009). Qualitative methods would, again, help broaden the possibilities for studying all aspects of social support by capturing the relational perspectives of those involved in social support exchanges (as they may differ; Coussens et al., 2015; Lakey & Drew, 1997; Rees, Freeman, Bell, & Bunney, 2012). In this regard, studying a range of individuals involved in social support can offer valuable perspectives to inform when, how, and why social support is likely to exert certain effects upon sport-related outcomes (e.g. by studying the facilitating or constraining influence of systemic factors and stakeholders; Cruickshank & Collins, 2013; Fletcher & Wagstaff, 2009). As such, qualitative methods offer the means to capture both stakeholder, provider, and recipient perspectives of social support.

Related to the import of capturing a range of perspectives in the study of social support mechanisms (e.g. perceived, received, stakeholder, provider and recipient perspectives), there are several reasons for also capturing how social identity processes might influence the dynamics of social support (Hartley et al., 2020; Rees et al., 2015). First, shared social identities could make social support possible by providing a common point of reference (e.g. by predisposing individuals to achieve consensus over desirable social support behaviours; Haslam et al., 1998; Haslam et al., 2012). Second, the experience of stress and social support are structured by self-categorisation, where the appraisal of stress and perceived availability (and actual receipt) of coping resources (such as social support) is shaped by salient group membership (i.e. 'can *we* cope' as opposed to 'can *I* cope'?; Campo et al., 2018; Haslam et al., 2012; Rees et al., 2015). Third, social support is almost always situated within (and constrained by) wider situational factors (e.g. salient social identities; Hartley et al., 2020). For example, while shared group membership may facilitate more gracious and effective social support exchanges (e.g. Greenaway, Wright, Willingham, Reynolds & Haslam, 2015), it may equally lead to disengagement if support is seen to conflict with a group's identity-based norms (Butler, 2016; Butler et al., 2018). As such, investigating and capturing how social identity influences the design, provision, and receipt of social support may help to explain when, how, and why social support is likely to exert certain effects.

The purpose of the present study (and Chapter) was to investigate how social identity influences the design, provision, and receipt of social support. This was achieved by capturing stakeholder, provider, and recipient perspectives of social support as situated within the wider social context of a national Rugby Academy programme in Scotland. Considering that differences may be noted across multiple perspectives of the social support experiences (e.g.

Coussens et al., 2015), that social support is likely to be contextually bound, and that researchers are unlikely to be completely detached from their line of inquiry – a naturalistic research paradigm was adopted for this study. This allowed for comprehensive and ecologically valid understandings of individuals' social support experiences and their relationship with a range of (performance and non-performance) sport-related outcomes (Freeman et al., 2011; Guba & Lincoln, 2004; Hassell et al., 2010). In line with the above, specific research questions were formulated in conjunction with findings from the first two studies of this thesis. Specifically, it was hoped these research questions would allow the main and interactive effects observed in Studies 1 and 2 to be further triangulated and investigated using different methods, while also further explaining the dimensional differences observed thus far:

1. How does social support and social identity contribute to (performance and non-performance) sport-related outcomes in Academy Rugby?
2. How does social identity influence the design, provision and receipt for different types (e.g. perspectives and dimensions) of social support in Academy Rugby?

Method

Research Context

This study was conducted as part of a research project funded by the National Governing Body (NGB) for Rugby in Scotland, Scottish Rugby's 'Rugby for Life' programme, a holistic support programme designed to improve player welfare. As such, this study was conducted with the NGB's performance-pathway sub-populations (termed the 'Rugby Academy') spread across four regional training centres in Scotland. These Rugby Academy sub-populations included stakeholders, dedicated teams of multidisciplinary support staff, and players.

Design

A cross-sectional design with qualitative methods of data collection was adopted. Qualitative methods were well-suited to capturing and triangulating stakeholder, provider, and recipient perspectives more extensively and in-situ, by offering an insight into the 'how' and 'why' phenomenon of social support's effects through the generation of relevant themes (Gratton & Jones, 2010; Sparkes & Smith, 2014).

Different roles assumed by the Rugby Academy sub-populations warranted different methods for eliciting data. For instance, semi-structured interviews were well suited for gathering individual accounts (Braun, Clarke & Weate, 2016) – in this case, of social support exchanges and the influence of social identity amongst stakeholders and players. However, individual interviews were deemed unsuitable for pursuing this inquiry in the support staff sub-population, as support in sport is commonly provided by *teams* of multidisciplinary support staff (Cruickshank & Collins, 2013; Fletcher & Wagstaff, 2009; Reid, Stewart & Thorne, 2004). As such, focus groups were deemed more appropriate for investigating the provision of social support by teams of support staff, as this method allows for group discussion and exploration of shared perspectives around a topic (Braun et al., 2016). Therefore, in order to capture suitably diverse insights from all Rugby Academy sub-populations, a mixture of face-to-face semi-structured interviews *and* focus groups were used. First, semi-structured interviews were used to investigate the design, provision, and receipt of social support amongst stakeholders and Academy players, respectively. Second, focus groups were used to investigate the design, provision, and receipt of social support by teams of multidisciplinary support staff, as staff discussions could provide dynamic and shared understandings of social support (thereby allowing the group to become more than 'the sum of its parts'; Krueger & Casey, 2009).

Sampling and Recruitment

Sampling was guided by preliminary analysis alongside the process of data collection, with collection ending when data saturation was achieved. Participants were only recruited if they were over 16 years old and able to provide voluntary informed consent on the basis of having a full understanding of the research and participant expectations. To ensure a broad range of experiences and views, a cross-section from the Rugby Academy (N = 36) was gathered using purposive sampling bespoke to each sub-population (Ritchi, Lewis, & Elam, 2003), as follows:

Academy stakeholders. Participant suitability was determined through collaborating with the NGB's human resources (HR) team. Based on the study research questions, the only inclusion criteria were that participants needed to be stakeholders in the organisation's design of performance and non-performance related social support (i.e. working directly or indirectly with player support programmes). To maximise variation in perspectives, stakeholders were purposively sampled to include a mix of males and females from different age and staff groups

(specifically, directorial- and managerial-level staff from performance, human resources, and medical teams). A total of six stakeholders were identified, approached and successfully recruited via email invitation (two females; ages ranging from 35 to 54).

Academy players. Participant suitability was determined through collaborating with regional Academy managers to list their cohort of players. Based on the research questions, the only inclusion criteria were that participants needed to be current Stage 2 (supported but not financially contracted) or Stage 3 (supported and financially contracted) Academy players and therefore in the receipt of social support. To maximise variation in perspectives, 13 eligible male and female Academy players (including a range of age groups and contracted stages; two Stage 3 athletes) were identified and approached via email invitation. A total of 12 participants were recruited (three female; ages ranging from 17 to 26 years), containing players from all four Academies. Only one eligible participant did not respond to the invite for study participation.

Academy support staff. Participant suitability was determined through collaborating with the NGB's HR team and regional Academy managers. Based on the research questions, the only inclusion criteria were that focus group participants needed to be working as part of a team of Academy support staff, and had to be providing performance and/or non-performance related support to Academy players. To ensure diverse and representative views, 20 eligible male and female members of support staff from all four Academies and varied professional support disciplines were identified and approached via email invitation. A total of 18 participants were recruited (two female; ages ranging from 27 to 55 years). There were two eligible members of support staff from one Academy (male strength and conditioning coaches) who responded to the invite for study participation but were unable to participate on the day of data collection.

Data Collection Tools

Semi-structured interviews and focus group schedules. A predetermined semi-structured interview schedule was derived with reference to social support and social identity literature in sport. A semi-structured approach was used for interviews and focus groups given its flexibility in questioning, whereby the lead researcher could exclude or elaborate on certain questions as needed (Robson, 2002), yet keep the interview/discussion centred around the research objectives (i.e. when, how, and why social support is likely to exert certain effects upon a range of sport-related outcomes). Prior to data collection, the lead researcher undertook

four pilot interviews (not included in dataset) with other researchers to check and revise interviewing technique and schedules so they addressed the study objectives. The pilot interviews also served to prepare the researcher for the encounter itself in terms of experience and navigating potential challenges.

The interview and focus group schedules contained 12 open-ended questions with prompts to encourage discussion (see Appendix 2; Patton, 2002; Rubin & Rubin, 2011). The schedule was designed to ease participants into the interview and started by asking what their role/s were and what types of support they provide and/or received. Several questions were then asked around their vision of effective support, their group identity, and how this identity influenced the provision and/or receipt of support. The remainder of the interview asked specific questions around support needs, gaps in support provision, and how these could be addressed. The precise wording of each interview schedule was adjusted to be relevant to the population in question (e.g. stakeholders, teams of support staff, and players).

Procedure

The Consolidated Criteria for Reporting Qualitative Research (COREQ; Tong, Sainsbury, & Craig, 2007) checklist was followed throughout to incorporate and report important aspects of the qualitative research process. Face-to-face interviews and focus groups were conducted in locations convenient for the participants (e.g. for one participant, the interview occurred in a public space where other people were present; Rubin & Rubin, 2011). Prior to data collection (and again on the day of data collection), participants were provided with study information (e.g. study purpose, procedure, use of audio-recorded data) and consent sheets that were developed in accordance with the General University Ethics Panel guidelines. Interviews and focus groups were conducted by the author, a male doctoral candidate and trainee sport psychologist with familiarity in qualitative interviewing. Stakeholder and player interviews lasted between 27-57min, while support staff focus groups lasted between 41–64min (repeat interviews were not needed). The author then transcribed all audio recordings verbatim (see Appendix 3 for an example transcript), which also served as part of the familiarisation stage for subsequent analyses. Following transcription and initial analyses, participants were provided with their transcript-copies and preliminary results for member checking to provide validity to their accounts (no participants provided comments or requested any changes; Smith & McGannon, 2017).

Analyses

Ontological and epistemological paradigm. Through a methodological chain of reasoning, the underlying ontological and epistemological assumptions of research are reflected in a study's aims and research questions (Braun et al., 2016; Demuth & Terkildsen, 2015; Poucher et al., 2019). Considering this, the interests of the present study (and thesis as a whole) were centred on the mechanisms of social support's effects upon sport-related outcomes, with a view to better understand what constitutes effective social support. This was also with a view to make theoretical and applied implications. As such, the present study necessitated an ontological approach that allowed for generalisations to be made beyond participants' experiences in the current dataset (i.e. that a mind-independent and external reality exists). Furthermore, given that the study purpose and research questions make moderately realist assumptions (i.e. that social identity and social support *are* genuine psychological constructs obscured by psychological and social factors such as the researcher and/or the participants themselves), a *critical* realist ontological perspective was adopted during thematic analysis (Atkinson, 2012). Critical realism is a post-positivist ontological perspective that assumes a 'hard reality' exists, and that this can (epistemologically) be uncovered imperfectly within data (e.g. the role of the researcher is critically recognised in this process; Braun et al., 2016; Haegele & Hodge, 2015).

Thematic analysis. Given the naturalistic design of the study, it was important that the chosen method of analyses captured the unique and variable nature of social support within the Rugby Academy sub-populations. Therefore, thematic analysis was chosen given its flexible approach to providing both descriptive and interpretative accounts of data (Boyatzis, 1998; Braun & Clarke, 2006), thereby allowing the research questions to be answered more fully.

While there is no standard procedure for thematic analysis, it is characterised by a number of flexible stages (Braun & Clarke, 2006). Analysis was conducted in five stages (Ritchie & Spencer, 2002), initially using an inductive approach followed by a deductive approach. Inductive analysis allowed for the generation of diverse and novel themes emerging from the data related to the research question, while deductive analysis allowed for patterns in the data to be linked to pre-existing theory (e.g. social support and social identity theory; Slater et al., 2015). To retain the bespoke insights gained from each sub-population's unique themes, data from each participant group (stakeholders, support staff, and players) were analysed separately, before bringing the three perspectives together in an interpretive analysis addressing the overall research questions of the study. The stages of data analysis are described below:

1. The inductive stage involved the researcher adding descriptive annotations of what participants were saying to their respective transcripts (McGannon, Hoffmann, Metz & Schinke, 2012; Schinke, Bonhomme, McGannon & Cummings, 2012). For each sub-population, three transcripts were chosen to provide a fair representation of the relevant dataset. Using descriptive annotations, the verbatim text was then divided into meaningful 'chunks' containing discrete segments of information, each of which were assigned descriptive codes that reflected the meaning of the data segment in relation to the topic covered during interviewing. These descriptive codes formed initial coding frameworks (i.e. three separate coding frameworks for stakeholders, support staff, and players, respectively).

For example, the following phrases were given the same descriptive annotation ('support for education'), and then grouped together under the same descriptive code of 'Educational support' within the player dataset:

"Yeah... the likes of Adam setup the college course" (Jerry, Stage 2 Player)

"They obviously give you the help with working and your academy training with college and uni, cause they'll speak to like lecturers and stuff like that" (Hugh, Stage 2 Player)

2. Each initial coding frame was then applied systematically to the remaining transcripts from their respective datasets using NVivo (v12), adding new descriptive codes as they were generated from the data. Coding continued until all the data were divided into meaningful and discrete segments and assigned a descriptive code (Strauss & Corbin, 1998), resulting in three distinct inductive coding frameworks (one for each sub-population; see Table 5.1).

3. Once all text had been coded, codes were revisited and revised within their respective datasets. Through this constant comparative process, a group of codes were considered together for similarities and grouped together as a descriptive theme if they represented a patterned group of meaning that captured some aspect of the research questions (Braun & Clarke, 2006). Accordingly, related and relevant codes were

subsumed and reinterpreted to form higher-order descriptive themes, resulting in three distinct sets of descriptive themes (see Table 5.1).

For example, within the players' dataset, content from the codes '*Identity conditioning behaviour*' and '*Identity purpose and values*' were deemed to be related and therefore subsumed into the higher-order descriptive theme called '*Influence of identity*'.

4. For the deductive phases of analysis, the research questions and pre-existing theory were used in a recursive process to synthesise the descriptive themes across all three coding frameworks into analytical sub-themes (i.e. that were common to all three sub-populations; Patton, 2002; Scanlan, Ravizza, & Stein, 1989). This required common descriptive themes to be identified across all distinct sets of descriptive themes (i.e. from stakeholders, staff, and players) and brought together by reinterpreting them as analytical sub-themes (i.e. informed by theory). This seemed appropriate given that all inductive themes across the three descriptive coding frameworks could be interpreted using pre-existing social support and social identity theories (e.g. Rees et al., 2015; Slater et al., 2015).

For example, the descriptive themes '*Role models*' (from Stakeholders), '*Identity shaping support provision*' (from Support staff), and '*Identity conditioning receipt*' (from Players) were compared and identified as being representative of how social identity theory is posited to facilitate social support exchanges (Hartley et al., 2020). These descriptive themes were therefore integrated into analytical sub-theme 9, entitled '*Social identification creates common ground for effective support exchanges*'.

5. Finally, a thematic map was created to facilitate the interpretation of analytical sub-themes (Sparkes & Smith, 2014). Emerging sub-themes were reiteratively compared with one another and pre-existing theory, as this allowed for amendment and reinterpretation of sub-themes into overarching analytical themes to ensure they were distinct and relevant to the research questions (see Figure 5.1; Braun & Clarke, 2006).

Through this process, sub-themes 1-3 seemed to be indicative of how social identity shaped the structural aspects of social support and were thus grouped under a higher-order analytical theme titled *'Social identity characteristics define the bespoke purpose and structure of support'*. The remaining sub-themes 4-9 seemed to be indicative of how and why social identity influenced the functional aspects of social support and were thus grouped under another higher-order analytical theme titled *'Identity processes allow the social support exchange to be adaptive and meaningful*'. Both higher-order analytical themes were characteristic of when, how, and why social identity influenced the mechanisms of designing, providing and receiving social support.

Table 5.1

Study 3 (Chapter 5) descriptive coding frames for stakeholders, support staff and player sub-populations

Sub-population	Descriptive theme	*Codes*
Stakeholders	Structure & Governance	*Regional differences, remit of support, stakeholder-provider-player relationship*
	Effective support barriers	*Admin & timing, Buy-in, Favouritism, Not meeting player needs, Player foresight & engagement, Resources*
	Identity shaping design	*Cliques & subgroups, Identity emotional value & importance, Identity values, interests of ingroup, return on investment*
	Effective support mechanisms	*Inferring effectiveness, Internal clarity & competence, Perceived baseline match, Player support needs*
	Functional support	*Support for non-performance, Support for performance, Support for transitions*
	Mechanisms of identity's influence	*Cloning of behaviour, Identity conditioning provision, Identity conditioning receipt, Role models*
Support staff	Purpose	*Developing autonomy, Purpose of support, unidimensional identities*
	Support available & provided	*Multidisciplinary nature of support, Provider support needs, Support for career & education, Support for performance, Support for sport-life balance, Support for transitions*
	Challenges to holistic support	*Resource challenges, Stigma*
	Influence of ecology	*Characteristics of Academy Rugby, Regional characteristics, Sociocultural influences, Stakeholder-provider relationship*
	Influence of identity	*Academy identity vs other identity, Academy values, Values shaping behaviour, Purpose of values, SRU Identity*
	Structural support	*Parents, Support providers*
	Delivery	*Collaborating with other providers, Disagreement between providers, How support is provided, Outsourcing specialist support, Providing support outside role*

(Table 5.1 Continued)

	Design of support	*Identifying player support needs, Making support exceptions, Players' stage shaping provision*
	Effectiveness	*Buy-in, Importance of rapport, Inferring satisfaction, Inferring effectiveness, Mechanisms of dissatisfaction, Mechanisms of satisfaction*
	Identity shaping support	*Identity conditioning receipt, Identity shaping support provision, Role models*
	Recipients	*Motives for players, Player perception & maturity, Player understanding of support*
Players	Structural network	*External support providers, Parental support, Peer and other support, players*
	Functional support	*Career support, Education support, Perceived support, Received support, Support for wellbeing*
	Support needs	*Balancing commitments, Female player needs, Gaps, Support needs, Transition experiences*
	Influence of identity	*Identity conditioning behaviour, Identity conditioning receipt, Identity purpose & values, Identity significance*
	Recipient perspectives	*Mechanisms of satisfaction, Perceptions of effective support, Perceptions of provider competence, Understanding support purpose*
	Support exchange	*How support is provided, Inferring support needs, Rapport, Social barriers*

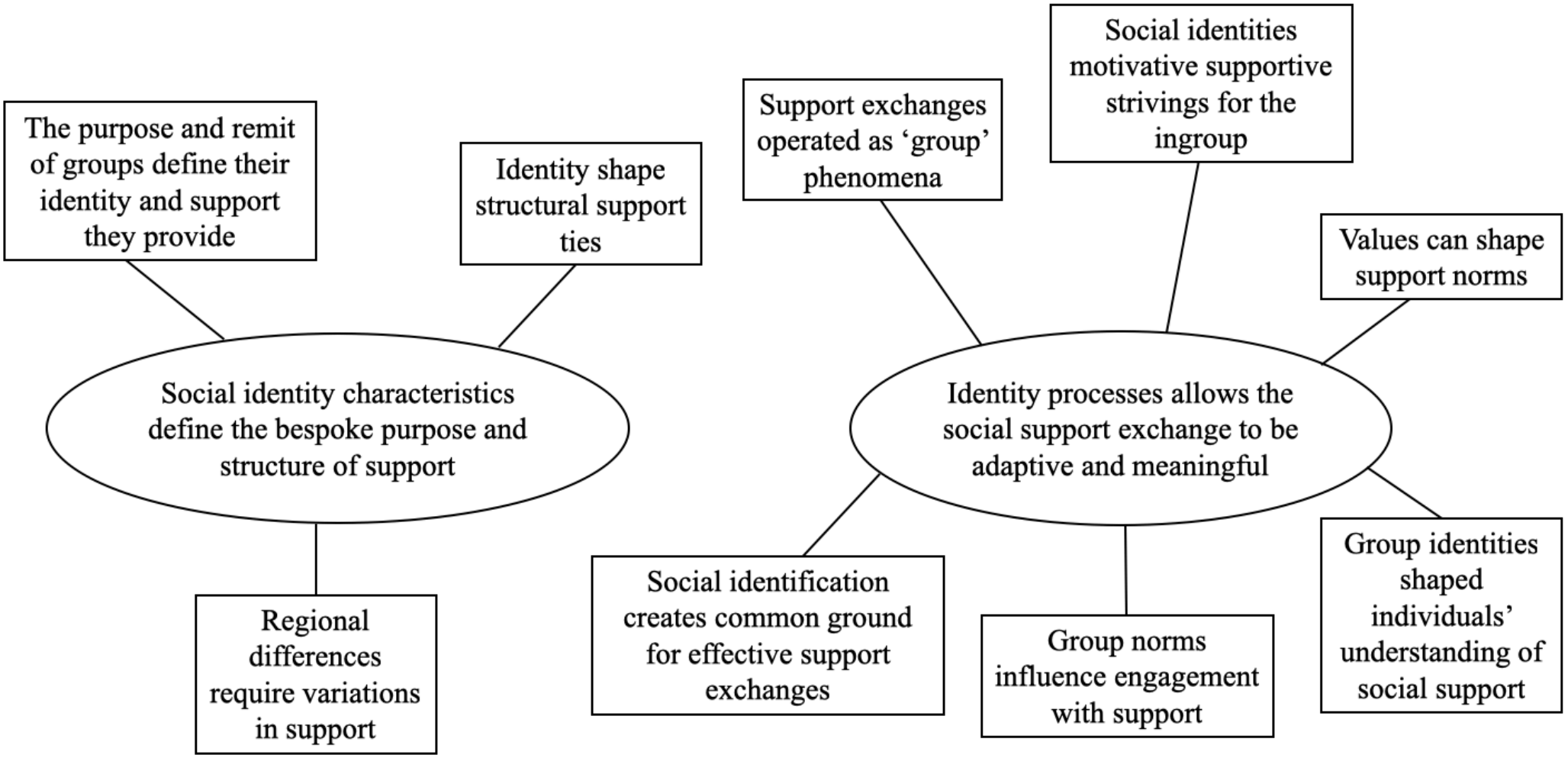

Figure 5.1. Study 3 (Chapter 5) thematic map for analytical themes and sub-themes.

Reflective Practice

To aid reflexivity in the phases of data collection and analysis (and to record the influence of researcher characteristics; Tong et al., 2007), the lead researcher utilised reflective practice in the form of field notes and a reflective journal (see Appendix 4; Etherington, 2004) and engaged both supervisors as critical-friends (e.g. to challenge and develop interpretations made; Smith & McGannon, 2017). This served to manage the impact of the researcher on the data collection process and document how their broader perceptions and understandings of the world influenced the analytical process (Holmes, 2010).

Results

Findings from the sub-themes generated during thematic analysis are grouped under higher-order analytical themes to collectively address both research questions. Quotes typical of each theme (using pseudonyms) are also presented to illustrate interpretation and synthesis.

Analytical Theme 1: Social Identity Characteristics Define the Purpose and Structure of Support

Sub-theme 1: The purpose and remit of groups define their identity and the support they provide. It is necessary to understand the structure of identities and support in context. Stakeholders explained how the Rugby Academy was situated within the context of a National Governing Body (NGB) – an organization which had its own purpose of supporting athlete welfare and holistic development alongside performance.

> *"I fundamentally believe that the key driver for us all is about making Scottish Rugby within the boundaries of Scotland successful and accessible to all. Going back to our responsibility as a governing body, that we have to develop better people as well as better players"* (John, Stakeholder)

This seemed to influence the purpose and identity of the Rugby Academy. This is reflected in the accounts of stakeholders and teams of support staff who referenced the NGB and Rugby Academy's values to explain how the standard of support provided helped to achieve both performance, holistic development, and player welfare. For example, values such as 'better people make better athletes', implying that an athlete who is supported holistically on- and off-the-pitch will be a better functioning individual.

"when we do quarterly reviews, we're looking at things like work-ethic or responsibility […] that's obviously not just rugby its overall making them we're looking at them being independent. Or, you know... good human beings who are gonna get jobs in other roles" (Richard, Physiotherapist)

Accordingly, the Rugby Academy's purpose and identity influenced the design of social support. For example, stakeholders, support staff and (to a lesser extent) players indicated how support was multidisciplinary in nature and included a complimentary focus on performance, dual-career and personal development in order to support both performance, holistic development, and player welfare.

"[Manager] *Pete's been driving me quite hard for my studies and making sure that they're on track and they're going as well as they can, so he pushes me in that way and as a Stage 2 it's very focused on... your studies come first and you train around that, rather than you train then your studies come around your training. So, there's always an option of when the S&C coaches puts up the schedule of the week, they're always saying 'look at university schedules and get back to us'* " (Nemo, Stage 2 Player)

Sub-theme 2: Regional differences require variations in support. Although there was a consistent identity and social support structure throughout the NGB and Rugby Academy, there were also regional variations in terms of regional identities (e.g. rural vs. metropolitan), support needs, and available resources (e.g. practical limitations). In other words, while there appeared to be a general alignment with a super-ordinate identity (i.e. Scottish Rugby), the operationalisation of this super-ordinate identity was regionally distinct.

"We have to have a national programme that's delivered regionally […] the academy structure that we have is very much a national focus, national messages, delivered regionally, that does reflect the region that the players are in […] there is slightly more leeway now for a regional flavour on delivery than there has been in the past" (Robert, Stakeholder)

"at the core of what we do is 'develop better players and people', that is our core goal, and then there's 5 sort of peripheral sort of uhm... sort of factors that we've identified around that, so uhm, enjoyment's one of them, so that's a Scottish Rugby value. […] [Billy: planned and organised] planned and organised, is the third one... Developing and sharing knowledge […] because we have a network of players developing and

sharing knowledge is really important because we couldn't run our academy with just our staff" (Marlin, Academy Manager)

These regional identities seemed to be freely 'mouldable' through values that were of importance to each regional Rugby Academy. For example, support staff and players often co-created 'Rugby Academy Values' and implemented these using culture-checking behaviours. These included discussion-based meetings, praising behaviours in line with their values (and challenging those that were not), forfeits, and reminders of shared responsibility.

"rather than just being an academy that is 'part of Scottish Rugby', which is where it started with, now, we're trying to develop our own identity, and then something that actually sits back about 'yes we're not any different to what's going on, but we are different' and it's something that we can actually hang our hat on in terms of as a group, and I think, you know, exactly what William said around being accountable is, you know, there were issues in the beginning, […] the consequence of actually not being accountable" (Adam, Academy Manager)

"I think our club and Scottish Rugby have kinda the same set of values, we want to represent ourselves really well, on and off the pitch, an that's really important to how we, cause it will help us play better" (Donald, Stage 3 Player)

Support staff and players explained how these regionally distinct identities were manifested through different support related behaviours, so that the delivery of social support was different in each Rugby Academy. Stakeholders and support staff indicated these variations were necessary for each Rugby Academy to address support needs that were of historic or salient importance to them. For example, values such as '*right kit right time*' helped to address the scheduling challenges experienced by rural Academies. As such, various sport-related outcomes were sometimes attributed to the beneficial influence of these regional identities and their associated values.

"Each region has different challenges in terms of how much support they can give that player, so in terms of what Elliot's saying and in some of the, so like, in the Caledonia region [a rural Academy] *where it's quite wide-spread, there's a lot of satellite centres, so there's, they probably don't get as much direct support as what they would here* [a metropolitan Academy] *where it's a bit of a smaller region, everyone comes to us, and there's room so we can afford to actually give them a bit more"* (Larry, S&C Coach)

"*we just thought that ehm, that before in the past the culture hasn't been up to scratch, ehm, per se, and the folk will tell you the same, we're honest about it – it wasn't, it wasn't there like, we, it just wasn't in that mindset where we could really push on […] we said, eh, 'what do you think we're all lacking?' And, that kind of thing, and said 'right how are we going to sort this out?' And so em, it was really good just to sit down and talk about this kind of thing and then iron some stuff out, and so obviously you get that accountability: right kit, right time, 100% effort, and it's just those 3 things and we've just all been working on them and eh, its true, we're, very rarely people are late now, I don't think I've... the only time... actually I can't remember a time someone was late to training"* (Rickie, Stage 2 Player)

Sub-theme 3: Identities shape structural support ties. Structural social support ties seemed to be curated or pruned in order to achieve outcomes that were consistent with each Rugby Academy's identity. For example, due to the Rugby Academy's identity of promoting holistic development, support staff expressed a need to cultivate close relationships with other support staff to help promote this. Specifically, because this would help staff to develop a shared-understanding of players' holistic support needs, while also improving their understanding of how to use other staff's expertise to provide for those holistic needs (and thus be identity consistent).

"its very hard sometimes to put it into sort of 'pillars of support', because I think they all 'blend' together in terms of; the medical crosses over into the physical, the physical crosses over into the rugby, and then behind it all the support in terms of parents, and nutritional, high performance behaviours all affect how they perform in each of those aspects" (Adam, Academy Manager)

"we then do share it within the group on various sorts of levels, especially when it comes to like specific needs that they might have, so I would look at the more holistic side from a coach and the person, so I'm probably linked-in quite heavily to a performance lifestyle, as is Gregor. From the medical point of view, sport psychology is also a level of support that we can utilise, but we also have a wider network of mental skills support, so we kinda explore that a bit, so that kind of falls under physio, in and around guidance of the rugby lead, and Jordan's the kind of overarching person on top of that kinda either troubleshooting with it or supplying us the support that we need or guidance within that where needed" (Magnus, Coach)

Similarly, in order to support players' educational development, some rural Academies curated supportive relationships with external support providers in order to source educational co-ordination or advice.

> *"asked Marlin like what I could do, how I could juggle it, and then I've just had a meeting with Marlin and Shaun about potential, potential ideas and they're gonna put me in touch with the guy in Glasgow so the like for like of Marlin but in Glasgow, and he has a good education background so they said he'll help a lot"* (Sean, Stage 2 Player)

Conversely, support staff indicated that high levels of parental support may prevent players from developing autonomy. Accordingly, in order to be more identity consistent and promote players' holistic development, support staff could strategically encourage players to reduce their level of reliance on parents and thus facilitate their development of autonomy.

> "*now, you're far more likely to have the parent phoning you directly saying 'how does this happen, how does that happen?' and their far more inquisitive which means the actual young person's actually got a lesser skillset of that, whereas once upon a time you'd have got a timetable schedule, you need to be somewhere, you did your research because you had to, and we find that particularly struggles from the current system of rugby within Scotland*" (Jordan, Academy Manager)

> *"I think the way we do that generally is we put a little bit of onus back on the player […] to take some ownership of that so we're not chasing them every week, they're coming to us with the pinch-points, so that we can work around it"* (Pete, Academy Manager)

Analytical Theme 2: Identity Processes Allow the Social Support Exchange to be Adaptive and Meaningful

Sub-theme 4: Support exchanges operated as 'group' phenomena. Social support typically operated as an exchange *within groups*. For example, stakeholders and support staff indicated a need to liaise closely with one another to develop a shared multidisciplinary understanding of support needs. They also regularly needed to collaborate with one another in order to provide effective multidisciplinary support. Group-based support exchanges were therefore adaptive, as one form of support could be given priority over another in order to meet the most salient support needs. For example, coaching and strength and conditioning support

might be prioritised over physiotherapy and vocational support if performance enhancement was the most salient need.

> *"by coming together twice a week to do that whirlwind meeting we just had there prior to this one, we pretty much talk through all our players, needs are highlighted and discussed, so if we've got a concern about a player, whether it's a sport-specific concern or a behavioural concern, or something in their life out-with this, we can monitor that either formally or informally"* (Jordan, Academy Manager)

> *"we have players, a couple of four or five players who live together, and a couple have got unwell, so we then off the back of that have conversations about hygiene, about cleaning about how they do that about the food... we have players who need to gain weight for their position, so we then, the S&C, have conversations off the back of that about nutrition and general... so, there's all these different things that we pick up cause it falls into our category a bit more, or because that conversation comes up when they're injured or when they're discussing rugby"* (Richard, Physiotherapist)

Group-based support exchanges were also dynamic, as players could readily engage in support-related collaborations with a range of support providers or peers. Similarly, the provision of support from one provider (e.g. coach) often informed the delivery of another (e.g. S&C, physio).

> *"so majority of their support that I receive is through my coaches and my physios, so, coaches and physios are people I'd see pretty much every day when I'm training, so, if anything goes wrong, they're always there […] there's always email updates with things coming out. You've got like your WhatsApp where you've got your chats for your coaches and they'll always sort of put in it, you've got physios as well putting in, after every match, they'll ask for an update on sort of how your body is, if you're any, carrying any injuries. So, all through that, and then if there's anything that flags up to them they'll arrange to sort of meet you"* (Hugh, Stage 2 Player)

> *"we're all aware that, someone... like Joanna might relate quite quickly to somebody else just because of age, and so it happens there and then they can relate quite quick or […] we need to obviously intervene here'. Who is it? Gregor's got the better relationship with him, you'll maybe pick that up [points to Gregor], or in-situ, Richard's just picked it up as they flag"* (Magnus, Coach)

These group processes seemed to influence the perceived effectiveness of social support exchanges. For example, most players indicated that group-based support exchanges were effective due to facilitating timely responses to their support needs and due to facilitating collaborative support exchanges (e.g. through the use of group-based technology).

Sub-theme 5: Social identities motivate supportive strivings for the ingroup. Stakeholders, staff and players indicated that membership with their NGB and Rugby Academy held emotional significance for them. This emotional significance, in turn, motivated them to 'give back' to the NGB and Rugby Academy by striving for beneficial sport-related outcomes. For example, stakeholders and support staff indicated that working for the Rugby Academy motivated them to support players' holistic development.

> *"I think 'actually, I'm not just working for an organisation, but actually I'm working for 'Scotland'!* [laughter] *and I think, and when I see the community coming together, or the rugby fans coming together to see that community and the, the nation gets behind the team, and you think 'god, these are, these are players that we've grown through the game' […] that excites me about working here. Would everybody say that? I think possibly a few, yeah, I think people do say that. Everyone's exceptionally passionate who works here. And very committed to making a difference*" (Amy, Stakeholder)

> *"very proud to work here, very passionate about what I do, very important to me that we get the good outcomes"* (Jane, Stakeholder)

> *"We're all in the same game, just different departments"* (Robert, Stakeholder)

> *"to work for the NGB is quite a privilege […] there'll be a lot of people that'll want to do our jobs" – "I think generally people are really behind what Scottish Rugby are trying to do, and they're behind the team"* (Derek, Coach; Marlin, Academy Manager)

Similarly, the emotional significance associated with Rugby Academy membership motivated players to 'return the favour' to their Rugby Academies by striving for both performance and non-performance related outcomes. For example, Academy membership motivated players to strive for superior performances, to professionally engage with non-performance support, and to be ambassadors for the NGB. These strivings meant the NGB and Rugby Academy would be more likely to achieve both its performance and non-performance goals (e.g. supporting players' holistic development) and thus benefit the group collective as a whole.

> *"it's important that you're also respectful to fans and things like that […] just being humble and not taking what you've got for granted. Cause it's obviously a huge honour to play for Scotland at any level and to even be where I am, like, be in a position of being on Academy"* (Nemo, Stage 2 Player)

Sub-theme 6: Values can shape support norms. The characterising values associated with regional Rugby Academy identities seemed to influence support norms. For instance, support staff could strategically use their values to facilitate engagement with support amongst players, and/or to influence the effectiveness of supportive acts (e.g. supportive acts would be perceived as more important and thus more graciously received if they were consistent with the groups' values).

> "*the players are expected to sort of communicate a lot, cause communicate, communication especially in the Caledonia region is just spread over such a wide area, it's important for us to communicate sort of where we'll be, what we're doing, how we're getting on, injury wise"* (Sean, Stage 2 Player)

> *"those values just reinforce that we're there to work hard, and that if we're working hard for these coaches that are taking time to come and coach us, they're doing the same for us? They're working hard to make sure we've got everything that we need and we kind of repay them by following these values and sticking to what we're told"* (Sheila, Stage 2 Player)

> "*if been drink involved etcetera at the weekend, or, behaviours and it's not quite meeting what we're expecting, I have the ability that – we as a team, we talk a fair amount and class our values and what we're aiming for – and I can project that through to the athlete when we're on the physio plinth, so to speak, and go: 'well, do you think that's a wise choice?'"* (Brian, Physiotherapist)

Certain values also influenced the way in which support was provided by staff, for example, by providing additional support over and above their role remit if doing so was in line with their identity-values. The inverse was also discussed, where less support was provided if identity-values were being violated. For example, if a player's behaviour (e.g. displaying autonomy and good work ethic) was in line with their Academy's values ('accountability'), this would warrant a higher tier of support from staff (and vice-versa).

"we'll give them a little bit more additional S&C support, we will give them a bit of nutritional advice, they will potentially see Brian and get a bit more support which they're not 'technically' in terms of that level due to get, and I think if we were to be honest about it, I think the values does shape the support we give em' rather than the 'level', cause if people aren't accountable, what do we say? [Luke: yeah that's true] 'Right well, phhw, you got a month to sort it out otherwise we're changing where we are'... and it references back purely to the expectations that are there. Cause I think we've all backed ourselves that if players turn up at the 'right time, right place, with the right kit and work 100%', they'll give 100% effort. Then we're all good enough as coaches and individuals within our areas that should make them better" (Adam, Academy Manager)

"Certainly from my point of view that identity has a big impact on what I deliver to them. Eh, for example there's a Stage 3 guy, they're given supplements, that Stage 3 guy I was giving the supplements from, he doesn't get them, because, the other parts, 'turn up on time, bring the effort, bring the right kit', those three parts weren't being delivered by him, so, there wasn't merit in giving him the supplements" (William, S&C Coach)

It therefore seemed that support staff and players were willing to provide and utilise support 'above and beyond' if it meant being consistent with their Academy's identity-values. This created logistical difficulties by clashing with the NGB's support parameters sometimes (e.g. managers having to outsource additional support to remain values-consistent).

Sub-theme 7: Group identities shaped individuals' understanding of social support. Support staff and players indicated that group identities shaped individual understandings of social support in three distinct ways, which had implications for the perceived effectiveness and satisfaction with support exchanges. First, group identities seemed to influence individuals' understanding of their own support needs. For example, both staff and players indicated that Rugby Academy identities were often created to make the group's most pertinent support needs more salient and more addressable.

"people have the perception that the Borders' players aren't fit, so we want them to be athletic, but we want to be mean, and then we've got that word 'dogged' that comes from it, and we think that encompasses us as a region" (Adam, Academy Manager)

[Interviewer: what does effective support look like for a player?] […] "making them the best player inside and out of rugby, so say like being able to live by themselves and eat well, know what they have to eat, and sort of get a good lifestyle as well as being able to play rugby" (Sean, Stage 2 Player)

Second, group identities seemed to influence individuals' understanding of why support was provided and how to access it. For example, compared to newer players, stakeholders and support staff displayed a richer understanding of non-rugby support. However, over time and with exposure to the Rugby Academy environment, newer players seemed to adopt group norms and improve their understanding of non-rugby support (for example, how it impacts upon performance and wellbeing outcomes).

"if we can maintain a healthy balanced individual, those rugby outcomes will be better, and as we move out of their game at whatever level that is, they'll be better people and more equipped to be able to cope with those the challenges that undoubtedly happen when you leave any environment" (John, Stakeholder)

"you see my bit's easy cause, it's the rugby: it's running around with a ball, catching, passing, tackling, that they see really important cause they want to be rugby players, that don't necessarily get the rehab and prehab and it's... they're all at different stages and most of the younger players that we deal with are, are just 'rugby, gym' and that's all they see as important... yeah, this was, it's ardual, how do get that education, to their understanding to see it's all joined up, it's all one? It's a Rugby Academy and it's about them, and they're all in there and not just 'rugby's here, S&C's here, physio's here, sport psychology, nutrition, everything else in different areas'. So, it's trying to get the, them to see it's all 'one package' and buy into it…" (Derek, Coach)

"Unfortunately in rugby there's a lot of injuries, so you could be beside a seasoned professional whose long term injured, and they'll see that as an opportunity to improve themselves, and to come back fitter and more robust than they went away from it, and that sometimes is a really steep learning curve for young players" (Jordan, Academy Manager)

Finally, group identities seemed to shape individuals' understanding of support perceived to be available and actually received. If support was considered to be normative by a group of players, there seemed to be a greater alignment between their understanding of

support perceived to be available and support actually received. For example, stakeholders and support staff indicated that rugby-support would be considered more normative amongst groups of players (and their understanding of perceived and received support were thus well aligned for rugby specific needs). In contrast, stakeholders and support staff indicated non-rugby support may be considered more atypical, and therefore less likely to be sought-after by players. Indeed, male players' understanding of support perceived to be available and support actually received for non-rugby needs seemed to be less well aligned, and was often informed through their team-mates' vicarious support experiences. For example (and conversely), due to there being no professional rugby avenues for women, female players seemed to have a distinct sub-group identity which facilitated a superior understanding of non-rugby support.

> *"in terms of actual [mental health] support and knowing what's available... I don't think I know much about it, just generally, because it's never happened to any of my friends or any sort of thing"* (Oliver, Stage 2 Player)

> *"well, when I signed the contract to be a Stage 2 athlete, I had to ensure it that it didn't get in the way of my studies, so, there's a big promotion on... obviously it might be different for guys because they have that goal of like professional 'professional rugby' which they can live off, but for a female athlete its... you need to get your life in order first, or, as well as rugby because, although there are there are there are professional contracts happening, it's not really like a long term sustainable lifestyle just yet. So, they definitely they understand, say you can't make training or you can't make a session cause you've got, you got uni work they fully understand that. So they definitely, the managers and all the coaches fully understand that you have life commitments as well as rugby"* (Sheila, Stage 2 Academy Player)

Sub-theme 8: Group norms influence engagement with social support. Engagement with social support seemed to be influenced by the extent to which it was considered normal to do so amongst players. For example, some support staff indicated that newer players were often preoccupied with rugby-related support, and showed poorer engagement with non-rugby support. Similarly, the opinions shared by groups of players about non-rugby support appeared to be valued and replicated amongst other players.

> *"they wanted to come in and just do rugby. And that's sometimes hard for somebody to work out that you can't just do that"* (Jordan, Academy Manager)

"when you find out what the players are studying, they all tend to study the same thing" (Amy, Stakeholder)

There were also barriers to engagement with support when that support was considered atypical by the group. Staff and players indicated this could be due to concerns over how engagement with atypical support may be perceived and how it may affect individuals' standing within their respective groups. For example, engagement with mental health support was considered atypical by some players (despite staff indicating otherwise), who held concerns that engaging with such support would indicate 'weakness' and increase their risk for deselection.

"I think there's probably a little bit of a barrier there depending on the type of support you're referring for, whether players see it as being related to performance. You know, we've had a number of conversations with the players that blows up: 'why don't you come and speak to us?', 'oh, well, oh... I didn't want to, didn't want to discuss that with you' and all that sorta stuff and it's a long, it's trying get across to them, 'it's much easier to deal with the really small problem before it becomes a great big problem', so it's not a sign, you know, it's really hammering that message: 'it's not a sign of weakness' " (Pete, Academy Manager)

"that's the big problem at the moment, I would say, mental health stuff probably is available, but you have to go and seek it yourself, and people might not feel too comfortable doing that […] it's changing, but there still is quite a big stigma to towards mental health. Like we've, I've not really ever talked to any of the other Academy girls about it, it's not really conversations that we have" (Irene, Stage 2 Player)

Similarly, engagement with certain support providers appeared to be influenced by the extent to which it was considered normal to do so. For example, stakeholders and support staff explained how retired professional players could facilitate Academy players' engagement with non-rugby support. It seemed that this was because receiving support from someone perceived to be similar to the players (e.g. retired professionals) would be interpreted as being more trustworthy and credible.

"somebody from HR trying to sell this to players is not going to work... if I'm being honest like, you know, Amy or Jane can't, those guys standing up and tryin' to help players with this great support network they've got, they're all sitting there half asleep.

You put in a couple of ex-rugby players up there saying it to them? They're listening" (Michael, Stakeholder)

Sub-theme 9: Social identification creates common ground for effective support exchanges. Stakeholders, support staff and players said that identifying with a support provider facilitated social support exchanges, thereby improving the effectiveness of those exchanges. First, this seemed to be because shared identities facilitated rapport, which allowed for a more nuanced identification and understanding of an individuals' support needs and resources. For example, both staff and players indicated how rapport facilitated a superior collaboration between support provider and receiver, and how this facilitated a superior understanding of how to identify and provide for their respective support needs.

"just in conversations walking to the pitch, during the pitch, breaks, and a sort of social side of thing, getting to know the players bit more about what's going on" – (Derek, Assistant Coach)

Second, shared identities seemed to make individuals more effective and comfortable with seeking support. For example, most players indicated feeling more comfortable about voicing their support needs when they had rapport with supportive others, which would allow for more effective support collaborations.

"I think we all, we all get on pretty well within the academy, and, I think the support is there, I'd feel comfortable speaking to anyone if I had a problem... and expect, the staff as well. If I felt like, luckily I haven't, but if I was falling behind with uni or something like that, but I'd be more than comfortable going to Pete or any of my S&C or physios" (Nemo, Stage 2 Player)

Third, it seemed that shared identities helped to overcome barriers to accessing support. For example, stakeholders and players indicated that having close and trusting relationships improved the perceived accessibility of support. Reciprocally, stakeholders and players also indicated that having a historic record of providing timely, bespoke, easy-to-access, and effective support helped to build trust with certain support providers.

"It makes you more comfortable in asking questions and stuff like that, so I'd feel really comfortable talking to one of these coaches about, just going up to them and asking 'right, I'm doing, I'm struggling with this'. So like I say: 'I'm struggling with my footwork before tackles, can you help me out?' […] [Int: Why does that make you

comfortable?] It's just, it's easy. It, as I say, like support is making things easier, it's just easy and there's no stress" (Rickie, Stage 2 Player)

"I would say that one of the reasons why there might be some stigma attached is just 'when' we utilise the support. So, historically, we've maybe been too late at utilising certain or certain support, so, by the time we're referring a player, and actually that player's not in a good headspace […] people then associate getting support with really not being in a great place, or things going quite badly wrong" (Megan, Physiotherapist)

Finally, shared social identities seemed to improve the perceived trustworthiness and credibility of support received. For example, stakeholders, staff, and players indicated that support was often more graciously received and utilised when provided by team-mates or retired professional players, due to their perceived ability to 'identify with' and 'empathically understand' players' support needs. Relatedly, the level of stakeholders' involvement with the design and provision of social support was influenced by their level of shared experience with current staff and/or players. For example, it was indicated by most interviewees that stakeholders' and staff's level of shared knowledge and prior experience would influence their ability to understand the support needs of current staff and/or players. This had implications for the effectiveness of support exchanges by affecting the perceived credibility and 'buy-in' of support.

"…a professional coach, one of the pro team coaches, which a lot of these guys will really look up to, might have a message and they might instantly buy into that, even though it could be completely detrimental, they'd be very satisfied just by being in that environment" (Jordan, Academy Manager)

"I respect William massively because he's top class 7's player, he knows what he's talking about, and I feel yeah, cause it obviously, I do trust what he says because he's been there and done that, like... [Int: Is that why? Because...] He's been, he's done it. So like, well obviously, Luke as well, he's done the likes of Powerlifting and that, he's like competed so he knows what he's talking about as well […] he's been there, so like; if he's telling you to do something maybe he's done it, so that maybe will give you like, you'll think 'oh well he's done it so, and he's made it to the top so, it might help me get there' " (Jerry, Stage 2 Player)

Discussion

The purpose of this study was to investigate how social identity influences the design, provision, and receipt of social support in a Rugby Academy programme. Using a naturalistic research paradigm, semi-structured interviews and focus groups were conducted with Rugby Academy stakeholders, teams of support staff, and players and analysed using thematic analysis. The research questions are answered below through discussion of the study's two main higher-order analytical themes.

RQ1: How does social support and social identity contribute to sport-related outcomes (e.g. performance and non-performance outcomes) in Academy Rugby?

As discussed in Analytical theme 1, the findings indicate that social identities influenced the purpose and structural aspects of social support, which may influence a range of sport-related outcomes. There appeared to be tiers to this, whereby an abstract super-ordinate identity (i.e. 'Better people make better athletes') emerged from initiatives to develop the purpose of the wider group collective (e.g. the NGB's aim to promote holistic development). This super-ordinate identity appeared to operate, in turn, through regionally distinct sub-identities in each Rugby Academy, each of which demonstrated alignment with the super-ordinate identity but also espoused unique values and support behaviours. This is in line with findings from organisational and collective-identity research which suggests that social identities are arranged hierarchically, where lower-level more concrete identities (e.g. teams and Academies) are nested within higher-level more abstract identities (e.g. Scottish Rugby as a collective; Hogg & Terry, 2000; Hornsey & Hogg, 2000; Peters et al., 2012). Furthermore, self-categorisation theory would suggest that an individual's sense of self can be defined at multiple levels of abstraction, and that individuals can engage in self-stereotyping where their support-related behaviours are structured by their group identity's defining content (e.g. providing support for performance and non-performance outcomes 'to promote holistic development'; Turner, 1985). In this way, group members were able to strategically draw on different tiers of their social identity in more or less abstract ways in order to adaptively influence the purpose and structure of their social support and thereby address the group's most salient performance and non-performance support needs (Haslam, Postmes & Ellemers, 2003).

The influence of social identity on sport-related outcomes through the adaptive shaping of social support can be seen in the findings of this study. For instance, the emotional

significance associated with Rugby Academy and NGB membership motivated the participants towards supportive strivings for their ingroup. This aligns with the social identity approach, where an individual's sense of identification with a group will likely motivate them to self-categorise as a group member (depersonalise; Haslam, 2004; Turner et al., 1987; Turner et al., 1994) and to align their thoughts, feelings, and behaviours with that of other ingroup members (Haslam, Ellemers, Reicher, Reynolds, & Schmitt, 2010; Reicher, Spears, & Haslam, 2010; Turner et al., 1987). Accordingly, social identification may increase ingroup members' commitment to achieving outcomes that are valued by their ingroup, thereby having practical ramifications for which performance and non-performance outcomes are pursued and achieved by the ingroup (Ellemers et al., 2004; Haslam, 2004; Slater et al., 2015; Stevens, Rees & Polman, 2018; Turner, 1991). For example, in order to advance the interests of Academy players (as a distinctive sub-ingroup), individual players were motivated towards greater collective engagement and concerted support behaviours which advanced the rugby-specific interests of their ingroup (as performance-related outcomes might be valued by this sub-group; Adarves-Yorno et al., 2006; Lee, Park, & Koo, 2015; Ng, 2015; Slater, Haslam & Steffens, 2018). In this way, social identity processes helped to define the purpose of social support so that it was adaptive to sport-related outcomes which were consistent with the group's identity, and therefore meaningful to the individuals involved.

As discussed in Analytical theme 1, another mechanism through which social identity shapes social support to achieve identity-consistent outcomes is by motivating ingroup members to modify structural social support ties. More specifically, social identities appear to motivate ingroup members to either curate or prune particular structural sources and types of social support. This might be because structural ties within shared spaces (such as Rugby Academies) are likely to be the basis for both beneficial *and* debilitative social support within groups (Haslam et al., 2016), which will have implications for a range of sport-related outcomes. For example, certain social support ties might facilitate desirable outcomes for the ingroup (e.g. having support staff who promote holistic development), whereas others might exacerbate the effects of stress or otherwise prevent the achievement of desirable group outcomes (e.g. a parent doing various administrative and organisational tasks for their child-athlete, thereby preventing the development of life skills as valued by the Rugby Academy). Indeed, organisational research has found that certain sources and types of social support can exacerbate the effects of stressors (Arnold, Edwards & Rees, 2018) and stress reactions (Kaufmann & Beehr, 1986; Tucker, Jimmieson, & Bordia, 2016). Therefore, it could be that

social identities influence the structure of social support by removing potentially deleterious sources (and thereby types) of social support, so that the support is better matched to the ingroup's particular stressors and outcomes of relevance within the Rugby Academy environment (Cutrona & Russell, 1990; Marigold, Cavallo, Holmes, & Wood, 2014).

A final mechanism through which social identity shapes social support to achieve identity-consistent outcomes could be through identity content. Specifically, as seen in Analytical theme 2, social support exchanges were made relatable and meaningful to ingroup members by drawing on 'values' that were of significance to the group. This is also known as the identity content attached to social identities (Slater, Evans & Turner, 2016), referring to the defining characteristics of an ingroup. The values, norms and ideals which characterise the core meaning of the group (Cerulo, 1995). This content can be seen in the language used to construct the Rugby Academy identities where, for example, one Academy espoused an identity associated with 'Doggedness' and used a values-acronym of 'P.A.W' to capture the characteristics that were of both historic significance and relevance to their performance-related needs ('performance, accountability, and winning'; Glynn & Abzug, 2002). Identity content may, therefore, influence group members' thoughts, feelings and (importantly) their social support behaviours to be in line with their identity content, which may have tangible implications for a range of sport-related outcomes.

This influence of identity content is notable because although social identities can *facilitate* social support exchanges, they can also *constrain* access to and engagement with social support (Hartley et al., 2020). This is because an ingroup's defining identity content may determine whether engaging in certain social support behaviours is deemed to be identity characterising (i.e. normative) or identity counter-firming (i.e. non-normative; Butler et al., 2018). As shown in this study, this may influence whether or not social support is provided (e.g. by stakeholders and staff), engaged with, or perceived to be effective (e.g. amongst staff and players). This is largely because engaging with identity characterising support will be deemed as advancing the interests of the ingroup (Slater et al., 2015; Turner, 1999; Turner et al., 1987), whereas engaging with identity counter-firming support may be deemed as threatening to a core characteristic of the ingroup (e.g. 'toughness') and potentially evoke embarrassment and disapproval from ingroup members (also known as identity-based threat; Tarrant & Campbell, 2007). This is likely to have tangible implications for which sport-related outcomes are achieved (e.g. if an athlete experiences identity-based threat over accessing mental health support, this may result in poor athlete mental health and/or wellbeing).

RQ2: How does social identity influence the design, provision and receipt for different types (e.g. perspectives and dimensions) of social support in Academy Rugby?

In performance and performance-pathway sport, social support is often provided by teams of multidisciplinary support staff to groups of athletes in shared spaces (Reid et al., 2004). This type of support may be effective due to group membership equipping individuals with the resources needed to provide support that is adaptive, dynamic, and sensitively-attuned to the needs of ingroup members (e.g. by creating opportunities for social interaction and for the formation of supportive relationships; Cattell, Dines, Gesler & Curtis, 2008; Cooper, 2003). This can be seen in Analytical theme 2, where social identity processes seemed to influence the design, provision and receipt of group-based support so that it was more adaptive to the group's needs (e.g. by influencing players' engagement with identity-firming forms of social support). This aligns with the extant literature, which suggests that group life and shared social identities are the basis for mutual influence (Turner, 1999), which may enhance the perceived availability of social support (Haslam et al., 2012), allow for more effective social support exchanges to occur (e.g. through timely and optimally-matched support; Cutrona & Russell, 1990; Haslam et al., 2016), and allow group members to better utilise the expertise of others to regulate their own emotions and stress-appraisals (Tucker et al., 2016; Wagstaff, Hanton & Fletcher, 2013).

As seen in Analytical theme 1, one of the ways that social identity may allow for the design, provision and receipt of social support to be adaptive is through the regional manifestation of super-ordinate group identities in the form of distinct social support design and provision. Indeed, while social identities may be arranged hierarchically, they may also have geographical aspects to them where the most salient regional characteristics form social categories which can be internalised into the identities of the groups contained within them (e.g. different Rugby Academies have unique identities; Dixon & Durrheim, 2000; Fong, Cruwys, Haslam & Haslam, 2019; Obst & White, 2005). It seems these regional identities were accordingly operationalised through distinct social support behaviours, as this may have helped the respective sub-groups' (Academies') most relevant support needs to be met. This could be because regional identities allow groups to draw upon environmental characteristics that are of historic or salient relevance to scaffold opportunities for beneficial support exchanges (e.g. by highlighting common support needs and barriers; Francis, Giles-Corti, Wood & Knuiman,

2012; McNamara, Stevenson & Muldoon, 2013; Oakes et al., 1994). This would suggest that if geographical subgroups face support-related challenges, drawing upon distinctive characteristics that cultivate a stronger sense of 'regional sub-identity' could adaptively influence the design and operationalisation of different types of social support to address those needs.

As seen in Analytical theme 2, another way that social identity may influence the design, provision and receipt for different types of social support is through influencing group members' shared understanding of, and engagement with, social support. For example, Rugby Academy identities seemed to influence the types of support players engaged with (i.e. identity-firming forms of social support) and *how* they engaged with social support (i.e. by *proactively* checking-in with physiotherapists following an injury). This could be because shared social identities offer a common lens through which to interpret and understand the shared sport experience amongst group members (Morgan et al., 2013). In this regard, self-categorising as a group member may create a shared understanding of what optimal support exchanges should look like between provider and recipient (i.e. consensualisation; Haslam et al.,1998; Reicher et al., 2010). For example, by shaping their understanding of support perceived to be available from within their group and how such support should be accessed, utilised, and interpreted. However, shared understandings of social support may have both beneficial and deleterious effects upon group members' abilities to coordinate the design, provision, and receipt of social support (Haslam, 2004; Turner, 1991). For example, shared group understandings may improve group members' perceptions of social support availability and allow for concerted access and engagement with identity-firming forms of support (e.g. performance related physiotherapy). Conversely, due to a group consensus over support-related behaviours that may be considered counter-firming (i.e. non-normative), such shared group understandings may also create barriers to engaging with certain forms of support and exacerbate the impact of support-related stress (e.g. when trying to access non-performance related mental health support; Arnold et al., 2018; Tucker et al., 2016).

The final way in which social identities may influence the design, provision and receipt for different types of social support are by highlighting commonalities between provider and recipient, and thus facilitating perceptions of credibility, trustworthiness, and effectiveness in subsequent social support exchanges. Self-categorisation theory would suggest this 'ingroup favouritism' effect is because shared social identities are the basis for mutual social influence amongst ingroup members (Turner, 1999), and *particularly* so when shared social identities

capture a meaningful intragroup similarity in a given context (Haslam, 2014). Indeed, in the current study Rugby Academy players interpreted social support from ex-professional players as being highly credible and trustworthy due to the perception of a meaningful intragroup similarity within the rugby context (i.e. shared playing experience). This mutual influence over social support behaviours could be due to perceived ingroup similarities allowing rapport and trust to emerge quickly and effectively between provider and recipient. In turn, greater levels of rapport and trust may allow for superior support collaborations to emerge between provider and recipient, where a superior understanding and alignment of support needs and desired support provision- and receipt-behaviours are achieved.

Considering the above, this chapter makes an original and unique contribution to knowledge by presenting the first empirical study to demonstrate when, how and why social identities influence social support so that it is ultimately adaptive to the ingroup's needs and meaningful to group members. This contribution builds on and further probes the findings from Studies 1 and 2 (and the extant literature) by using qualitative methods and a unique conceptualisation of social support to better understand and demonstrate why social identity processes may influence the effects of social support in sport.

This study has several original and unique practical implications. Importantly, the psychology and practice of social support seems to be intimately connected to the psychology of groups. As such, the abstract and defining features of group identities will influence how individuals understand, engage with, and action support behaviours. Notably, athletes' attachment to their group identity will motivate them to align their social support behaviours to the social support norms of other group members – yet may unintentionally create *barriers* to non-normative social support. By utilising the potency of social identities, there are several options for practitioners hoping to ensure social support interventions have their desired effects. First, practitioners could ensure that the target social support intervention and/or behaviour sensitively aligns with the wider group's identity. This could be achieved by, for example, engaging group members in reflection and discussion to gain a better understanding of whether the support would be considered helpful or not to '*Us*' as a group (i.e. as opposed to simply asking an individual athlete whether the support would be considered helpful or not to '*You*' as an individual). Second, practitioners may give careful consideration to who is best positioned to deliver the target social support intervention to a particular athlete or group of athletes. For example, the identity-based perceptions of receiving informational support from a retired ex-professional athlete may enhance the credibility and trustworthiness of that support (e.g.

compared to receiving it from a parent, friend, or other practitioner). Third (and alternatively), practitioners could aim to redefine the target group's identity content, as this may have concrete implications for that group's support practices. This could be achieved by engaging with the target group's leaders (e.g. coaches, captains) or prototypical group members (e.g. ex-professional athletes) to create a new sense of "*Us*" through identity impresarioship (Steffens et al., 2014), or by employing a 5R's approach to identity leadership that serves to create a group identity that is more adaptive to the desired social support practices (Haslam et al., 2017; Slater, Coffee, Barker, Haslam, & Steffens, 2019).

Limitations and Strengths

Some limitations of the present study should be noted. First, with regards to the study's naturalistic design, conclusive statements about cause and effect are not possible. Indeed, there were no observational data to augment participants' experiences of the design, provision, and receipt of social support. However, it is worth noting that studies which have combined observational, self-report, and other measures of social identity-related processes have reported high correlations between them (e.g. Reicher & Haslam, 2006), and several of the themes presented in this study match closely with the established literature (e.g. identity-based support threat, identity-content's influence upon support-behaviours, etc.; Adarves-Yorno et al., 2006; Butler et al., 2018; Turner, 1999; Turner et al., 1987). Second, although this study sampled almost the entire stakeholder and support staff populations, only a sub-sample of Rugby Academy players were captured. Therefore, while this study offers a representative and theoretically informed approach to this dataset, it is unclear if the findings are transferable to other sport-populations more generally. Third, although steps were taken to strengthen rigour and impartiality during the phases of data collection and analyses (e.g. using both supervisors as critical feedback friends; Smith & McGannon, 2017; Tong et al., 2007), there remains the possibility that the researcher influenced the insights generated (e.g. through bias or logistical constraints). In this regard, the following study materials are made available to reviewers and readers to judge if the research is suitably cohesive, fair, and informed with regards to the extant literature, research questions, available data, and findings: (1) interview and focus group schedule (Appendix 2); (2) example transcript (Appendix 3); (3) field notes and reflective diary (Appendix 4); (4) coding frames used throughout analyses (Table 5.1), and; (5) final thematic map generated during analyses (Figure 5.1).

The study also had several strengths. Most notably, the naturalistic design and qualitative methodology used in this study offer insightful approaches to the study of when, how, and why social support is likely to exert certain effects upon sport-related outcomes. For example, by highlighting the importance of studying a broader range of sport-related outcomes, adopting and capturing a broader conceptualisation of social support, and capturing the influence of situational factors (e.g. salient context and social identities). Indeed, the use of purposive sampling allowed the views of understudied individuals (e.g. stakeholders and support providers) with distinct yet important roles in the design, provision, and receipt of social support to be captured. These methods also helped the researcher to build rapport with participants and develop contextual awareness to recognise the subtleties of what was being said (Rubin & Rubin, 2011).

Future Research

This study's naturalistic design and qualitative methodology highlight the rich insights into the mechanisms of social support's effects that could be gained from adopting these under-utilised approaches in future research. Researchers could further investigate these processes by combining qualitative methods with other observational, experimental, or validated scalar-measurements of social support and social identity. However, if future research is to develop a better understanding of when, how, and why social support is likely to exert certain effects upon sport-related outcomes, it is important that methods are adopted which allow the following areas of social support to be conceptualised and captured. First, methods that allow a broad range of sport-related outcomes to be investigated, as this may highlight unique and/or common ways of when, how, and why social support is likely to exert certain effects (as well as highlighting the influence of different contexts). Second, methods that allow a broader conceptualisation of social support to be captured (e.g. including the design, provision, and receipt of both perceived and received support). Third, methods that allow differing perspectives of key individuals involved in the design, provision and receipt of social support to be captured (e.g. the views of stakeholders, support providers, and recipients). Fourth, methods that allow the influence of the situational factors to be captured (e.g. the influence of prevailing social identities upon support-related norms).

Conclusion

The current study provides a novel contribution towards better understanding how social identity influences the design, provision, and receipt of social support. By capturing both

a broader conceptualisation of social support and range of sport-related outcomes, as well as relevant situational factors – the current study suggests that social identity influences the design, provision, and receipt of social support to be adaptive to the ingroup's salient support needs and to be meaningful to group members. This is achieved through several potential mechanisms: (1) the alignment of social support behaviours with the group identity; (2) the hierarchical and regional manifestation of identity through distinct social support behaviours; (3) the emotional significance associated with depersonalisation in an effort to advance the interests of the ingroup; (4) the modification of structural social support ties; (5) the normative implications of identity content for support behaviours; (6) achieving shared group understandings of social support exchanges, and; (7) by highlighting ingroup similarities to facilitate perceptions of credibility, trustworthiness and effectiveness in social support exchanges. These findings provide a more nuanced understanding of when, how, and why social support is likely to exert certain effects upon sport-related outcomes and have tangible implications for better understanding what constitutes effective social support (see Chapter 6 for a discussion).

Chapter 6

General Discussion

Summary of Thesis

The purpose of this thesis was to conduct an investigation into the mechanisms of social support's effects upon sport-related outcomes using the social identity approach, with a view to better understand what constitutes effective social support. Chapter 1 provided an introduction and overview of the relevance of this work amidst contemporary knowledge of social support and social identity in sport. Specifically, Chapter 1 explained that while social support is of considerable import in sport, the current lack of understanding around its underpinning mechanisms means researchers are unable to explain nor predict when, how, and why social support is likely to exert certain (e.g. effective or deleterious) effects upon sport-related outcomes. Chapter 2 then provided a literature review of relevant theoretical concepts and empirical research of social support in sport, outlined the limitations of extant approaches, and justified the adoption of the social identity approach throughout this thesis. Across Chapters 3-5, quantitative and qualitative research approaches were employed. Two quantitative studies were conducted to explore and conceptualise when and how social support is likely to exert certain effects upon sport-related outcomes (such as dimensions of burnout). These studies subsequently guided decisions about further in-depth qualitative investigation in Chapter 5 to provide a more nuanced understanding of when, how, and why social support is likely to exert certain effects upon a broader range of sport-related outcomes (by investigating how social identity influences the design, provision, and receipt of social support; Study 3).

Considering the above, this thesis makes an original and unique contribution to knowledge by presenting the first body of work to demonstrate how the effects of social support are related to and influenced by a range of social correlates (e.g. stress experienced, social identification, identity content), when social support is likely to exert beneficial versus deleterious effects, and why social identity processes influence these effects. Specifically, the findings from Chapters 3-5 concluded that the mechanisms underpinning social support's effects upon sport-related outcomes are influenced by a range of social identity-related processes. These processes influence the design, provision, and receipt of social support in ways that can be both more or less adaptive depending on the context (e.g. levels of stress and/or shared social identification, geography, etc.), dimensions (e.g. perspective and dimension of social support), and sport-related outcomes of interest (i.e. dimensions of burnout, whether the outcome is considered adaptive and/or meaningful to group members). This implies that in order to better understand what constitutes effective social support for sport-related outcomes, it is necessary to make context-, dimension- and outcome-specific

assessments of the identity-based implications behind social support. What follows is a summary of key empirical findings from each chapter that support these conclusions and unique contributions to knowledge. Theoretical and applied implications are then discussed.

Chapter 3: Study 1

In Study 1, the longitudinal relationships between stress, dimensions of perceived support, and social identification as temporal contributors to the development of burnout dimensions were investigated across three time points in a sample of 320 athletes. This provided longitudinal evidence that higher levels of burnout dimensions existed as a function of several social correlates of the sport experience, specifically: (1) higher levels of stress; (2) lower levels of dimensions of perceived support, and; (3) lower levels of social identification. The findings in this chapter highlighted the deleterious effects that stress, as well as the protective effects that dimensions of perceived support and social identification may have upon the development of burnout dimensions in sport. The use of fully differentiated measures in this study demonstrated that different dimensions of perceived support have more adaptive relationships with certain dimensions of burnout, thereby providing a more nuanced understanding of how these variables contribute longitudinally to the development of burnout dimensions over time. Study 1 concluded by suggesting that more nuanced understandings of when and how social support is likely to exert certain effects upon sport-related outcomes could be gained by investigating the interactive relationships between these variables.

Chapter 4: Study 2

In Study 2, a series of 3-step moderated hierarchical regression analyses investigated the main, disjunctive, and conjunctive interaction effects of stress and dimensions of perceived support (stress-buffering) and social identification (conjunctive moderation) upon dimensions of burnout. This was achieved using a sample of 444 athletes. The findings of Study 2 both confirmed and extended those from Study 1. First, by further investigating the deleterious associations that stress may have with reduced sense of accomplishment and exhaustion, as well as the beneficial associations that dimensions of perceived support may have with reduced sense of accomplishment (although there were no beneficial associations with exhaustion). Social identification was also found to have beneficial associations with both reduced sense of accomplishment and exhaustion. Second, the disjunctive moderation effects observed further contributed to the mixed evidence for a stress-buffering effect in sport, while also suggesting that high levels of social identification may benefit the effects of perceived informational

support upon exhaustion, and yet *worsen* the effects of stress upon both reduced sense of accomplishment and exhaustion. Third, the conjunctive moderation effect observed in this study indicated a stronger positive association between stress and exhaustion when levels of perceived emotional support and social identification were high. The findings in this chapter demonstrated how the relationships between social support and sport-related outcomes might be more or less adaptive depending on the nature of the relationship (i.e. main or interactive), the context (i.e. low or high levels of stress and social identification), and the dimensions of interest (i.e. dimensions of perceived support and burnout). The fully differentiated and interaction-focused approach employed in this study provided a more nuanced understanding of when, how, and which dimensions of social support are likely to exert both beneficial and deleterious effects upon sport-related outcomes. In order to further investigate and explain when, how, and why social support is likely to exert these effects, Study 2 concluded by suggesting that it may be necessary to broaden the conceptualisation and assessment of how the dynamics of group life condition social support's effects, as well as the identity-based implications behind this (Hartley et al., 2020; Rees et al., 2015).

Chapter 5: Study 3

To further investigate and explain when, how, and why social support is likely to exert the effects observed in Studies 1 and 2; Study 3 broadened the conceptualisation and assessment of social support to include a range of sport-related outcomes, multiple perspectives of individuals involved in social support (i.e. stakeholder, provider, and recipient perspectives), and the influence of situational factors. This was achieved by conducting a qualitative investigation into how social identity influenced the design, provision, and receipt of social support in a Rugby Academy programme. The findings of this chapter identified that social identity influenced social support so that it was both adaptive to the group's salient support needs and meaningful to group members. Study 3's discussion highlighted that this may be achieved through several potential mechanisms: (1) the alignment of social support behaviours with the group's identity; (2) the hierarchical and regional manifestation of identity through distinct social support behaviours; (3) the emotional significance associated with depersonalisation in an effort to advance the interests of the ingroup; (4) the modification of structural social support ties; (5) the normative implications of identity content for support behaviours; (6) facilitating shared group understandings of social support, and; (7) by highlighting ingroup similarities to facilitate perceptions of credible, trustworthy, and effective social support. The underutilised naturalistic design and qualitative methodology employed in

this study provide a more nuanced understanding of how social identity influences the design, provision, and receipt of social support, and thereby help to explain when, how, and why social support is likely to exert certain effects upon a range of (both performance and non-performance) sport-related outcomes.

Theoretical Implications

By employing the social identity approach, the findings presented in this thesis helped to address some of the shortcomings identified in the extant literature (see Chapter 1) and to provide a better understanding of the mechanisms of social support's effects upon sport-related outcomes, as well as what constitutes effective social support (Thoits, 2011; Uchino et al., 2012). As such, this thesis has several theoretical implications for both social support and social identity theories in the field of sport psychology.

The first theoretical contribution supports postulations made by Haslam and colleagues (2012; Rees et al., 2015), which is that the psychology of social support in sport is inextricably linked to the psychology of groups. This seems to be because social support ultimately occurs *between* individuals, and the actual receipt of social support (or individuals' perceived availability thereof) is conditioned by the nature of their physical or psychological group memberships. This is supported by both the protective effects observed in Study 1 from having high levels of social identification, and the interaction effects observed in Study 2 which collectively demonstrated how social identification may both *beneficially* and *deleteriously* contribute to and influence perceived support's relationship with stress and/or dimensions of burnout. Relatedly, Study 3 demonstrated that athletes are not 'passive recipients' in social support, and that group membership can constrain social support in terms of how athletes understand, engage with, and utilise it. Indeed, social support in sport is often provided in 'groups' of athletes and support staff (Cruickshank & Collins, 2013; Fletcher & Wagstaff, 2009; Reid et al. 2004), where mutual collaborations occur with regards to their support-related needs, preferences, and processes. Accordingly, this first theoretical insight suggests that the experience of social support in sport *is* bound-up with the dynamics of group life and should therefore be conceptualised in social terms (Hartley et al., 2020; Rees et al., 2015).

The second theoretical contribution is that adopting broader conceptualisations and assessments of social support in sport has the potential to advance knowledge on the underpinning mechanisms and conditions needed for effective social support. This is justified when considering the insights gained from investigating the effects of social identification in

conjunction with perceived support across Studies 1 and 2, as well as the rich insights gained from Study 3 when multiple perspectives of those involved in social support were conceptualised and captured. Therefore, in conjunction with the first theoretical contribution above, if researchers are to conceptualise social support in social terms then it should be assessed in conjunction with other important social correlates and broadened beyond the support-recipient's perspective in order to account for the relational differences of others involved in social support (Coussens et al., 2015; Lakey & Drew, 1997; Rees et al., 2012). In this regard, capturing the perspectives of those involved in the systemic design (e.g. stakeholders, NGB's), provision (e.g. support staff, coaches, team-mates), and receipt of social support (e.g. athletes, support staff) could add valuable insights into when, how, and why social support is likely to exert certain effects upon sport-related outcomes (and to better understand what constitutes effective social support).

The third theoretical contribution is that social identity's influence on when, how, and why social support is likely to exert certain effects may depend on context. As seen across Chapters 3-5, context may vary in terms of the levels of stress experienced, the degree of shared social identification, or even the physical spaces in which social support exchanges occur. For instance, the stress-buffering model suggests that social support will have beneficial effects only under conditions of high stress (Bianco & Eklund, 2001; Cohen et al., 2000; Cohen & Wills, 1985), yet there is mixed evidence for this proposition in sport (Hartley & Coffee, 2019; Mitchell et al., 2014). However, Studies 1 and 2 demonstrated how the relationships between dimensions of perceived support and dimensions of burnout varied depending on the levels of stress and social identification. Study 3 also discussed how social support behaviours may differ depending on the identity abstractions deemed to have the most historical or contextually-salient significance to an ingroup within a given social, geographical, or temporal space (e.g. a particular Rugby Academy at different points within their season; Bruner, 1957; Oakes, 1987). In this manner, the mechanisms of social support's effects may depend on a range of contextual factors.

In a similar vein, the fourth theoretical contribution is that social identity's influence on when, how, and why social support is likely to exert certain effects may depend on the perspectives and dimensions of social support of interest. For instance, both Studies 1 and 2 noted that dimensional differences existed with regards to perceived support's direct and interactive relationships with stress and social identification upon dimensions of burnout. Similarly, Study 3 discussed how engagement with certain types of social support behaviours

might be deemed beneficial or stressful depending on an individual's shared social identification with their group, the group's defining identity content, and perceptions of identity-based support threat. In this regard, Hartley and Coffee (2019) argue that merely increasing levels of perceived and received support across all dimensions may not translate directly into functional adaptations to stress or sport-related outcomes, and careful consideration should therefore be given to the types (e.g. perspectives and dimensions) of social support to ensure they are optimally matched to situational demands (e.g. depending on context; Cutrona & Russell, 1990). This may have implications for researchers investigating the effects of social support more broadly, as much of the extant literature may not have differentiated between the effects of different types of socially supportive behaviours upon health- and wellbeing-related outcomes outside of sport (e.g. Barth et al., 2010; Chronister et al., 2008; Harper et al., 2016).

The final theoretical contribution to be gleaned from Chapters 3-5 of this thesis is that social identity's influence on when, how, and why social support is likely to exert certain effects may differ depending on the sport-related outcome of interest. For instance, Studies 1 and 2 demonstrated that social identity's influence on the relationships between stress and dimensions of perceived support differed depending on the dimensions of burnout being investigated. Study 3 argued this may ultimately depend on whether the sport-related outcome is considered to be adaptive and/or meaningful to ingroup members within a given context. What is deemed to be adaptive and/or meaningful may vary according to the group's defining identity content (Cerulo, 1995), and/or what is deemed to have the most historical or salient significance to the group (Bruner, 1957; Oakes, 1987). This implies that social identities can either facilitate or constrain access to and engagement with certain types of social support due to the identity-based implications this may have for the outcomes achieved (i.e. whether the outcomes are considered adaptive and/or meaningful to the ingroup; Butler et al., 2018; Hartley et al., 2020). For example, if a group deemed prototypical sport-related outcomes to be meaningful to its members (e.g. being fit, fast and strong), then engagement with certain forms of social support might be facilitated if doing so was more likely to result in those meaningful outcomes (i.e. becoming fitter, faster and stronger would be considered identity-firming). In contrast, engagement with other forms of support might be constrained if doing so was likely to result in outcomes not considered meaningful (i.e. becoming more literate would be considered identity counter-firming).

Applied Implications

The findings presented in this thesis have several applied implications towards understanding what constitutes effective social support and, thereby, informing the development of theory-led social support interventions. Specifically, the findings of this thesis suggest that a better understanding of what constitutes effective social support in sport could be gained by making bespoke assessments and decisions around the identity-based implications behind the perceived availability (or receipt of) social support. This may have particularly relevant implications for social support practice in sport environments, where there have been government calls to find ways of improving the effectiveness of social support to manage the impact of stress upon athletic functioning and to better safeguard the wellbeing, mental health and welfare of athletes ('Sporting Future: A new strategy for an active nation', HM Government, 2015; Grey-Thomson, 2017; Moesch et al., 2018).

In line with the first and second theoretical contributions above, the experience of social support in sport appears to be bound-up with the dynamics of group life and should therefore be conceptualised in social terms (Hartley et al., 2020; Rees et al., 2015). As such, practitioners may be advised to consider not only the *personal* perspectives and needs of support recipients, but to broaden their consideration of how *systemic* factors may influence the design and provision of social support in groups. For example, by considering how geographical locations or the design of physical spaces might influence the practicalities of support provision (e.g. whether support should be visibly provided or not; Moll, 2013). In a similar vein, practitioners may be advised to broaden their consideration of social factors that might influence or place systemic constraints on the provision of social support. For example, Study 3 discussed how shared social identities and identity-content may create perceptions of identity-based support threat if support is deemed to be identity counter-firming, which may have ramifications for individuals' willingness to provide and/or engage with such forms of social support (Butler et al., 2018). This implication could also be extended to non-sport settings where the constraining influence of systemic and/or social factors may impede the effectiveness of social support (e.g. how hospital design may limit the provision of consistent social support provision from the same caregiver, or how the group-identities of junior doctors may create identity-based threat for accessing work-related support; Wainwright et al., 2017).

In line with the third, fourth and fifth theoretical contributions above; practitioners may also be advised to consider the prevailing context, type of social support, and outcomes of

interest, as this might provide more sensitive ways of making bespoke and identity-based assessments and decisions regarding social support interventions. For instance, by considering an athlete's prevailing levels of stress (e.g. if they are already under high levels of stress), their specific support needs (e.g. whether esteem or informational support might cause more or less stress depending on the outcome of interest), and whether the outcome aligns with the interests of the athlete's social group (e.g. whether dual-career progression is considered to be relevant and identity-firming) may inform when, how and which types of support will be most appropriate. Social support interventions based on such guidelines might be less resource intensive while also being better matched to the demands of stressors (Cutrona & Russell, 1990). Considering these applied implications, this warrants a further discussion with regards to the appropriateness of using social support to reduce the impact of stress in the sport context.

Considering that Studies 1 and 2 demonstrated deleterious associations between stress experienced and dimensions of burnout, the stress-buffering model would traditionally suggest that successful stress-buffering requires the provision of social support resources (Bianco & Eklund, 2001; Cohen et al., 2000; Cohen & Wills, 1985). However, as seen in the broader extant literature and in this thesis, the provision of social support may be prone to inconsistent or even deleterious effects (Cruwys et al., 2014; Hartley & Coffee, 2019; Mitchell et al., 2014). Based on the applied implication above, a considered alternative is based on the notion that stress forms a ubiquitous component of many sport contexts (Fletcher et al., 2006; Sarkar & Fletcher, 2014), and the ability to manage pressure and cope with stress may be considered a key characteristic of sporting excellence amongst athlete-groups (MacNamara, Button & Collins, 2010). Indeed, being able to thrive in highly stressful environments might be valued as a meaningful and defining ingroup characteristic amongst some performers (e.g. Wainwright et al., 2017). In support of this, Study 2 noted that under conditions of high perceived emotional support and social identification, the effects of stress upon exhaustion actually *worsened*. Therefore, practitioners may consider whether using social support to reduce stress in sport is always realistic (or even helpful) due to the identity-based implications behind such support initiatives. In such cases, practitioners may be advised to consider more appropriate forms of support (e.g. invisible support; Moll, 2013) and/or pursue more identity-characterising sport-related outcomes (e.g. providing social support in service of faster injury recovery as opposed to stress reduction).

In conjunction with the extant literature and the findings from Studies 2 and 3, another applied implication is that shared social identities could be used to enhance the potency of

social support. Indeed, Study 2 indicated that the protective effects of perceived informational support upon exhaustion could be facilitated by higher levels of social identification, while Study 3 indicated that shared social identities could improve the effectiveness of social support by facilitating perceptions of credible, trustworthy, and effective support. This is because social support underpinned by shared social identities may be biased towards greater effectiveness (Greenaway et al., 2015; Tarrant, Hagger & Farrow, 2011), partly due to creating the basis for shared mutual influence and ingroup-favouritism (Turner, 1999). For example, Australian Football League players have indicated that players from similar cultural backgrounds were their most important source of support (Nicholson, Hoye, & Gallant, 2011). The converse has also been noted in the extant literature, where social support received from outgroup sources is less effective irrespective of providers' expertise, credibility, or quality of support (e.g. Greenaway et al., 2015; Morton, Wright, Peters, Reynolds, & Haslam, 2012; Rascle et al., 2019; Rees et al., 2013). Therefore, support providers could strategically prioritise the cultivation of shared social identities to build rapport and mutual influence while ameliorating potential barriers to accessing support (provided the ingroup's associated identity-content does not antagonise the effects of particular types of social support). Indeed, having close and trusting relationships is often considered to be an essential component underpinning effective and supportive working relationships in sport for similar reasons (e.g. Friesen & Orlick, 2010; Sharp, Hodge & Danish, 2015).

As a closing implication, social identities may have implications for safeguarding the wellbeing, mental health and welfare of athletes by creating thriving high-performance cultures – largely due to their influence over socially supportive-norms and sport-related outcomes (Hartley et al., 2020; Grey-Thomson, 2017). This is noted in Studies 1 and 2, which collectively demonstrated how social identification may both *beneficially* and *deleteriously* contribute to and influence perceived support's relationship with stress and/or exhaustion. Similarly, Study 3 demonstrated how abstract superordinate identities and their associated content (e.g. Scottish Rugby and 'Better People Make Better Athletes') were connected to more concrete, lower-level social support processes (e.g. the availability, understanding and effectiveness of certain types of social support), and how self-categorising as group members was likely to influence individuals' social support norms (i.e. whether or not some forms of support were deemed to be identity-characterising; Cornelissen, Haslam, & Balmer, 2007). As such, by endeavouring to redefine the content associated with groups' social identities at various levels of abstraction, this may facilitate the design, provision, and receipt of social support that is deemed to be

adaptive to various sport-related outcomes, and thereby create more supportive and thriving high-performance cultures (Gaffney & Hogg, 2017; Haslam, 2004; Turner et al., 1987). Indeed, it is interesting to note that the super-ordinate identity espoused and enacted by Scottish Rugby in Study 3 was perfectly (and perhaps purposively) aligned with the identity abstraction originally espoused and enacted by the world's most successful (and potentially most prototypical) rugby team – the New Zealand All Blacks (Kerr, 2013).

Considering the above applied implications, a practical example that translates the insights of this thesis into a structured social support intervention for sport organisations might involve the application of a five-stage framework, as follows: (1) Identifying relevant individuals from the target collective (e.g. sport organisation or club) and explaining the importance of how social identity processes underpin social support's effects; (2) Engaging relevant subgroups (e.g. stakeholders, support staff, and athletes) in reflection and discussion about aspects perceived to be important for effective social support in their environment (e.g. optimal context, types of helping behaviour and aims thereof); (3) Identifying collective and subgroup identity abstractions that have desirable versus problematic impact on social support practices; (4) Engaging prototypical subgroup members/leaders to identify subgroup disparities related to the identity-based perceptions of social support; (5) Engaging prototypical subgroup members to help strategise support plans that align with the target-collective's identity-based perceptions of social support, and/or to help re-define problematic identity abstractions so that they have a more desirable impact on social support practice. Similar intervention frameworks developed by researchers investigating the impact of social identities on leadership development have shown promising results (e.g. demonstrating medium to large effect sizes for increasing target outcomes; Haslam et al., 2017; Slater & Barker, 2019).

Limitations

Several limitations of this thesis should be noted. Starting with Studies 1 and 2, although fully differentiated investigations were conducted which allowed the effects of specific supportive acts to be evaluated (Cutrona & Russell, 1990; Raedeke & Smith, 2009), this reduced parsimony considerably. Indeed, the mixed pattern of dimensional associations between different dimensions of perceived support and dimensions of burnout make it difficult to draw conclusions about which dimensions have adaptive relationships with specific sport-related outcomes. Relatedly, conducting fully differentiated investigations across Studies 1 and 2 required the computation of several models which may have increased the risk for Type 1

Error. This presented limitations in terms of the number and choice of interaction effects that could be investigated in Study 2 (e.g. investigating inter-dimensional interaction effects between the dimensions of perceived support; see recommendations for future research below). However, it should be noted that the sample sizes across Studies 1 and 2 were calculated to be large enough to detect meaningful effects while also keeping the number of models similar to those computed in previous research (e.g. Defreese & Smith, 2014; Lu et al., 2016).

Although the value of investigating the potentially unique effects of received support were mentioned in Chapters 2, 3 and 4; only perceived support was investigated in Studies 1 and 2. To the knowledge of the author, there have been no studies in sport to date which have explicitly investigated the longitudinal and/or interactional effects of social support *and* social identification upon burnout. As such (and as discussed in Chapter 3), the decision to start with perceived support over received support was made on theoretical and empirical grounds. Theoretically, perceived support may be more strongly associated with social identification due to the self-categorisation process likely influencing an individual's perceived availability of coping resources (i.e. due to defining the self and ones' coping resources in *social* terms, see Chapters 2 and 3 for an elaboration; Bianco & Eklund, 2001; Hartley et al., 2020; Rees et al., 2015). Empirically, perceived support has also been more consistently associated with main effects and stress-buffering effects compared to received support (e.g. Boat & Taylor, 2015; Defreese & Smith, 2013; Freeman & Rees, 2008, 2009, 2010; Hartley & Coffee, 2019). As such, across Studies 1 and 2 it may have been less likely for perceived support to be impacted by extraneous variables due to perceived support's 'trait-like' qualities (as opposed to received support which may be more context-dependent; Uchino, 2009). Furthermore, the decision to focus on perceived support across Studies 1 and 2 was made partly due to limitations in computational power (as discussed in the previous paragraph). However, an attempt to address this limitation was made in Study 3 (Chapter 5) by capturing a broader conceptualisation of social support (i.e. perceived *and* received support).

Concerns may also have been raised in Study 2 due to only investigating reduced sense of accomplishment and exhaustion as dimensions of burnout. Considering that the purpose and aims of Study 2 were to investigate the main, disjunctive, and conjunctive interaction effects between stress, perceived support and social identification upon sport-related outcomes; adding a third dependent variable (i.e. devaluation) would have considerably increased the number of models computed and thereby inflated the risk for Type 1 Error. In this regard, the decision to not investigate devaluation was made because stress did not show a longitudinal association

with devaluation in Study 1 and because the extant sport literature has found inconsistent associations between perceived support and devaluation (e.g. Freeman et al., 2011; Hartley & Coffee, 2019), which may have posed challenges to achieving the purpose and aims of Study 2 (i.e. by building on the findings from Study 1 and investigating interaction effects). This decision to measure and interpret the dimensions of burnout independently is appropriate and in-line with the theoretically assumed first-order factor solution of the athlete-burnout questionnaire (Raedeke, Arce, De Francisco, Seoane, & Ferraces, 2013; Raedeke & Smith, 2001). Indeed, burnout is defined as a *syndrome* characterised by distinct dimensions (as opposed to a second-order 'global burnout' construct; Eklund & Defreese, 2015; Gustafsson et al., 2011), and measuring and interpreting dimensions of burnout independently aligns with methods used previously in sport (Gustafsson et al., 2017) and organisational research (e.g. Maslach, Jackson & Leiter, 1996). Considering this, the purpose and aims of Study 2 were still achieved by only investigating reduced sense of accomplishment and exhaustion as dependent variables.

With regards to Study 3, the naturalistic design adopted meant that conclusive statements about cause and effect were not possible, and the accounts provided by participants were not able to be augmented with other sources of data. Relatedly, the qualitative methods employed in Study 3 meant that there was risk for researcher bias. Finally, although Study 3 sampled extensively and recruited much of the target population, it is possible that the findings are unique to this population and nationwide context (i.e. a Scottish Rugby Academy system) and may therefore not generalize to other sport-populations (Burleson & MacGeorge, 2002).

A final set of limitations apply to all studies contained within this thesis. Even though separate reports were obtained to investigate the design, provision, and receipt of social support; these measures and qualitative accounts only reflect *subjective perceptions* of support actually received or perceived to be available (i.e. enacted support was not measured, see Chapter 2; Goldsmith, 2004). Accordingly, all the data gathered could have been subject to recall bias, yet no other methods were employed to verify the data collected (Bolger, Zuckerman, & Kessler, 2000). There is also the potential for the findings across all studies within this thesis to be confounded by provider- (e.g. gender) or relationship-related factors (quality, closeness) which were not accounted for (Rafaeli & Gleason, 2009; Uchino, Carlisle, Birmingham, & Vaughn, 2011).

Strengths

There were several strengths of this thesis. Across Studies 1 and 2, measures derived entirely for the sport context were used (Freeman et al., 2011; Raedeke & Smith, 2001), thereby reducing concerns over measurement error (Dunkel-Schetter & Bennett, 1990). Conversely related to the concerns over reduced parsimony, the multivariate conceptualisations adopted throughout these studies helped determine the relative impact of dimensions of perceived support upon different dimensions of burnout (Freeman & Rees, 2010; Hartley & Coffee, 2019; Hassell et al., 2010), thereby providing more nuanced understandings of how these variables are related to one another.

Studies 1 and 2 were critiqued for over-relying on recipient-only perspectives of social support, and for only investigating perceived support and dimensions of burnout. Study 3 addressed this shortcoming by comprehensively capturing stakeholder, provider, and recipient perspectives of social support, to allow for the examination of both perceived and received support, as well as a broader range of (performance and non-performance) sport-related outcomes. The research questions chosen in Study 3 were also based on the pattern of findings from Studies 1 and 2, which allowed them to be further investigated using different methods while also further explaining previously noted findings. The naturalistic design and qualitative methodology adopted in Study 3 provided insightful approaches to the study of social support' mechanisms, specifically by highlighting the importance of studying a range of sport-related outcomes, capturing a broader conceptualisation of social support, and capturing the influence of situational factors. Indeed, the use of purposive sampling allowed the views of understudied individuals (e.g. stakeholders and support providers) with distinct yet important roles in the design, provision, and receipt of social support to be captured.

Future Research

The findings of this thesis offer directions for future research. As discussed in Chapter 2, there is a dearth of empirical and theoretical approaches to the study of social support mechanisms in sport, which makes investigating when, how, and why social support is likely to exert certain effects upon sport-related outcomes a potentially interesting and insightful endeavour. In this regard, this thesis has demonstrated that insights could be gained by adopting a social identity approach to the study of social support in sport. Indeed, the social identity approach allows the mechanisms of social support's effects to be conceptualised in social terms (as opposed to personal terms) and helps to explain when, how, and why social support is likely

to exert certain effects (Hartley et al., 2020). Adopting the social identity approach in future research on social support may allow researchers to investigate theoretically interesting questions, such as whether shared social identities and identity content can be used to make predictions about when stress-buffering effects are likely to occur in sport.

The relationships observed across Studies 1 and 2 between stress, dimensions of perceived support, and social identification upon dimensions of burnout served to signpost mechanistic relationships of interest that should be further investigated in future research. First, there is value in replicating and further investigating the deleterious relationships noted between stress, as well as the protective relationships between dimensions of perceived support and social identification upon dimensions of burnout (Freeman et al., 2011; Hartley & Coffee, 2019). Second, as demonstrated in Study 2, the impact of stress and social support upon sport-related outcomes may depend on disjunctive and conjunctive interactions with other contributing factors not accounted for in this thesis (e.g. quality of relationships). Future research should therefore further investigate the nuances of both the main and interactive effects of these variables, as well as other potential mediating or moderating variables. Notably, there is value in investigating the inter-dimensional interaction effects between different dimensions of social support upon sport-related outcomes, as the degree of optimal matching between a particular form of social support (e.g. emotional support) and the outcome of relevance might depend on, for example, the lack of availability of other forms of support (e.g. a lack of informational or tangible support). Doing so may provide valuable insights into the mechanisms of social support's effects, and further indicate when, how and/or why social support may have beneficial or deleterious effects upon sport-related outcomes.

Relatedly, it is important for future research to investigate the effects of perceived and received support simultaneously. This is because both perceived and received support tend to be associated with main and stress-buffering effects when examined separately, whereas different effects tend to be seen when examined together (Freeman & Rees, 2008; Rees & Freeman, 2007). Considering this potential interaction between perceived and received support, it has been advised that researchers simultaneously examine the differential impact of perceived and received support upon outcomes to determine their unique effects (Bianco & Eklund, 2001; Dunkel-Schetter & Bennett, 1990; Rees & Freeman, 2007). Simultaneous examinations might give an indication as to which type of support exerts a greater effect on outcomes and under what conditions (Freeman & Rees, 2010; Hartley & Coffee, 2019).

As discussed in Chapter 5, in order to develop a better understanding of when, how, and why social support is likely to have certain effects upon sport-related outcomes researchers may be advised to broaden their conceptualisation and assessment of social support. To achieve this, new methods may need to be adopted which allow the following areas of social support to be conceptualised and captured. First, methods that allow a broader range of sport-related outcomes to be investigated, as this may highlight common and/or unique mechanisms underpinning social support's effects (as well as the influence of differing contexts). Second, methods that allow a broader conceptualisation of social support to be captured (e.g. including the design, provision, and receipt of both perceived and received support). Third, methods that allow differing perspectives of key individuals involved in the design, provision and receipt of social support to be captured (e.g. the views of stakeholders, support providers, and recipients). Fourth, methods that allow the influence of the social context to be captured (e.g. the influence of prevailing social identities on support-related norms). Possible ways this could be achieved are by re-evaluating how researchers currently conceptualise social support (e.g. as recipient-oriented transactions versus mutual exchanges), the perspectives of interest (e.g. recipient-only perspectives versus stakeholder and provider perspectives), and the methodology employed to capture them (e.g. by combining recipient-based questionnaires with other qualitative, observational, or experimental methods in order to overcome the inherent shortcoming of each).

Significance and Contribution

This thesis has provided several contributions to the field of sport psychology. To the researcher's knowledge, each of the studies contained in this thesis were the first of their kind on particular fronts. Study 1 was the first to investigate the longitudinal associations between stress, dimensions of perceived support, and social identification upon dimensions of burnout in sport. Study 2 was the first to investigate the disjunctive (i.e. two-way) and conjunctive (i.e. three-way) moderation effects for stress, dimensions of perceived support, and social identification upon dimensions of burnout in sport. Study 3 was the first to utilise qualitative methods to investigate how multiple perspectives of those involved in social support may influence the design, provision, and receipt of social support. Collectively, these studies have provided both quantitative (longitudinal and cross-sectional) and qualitative evidence of how the psychology of social support is inextricably linked to the psychology of groups, and highlighted the theoretical insights and applied implications that could be gained from adopting broader conceptualisations of social support. This has provided valuable extensions to our

understanding of the mechanisms of social support's effects upon sport-related outcomes, as well a better understanding of what constitutes effective social support more generally (Thoits, 2011; Uchino et al., 2012).

Conclusion

The findings of this thesis extend our understanding of the mechanisms of social support's effects upon sport-related outcomes. This was achieved by demonstrating how a range of social identity-related processes influence the design, provision, and receipt of social support in ways that can be both more or less adaptive depending on the context (e.g. levels of stress and/or shared social identification, geography, etc.), dimensions (e.g. perspective and dimension of social support), and sport-related outcomes of interest (e.g. dimensions of burnout, whether the outcome is considered adaptive and/or meaningful to group members, etc.). These conclusions would argue against seeking generalisable statements about when, how, and why social support is likely to exert certain effects in sport, and instead emphasise that a better understanding of what constitutes effective social support could be gained by making bespoke (e.g. context-, dimension-, and outcome-specific) assessments and predictions of the identity-based implications behind social support.

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Appendix 1 – Studies 1 (Chapter 3) and 2 (Chapter 4) Example Questionnaire Packet

Study Information & Consent Sheet

You are being asked to take part in a research study on social support in sport. My name is Christopher Hartley, and this study is part of my PhD research with the University of Stirling. This study is being supervised by Dr. Pete Coffee from the School of Health Sciences & Sport, and has received ethical approval from the University of Stirling.

What will happen

[Study 1] You will be asked to complete several short questionnaires at three equally spaced measurement occasions (each approximately 2-months apart). This will require less than 15 minutes of your time at each measurement occasion, and will be greatly appreciated. Please try to complete all questions; there are no right or wrong answers, we only want you to respond openly and honestly.

[Study 2] You will be asked to complete several short questionnaires. This will require less than 15 minutes of your time, and will be greatly appreciated. Please try to complete all questions; there are no right or wrong answers, we only want you to respond openly and honestly.

There are no known benefits or risks for you in this study, and your participation in this study is entirely voluntary.

Participants' rights

- The data you provide will be kept anonymously, and you will not be personally identifiable from the data you provide. You data will only be used for subsequent analysis and publication of this study.
- You may decide to stop being a part of the research study at any time without explanation.
- You may ask that any data you have supplied up to that point be withdrawn/destroyed.
- If may have any questions about the study, or the use of your data, you may contact the investigator/s and we will do our best to answer them.

Please tick both boxes below before starting the survey

☐ **By ticking this box, I agree that I have read the participant information sheet above, and I understand fully what is proposed to be done in this study. By ticking this box, I hereby fully and freely consent to participate in the study, and I understand I am completely free to withdraw from the study at any time I wish and that my participation is entirely voluntary.**

For further information:

Myself or Dr. Pete Coffee will be glad to answer your questions about this study at any time. You may contact us at:

Christopher Hartley (Investigator)

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Dr. Pete Coffee (Supervisor)

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If you are interested in finding out the results of this study, please include an email address below.

You will be submitted a summary of the findings when the study is complete**:**

_____

What is your date of birth (DD/MM/YYYY)?

What is your gender? Male / Female (please circle)

What is your competitive level/history of competing in sport? (please tick)

None-competitive	
Recreational	
Club	
Regional/county	
National	
International	

What is your sport? _____

Below is a list of situations you may encounter as a sportsperson. On the right-hand column please indicate **how stressed you felt because of these situations.**

- ☐ not at all
- ☐ slightly
- ☐ moderately
- ☐ considerably
- ☐ extremely

In the last week, please indicate the stress you experienced because of the situation:

	Stress Experienced				
Situation	not at all	slightly	moderately	considerably	extremely
Competition pressure	☐	☐	☐	☐	☐
High performance expectations from others	☐	☐	☐	☐	☐
Technical problems in training	☐	☐	☐	☐	☐
Personal problems	☐	☐	☐	☐	☐
Doubts about current form	☐	☐	☐	☐	☐
Fitness concerns	☐	☐	☐	☐	☐

Below is a list of items referring to the types of help and support you may have available to you as a sportsperson. **Please indicate to what extent you have these types of support available to you.**

- ☐ not at all
- ☐ slightly
- ☐ moderately
- ☐ considerably
- ☐ extremely

If needed, to what extent would someone…

	Not at all	Slightly	Moderately	Considerably	Extremely
provide you with comfort and security	☐	☐	☐	☐	☐
reinforce the positives	☐	☐	☐	☐	☐
help with travel to training and matches	☐	☐	☐	☐	☐
enhance your self-esteem	☐	☐	☐	☐	☐
give you constructive criticism	☐	☐	☐	☐	☐
help with tasks to leave you free to concentrate	☐	☐	☐	☐	☐
give you tactical advice	☐	☐	☐	☐	☐
always be there for you	☐	☐	☐	☐	☐
instil you with the confidence to deal with pressure	☐	☐	☐	☐	☐
do things for you at competitions/matches	☐	☐	☐	☐	☐
care for you	☐	☐	☐	☐	☐
boost your sense of competence	☐	☐	☐	☐	☐
give you advice about performing in competitive situations	☐	☐	☐	☐	☐
show concern for you	☐	☐	☐	☐	☐
give you advice when you're performing poorly	☐	☐	☐	☐	☐
help you organise and plan your competitions/matches	☐	☐	☐	☐	☐

A number of statements that athletes have used to describe their feelings about their sport are given below. **Please read each of the statements below and indicate the extent to which you are currently experiencing each feeling by selecting one of the following:**

- ☐ almost never
- ☐ rarely
- ☐ sometimes
- ☐ frequently
- ☐ almost always

		almost never	rarely	sometimes	frequently	almost always
1	I'm accomplishing many worthwhile things in my sport	☐	☐	☐	☐	☐
2	I feel so tired from my training that I have trouble finding energy to do other things	☐	☐	☐	☐	☐
3	The effort I spend on my sport would be better spent doing other things	☐	☐	☐	☐	☐
4	I feel overly tired from my sports participation	☐	☐	☐	☐	☐
5	I am not achieving much in my sport	☐	☐	☐	☐	☐
6	I don't care as much about my sports performance as I used to	☐	☐	☐	☐	☐
7	I am not performing up to my ability in my sport	☐	☐	☐	☐	☐
8	I feel "wiped out" from my sport	☐	☐	☐	☐	☐
9	I'm not into my sport like I used to be	☐	☐	☐	☐	☐
10	I feel physically worn out from my sport	☐	☐	☐	☐	☐
11	I feel less concerned about being successful in my sport than I used to	☐	☐	☐	☐	☐
12	I am exhausted by the mental and physical demands of my sport	☐	☐	☐	☐	☐
13	It seems that no matter what I do, I don't perform as well as I should	☐	☐	☐	☐	☐
14	I feel successful at my sport	☐	☐	☐	☐	☐
15	I have negative feelings toward my sport	☐	☐	☐	☐	☐

Please rate your level of agreement with each statement from 1 (strongly disagree) to 7 (strongly agree).

		Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
1	I identify with others in my sport	☐	☐	☐	☐	☐	☐	☐
2	I see myself as a member of my sport	☐	☐	☐	☐	☐	☐	☐
3	I am pleased to be a member of my sport	☐	☐	☐	☐	☐	☐	☐
4	I feel strong ties with others in my sport	☐	☐	☐	☐	☐	☐	☐

Appendix 2 – Study 3 (Chapter 5) Interview and Focus Group Schedule

Wording was modified to be relevant to stakeholder, support staff, and player populations, respectively:

Please start by introducing yourselves, and describe your role/s

Describe some examples of players' support needs, and how these support needs are identified?

What/how is support is provided to players? Can you provide examples?

> *Probe: For performance needs or non-performance needs: sport-life balance, career transitions, education?*
> *Probe: By coaches, staff, parents, peers?*

What influences how satisfied players are with the support perceived to be available/that they receive?

> *Probe: Why does this influence satisfaction?*
>
> *Probe: How do you know when players are satisfied?*

How do we know when support has been effective?

> *Probe: What outcomes and/or indicators do you look for? What does 'effective support' mean to you?*

What does it mean to be a member of your sport?

Describe the identity you have with others in your sport?

> *Clarification probe: To what extent do you feel like you both belong to the same group?*

How does this identity influence the support provided to others?

> *Clarification probe: For example, does your group membership influence how you provide support to others?*

How does your identification with others influence how support is received?

Clarification probe: For example, does your relationship with certain players influence whether they engage with, accept, and/or utilise the support given to them? Why?

What support are you expected to provide, and how are you expected to provide it?

What are players' understanding of support available if needed, and support that is provided?

What support do you think should be provided to players, and how?

Probe: Can you provide examples? Why should this be provided?

Describe the challenges associated with providing support in your academy/region, and what your support needs are?

Probe: E.g. player understanding, disengagement, stigma, how well equipped are you to source, utilise, and signpost support?

Considering the aim of the study, is there anything you'd like to add?

Appendix 3 – Study 3 (Chapter 5) Example Transcript (Hugh, Stage 2 Player)

Start Time	End Time	Transcript	Speaker
00:01:10.8	00:01:15.4	Please start by introducing yourself and describing your role as a player within Scottish Rugby.	Int
00:01:15.4	00:01:17.8	Ehm, name's Hugh, I'm currently involved in the Scotland U20's squad, just come out the 6 Nations, I'm in the Caledonia Academy and play here at Stirling County, just in the city.	Res
00:01:29.6	00:02:06.9	Okay, good. It should hear you fin if you just sort of chilling the back of your chair, you don't have to worry about it [Int: alright that's fine], no that's excellent thank you. So, there are 3 parts to the questions, the first part is just directly around support, okay? So, most of the questions have got 2 parts to them, okay, there's: support that you 'perceive' to be available, so not support that you necessarily access, but support that you 'know' you can access of you need to. The other half is around support that you 'do' access, so that's the received support [Res: yeah, okay] Okay, does that makes sense? [Res: yep] So, just to start off with, what is your understanding of support?	Int
00:02:06.9	00:02:33.4	Uhm... support to me sort of is a lot of the back sort of background stuff, so your physios, your S&C coaches, uhm nutritionists, even like the sort of coaches you get in your drills, so your attack and your defence coaches, so its, different people that give you different inputs in their sort of respective areas, that sort of help you as a player get to your end goal.	Res
00:02:33.4	00:02:41.5	Okay, very good. Uhm, what about your understanding of support around non-performance needs?	Int
00:02:41.5	00:02:44.6	Uhm... so is, is that like...?	Res
00:02:44.6	00:02:50.9	Well, what is your understanding of that? We'll get a little bit more into it what it could be in a sec... what is your understanding of support for non-performance needs in rugby?	Int

00:02:50.9	00:02:53.4	Uhm... . . . not, not a great deal, I know the sort of general, so you you've got your psychologists and your nutritionists, that aren't 'directly' involved like your physios are, but they have quite a big impact i feel, especially your nutritionists, with your dieting, and all that sort of stuff. So, although they're not directly involved with you all the time, they're there and they are a big help.	Res
00:03:20.8	00:03:27.7	Kay, kay, very good, thank you. Okay, so next question: what support can you access?	Int
00:03:27.7	00:04:05.9	Uhm, so through the academy we've got access to physios, doctors, nutritionists, psychologists, we've got... uhm, so you've got your different areas, so we've got attack coaches, defence, then working more into it, you've got like kicking coaches, forwards, you got like scrum, line-out, all that sort of thing. So, every aspect of the game you could sort of think of there's coaches that will have specific background knowledge or extensive knowledge on that area.	Res
00:04:05.9	00:04:34.4	Good, okay, now what about support that you can access for non-performance needs? So I'm gonna give you an example, some examples of the areas that I'm referring to okay? So, things to help with like education and career development, things like managing your finances, mental or physical wellbeing, mental health, personal development, that sort of thing? [Res: okay] What support can you access for non-performance needs?	Int
00:04:34.4	00:05:25.0	Uhm, well as far as I'm aware, there, I'm not involved with what - I don't know about, sort of like your mental health needs - I've been in contact with a psychologist that works here at Stirling Uni, so he's helping me with so, what outside of rugby what are my other goals, what do I maybe want to pursue, so if I wanna go to Uni or college what, what do I want to be sort of learning, so I've gone through that sort of avenue with him. Uh another psychologist I've seen is going over sort of specific rugby needs, so, it will be, in games what what sort of tips me over if I'm annoyed at something, how do I respond to it and, sort of, all around my mental approach to the game.	Res

00:05:25.0	00:05:35.5	Okay. Anything else? What about things like personal development away from rugby or things like helping you manage finances and things like that?	Int
00:05:35.5	00:05:40.1	Uhm, as far as I'm aware, I've not... well I've not received any sort of financial type thing... so -	Res
00:05:40.1	00:05:43.4	- do you know if there is that kind of support if you need it?	Int
00:05:43.4	00:05:43.5	Uhm, I don't no, I'm not too sure on that one.	Res
00:05:45.9	00:05:59.0	Thats good, that's okay, that's what we wanna find out. Uhm, anything else? Knowledge about the support that you can access, maybe things like sport-life balance, anything like that?	Int
00:05:59.0	00:06:22.5	Uhm, well I think the sport-life balance is one of the... I don't know if he is a psychologist, but he's in that sort of area, so he will work with he'll try and get the most of you in rugby, but outside as well he also wants to sort of make sure you're you're not putting all your eggs in one basket, you've got other options, so, if say you do get injured in rugby, you've got a fallback or vice versa...	Res
00:06:22.5	00:06:27.0	And is this person part of Scottish Rugby, or...?	Int
00:06:27.0	00:06:34.3	Uhm... he works with them, I dunno if he's actually he's not an employee of Scottish Rugby, but he works with them.	Res
00:06:34.3	00:06:50.2	Okay, okay, very good. And uhm, now can you - again, the flipside, we were kind of talking about support that you 'can' access, so if we flip the question, describe some examples of support that you 'receive', so that can be anything you've just spoken about around performance and non-performance.	Int
00:06:50.2	00:07:29.6	Yeah... uhm, so majority of their support that I receive is through my coaches and my physios, so, coaches and physios are people I'd see pretty much everyday when I'm training, so, if anything goes wrong, they're always there. Uhm, like I say, the psychologists that I see, I've seen them, I don't see them often, sort it'd be maybe every month or so, but that's just more of like a catch-up to see where I'm at. But I think on a regular training-	Res

		day basis it's my coaches and psychologists... well no uhm physios and doctors... [Int: Okay] are the people I see the most.	
00:07:29.6	00:07:31.8	really good, and eh, what about if we're talking about support that you might receive for some of these things - both performance and non-performance needs - do you get support from just staff at Scottish Rugby, or do you also receive support from your peers, your teammates, your parents, things like that?	Int
00:07:51.5	00:08:37.8	Ehm, yeah uh, obviously I receive a lot of sort of support off my parents, cause I'm sort of at the stage where I'm middle, so I'm still living at home with them just now, so obviously, they're a big help with that, being able to stay there, it takes a bit of the pressure off having to, not having to worry about that sort of living arrangements and all of that. Uhm, players as well, cause obviously, playing in the Prem, there's a lot of a lot of academy players like myself that are in the same situation, so its always being around them, its a good help, you're always just chatting about general things, although it doesn't really seem much but, you're all in the same position, so it's not like you're the only one that's perhaps struggling with something, so you're always around players bout that....	Res
00:08:37.8	00:08:57.9	That's good, okay. Okay, right, so moving on. Uhm, 'HOW' is support provided to you? ... Do you think you could provide some examples as well? [Res: Uhm...] So this is more around the 'way' people deliver support to you [Res: ah okay]... how people support provide... support.	Int
00:08:57.9	00:08:58.0	So obviously, uhm, technology's a big one, so there's always email updates, with things coming out. You've got like your WhatsApp where you've got your chats for your coaches and they'll always sort of put in it, you've got physios as well putting in, after every match, they'll ask for an update on sort of how your body is, if you're any, carrying any injuries. So, all through that, and then if there's anything that flags up to them they'll arrange to sort of meet you, so if there is like an injury or something, you'll say it to the physio and they'll be like 'right, we'll meet on this day, and we'll sort it out'. So, I think technology is probably the main source that they communicate through you with...	Res

00:09:42.2	00:10:01.2	Okay, really good. And what about ehm, when they're providing support to you in person? You've mentioned for example that you get support from your coaches and S&C and so on... ehm... is there anything that comes to mind when you think about 'how' they provide support to you in person?	Int
00:10:01.2	00:10:03.7	Uhm... how, how do you mean by that?	Res
00:10:03.7	00:10:20.5	So, uh, what 'features' of that social exchange maybe come to mind, is it, do they pay a lot of attention to you, is it uhm, mostly them giving you instruction, or do they look for your feedback as well [Res: oh okay yea] examples of 'how' they provide that support to you.	Int
00:10:20.4	00:10:59.3	Uhm... yeah I think the... the main thing they'd sort of go towards first is that they'll ask for your feedback in, so, so, if you're assessing an injury or you're going over a game they'll ask for your feedback first, and once you've given it, then they'll give their feedback, you sort of come together and compare your notes, and then you'll speak about it together. So first of all, they'll, yeah they will ask for your feedback and, cause obviously you sort of know yourself the best, how you feel something is, so, if give that first, they'll sort of give their view of it, and then you just come together, and speak about, that, or whatever the topic is.	Res
00:10:59.3	00:11:08.1	Okay, good example, thank you. Okay, so, next question; what does effective support look like for a player?	Int
00:11:08.1	00:11:42.6	Uhm, I feel like it's just having access to anyone that you need, so your physios probably mainly, having access to them sort of all throughout the week, over weekends, cause if something does go wrong, you don't want to sort of just be left on your own, you wanna have them there to sorta go over and see if you're alright. Uhm... coaches as well like, having as much access to them as possible, just, cause sort of everyday building on your game, and improving yourself... yeah, so...	Res
00:11:42.6	00:11:51.8	Okay, and why is that... what, why is that effective? Why, why does that make it effective, that availability?	Int
00:11:51.8	00:12:27.6	Uhm. Well its, it keeps you... I say keep you in check, its keeps you sort of there... well I mean you can't sort of go wondering off by yourself and be	Res

		doing whatever you want, they're sort of always there keeping an eye on you, and making sure you're doing what's best for you, uhm, what's... yeah so you're not doing extra, so like your gym coaches they'll be monitoring you so make sure you're not like overloading yourself which so you get to the point where you cause an injury. So I think the more they're sort of looking over you - which like they do - its good, cause it keeps you in check, it keeps you hopefully healthy.	
00:12:27.6	00:12:47.4	Good, what do you think about eh effective support again for those things I mentioned that are outside of rugby? So, what is your vision of effective support for things like helping with career and educational development alongside rugby, and mental health needs, that sort of thing?	Int
00:12:47.4	00:12:53.9	I don't, I feel it's something that is not of every season or, it's something that should be made aware to you to, so you say you've got given a big sort of hand out, like a bit of paper, that says what you do have access to, but, I think its after that you've sort of done what you, you don't really need to be updated every month by saying 'aw you know you've access to this'. At the start of the year, if you know you've got access to say like a 'mental' ehm, 'mental psychologist', so if you've got like mental issues, then, like if you're made aware of that at the start of the season, then that should be enough for you, and then from there it's sort of upon you to take yourself up and get in contact with them, it shouldn't really be them having to get in contact with you I think.	Res
00:13:38.4	00:13:46.8	Okay, really good, thank you. Alright, so, who decides what support you need? Is that you, and or others?	Int
00:13:46.8	00:14:10.2	Uhm, I think overall it's you. You know yourself better than anyone, so if you know you're having issues or troubles with something, then its all on you to go and sort of seek the help, its not on anyone else to sort of tell you, cause, at the end of the day they don't really know what's going on with you if you feel you need help or something, then its, sort of, the onus is on you to go and get it.	Res
00:14:10.2	00:14:21.8	Okay, how do others - and by that I mean the people who provide support to you - how do others know what support you need, usually?	Int

00:14:21.8	00:14:42.9	Uhm, they don't, I don't think they necessarily know exactly what support you need. They've just, they've got like the foundation there so, the, all the support's there for you, and its then again its sort of on you to go and get that. So they're there for you if you need it, and they will provide it, they will be happy enough to provide it, but its its on you in the end I think.	Res
00:14:42.9	00:15:17.6	Good, alright, thank you. Okay, got couple... kind of 2 questions here, the last ones of this section alright uhm, these are very strange, they're very repetitive, so I'll try my best to kind of separate them out before I ask them okay? Again these are the sort of more theoretical things. Okay, one is around... the first couple of questions are gonna be around support that you 'can' access, so that perceived support again. And the second ones will be more around the support that you 'do' access and receive, okay? So talking about those first ones, how satisfied are you with the support that you 'can' access?	Int
00:15:17.6	00:15:39.5	Uhm, yeah, I've, I think everything there that you could need within the SRU is there. You've got all your different areas, so you've got your physios, your doctors, your coaches, your nutritionists, your psychologists, everyone's there that you might need, I feel, so I'd say from that, yeah....	Res
00:15:39.5	00:15:46.7	Okay. So, what influences how satisfied you are with the support that you can access?	Int
00:15:46.7	00:16:31.7	Uhm, I'd say, knowing the fact that you have the support there it's definitely a big sort of influence, it does help you a lot, it, you don't have to sort of worry about things, so, like, for example, like I got injured with my knee, so, with what had happened I got would have, if I had gone to like a public hospital, Id've been put on a big waiting list, whereas with the SRU they put you through a private hospital, they pay for it themselves, and I'd had my scan and all that done within a few days of it happening, so, that there it's definitely a big help, knowing that they can sort of support you like that and keep you... keep you checked.	Res
00:16:31.7	00:16:48.9	Good, really good, thank you. Okay, now we're flipping those questions more to the support that you 'do' receive. And I realise you've already spoken a little bit about that [Res: yeah] instance of support, but anyway. I	Int

		have to ask you them again, so ehm. How satisfied are you with the support that you 'do' receive?	
00:16:48.9	00:17:08.4	Uhm, yeah I'd say I'm pretty happy with how things are going, everything that I need myself I get through, well obviously asking coaches and speaking to people, but everything that I do need in my game to help me, I've got the support there for it to push me	Res
00:17:08.4	00:17:16.6	Good, okay. And now the last one of this section, so, what influences how satisfied you are with the support that you do receive?	Int
00:17:16.6	00:17:31.8	Yeah no I'd say I'm sort of very satisfied with everything that I get, its, its a, I'd say its a privilege, that you don't get much kids sort of my age or older or younger that get the amount of support that we get, so I'd say it's definitely a privilege what we get.	Res
00:17:31.8	00:17:39.1	So, what influences how satisfied you are with that, support that you do receive? Is there anything in particular about it that makes you satisfied with it?	Int
00:17:42.6	00:18:08.9	Uhm, yeah I'd say, I have to say, cause obviously in training we're around the professional environment. So you train around the sort of pro players, the elite players. Alongside that you've got all their coaching staff as well, so people that are sort of, they've been coaches over in successful teams, to successful countries, so trained alongside them, it's sort of very helpful, and you're always sort of picking up things off them.	Res
00:18:08.9	00:18:33.0	Good, really good. Kay, that's the end of those ones, thank you very much. So, the second set of, the sort of second category of questions okay, they're around identity and how that influences support, okay? So, again, some of these might seem a little bit strange but just bear with me. So, this is the first question here; what does it mean to you to be a member of Scottish Rugby?	Int
00:18:33.4	00:19:13.2	Uhm, yeah, I have to say its a big a big honour to sort of be involved with the SRU setup its, obviously over the last few years its sort of slowly growing and growing and sort of improving and you can probably see that in the national team, and how it's going, like with how much success they're	Res

		receiving, so I do feel that's down to the Academy system that they've put in place, it's definitely helping boys grow and receive all the support they need, whereas before they'd sort of just be left on their own at their own clubs, whereas now everyone's brought together, trained at the highest standard, all the best equipment access to all the support, so, thats...	
00:19:13.2	00:19:24.4	Good, so, if you were gonna try and sum that up in like a phrase, or a sentence, what do you feel it means to you to be a member of Scottish Rugby?	Int
00:19:24.4	00:19:27.0	Uh, I'd say privileged.	Res
00:19:27.0	00:19:40.1	Good, alright so just kind of probing around that a little bit more, the second question, can you describe the identity you have with Scottish Rugby, or those who provide support to you?	Int
00:19:40.1	00:19:42.8	How do you mean by identity?	Res
00:19:42.8	00:19:51.7	So, considering that membership you just described with Scottish Rugby; to what extent do you feel you're a member of that group?	Int
00:19:51.7	00:20:20.4	uhm... wellI think just now being involved with the U20's, its definitely it's definitely an important thing because you've got onto this sort of stage, and you you are being noticed by other coaches and or sort of your peers at that stage, so I think that's definitely a huge thing that sort of, you do, you're putting in all this hard work in and you're getting noticed for it, so I think that's definitely a huge positive.	Res
00:20:20.4	00:20:31.4	Okay, and uh, can I maybe also just get you to tell me a little bit more, can you describe what it's like to be a member of that group?	Int
00:20:31.4	00:21:11.3	Uhm... def.. uhm, it's definitely, its a its good fun, I was involved ab it last year, but got injured but, it's I think the bond that you sort of form with all these players you come at the start of the competition and its just 30 individuals basically, and over the course of the 8 weeks and the 6 Nations you sort of grow as a group, and especially this year we've sort of gone from like a group of individuals and now its a really really strong bond we've all got, like we're all, we all get on with each other, there's no rivalries	Res

		or anything like that, so its definitely I think, its a good environment to be in.	
00:21:11.3	00:21:23.2	Good, really good okay. Could I ask if in your academy; do you guys have any sort of Academy Values or anything like that? Sort of team values?	Int
00:21:23.2	00:21:34.7	Yeah we've got like a, dunno what you call it, maybe code of conduct or something like that, [Int: yeah?] so, def, we've got that that's in place and that's sort of the mottos you sort of live and train by.	Res
00:21:34.7	00:21:36.6	Do you mind telling me a bit more about that?	Int
00:21:36.6	00:23:03.1	Yeah, I don't know exactly it all, but I do know a few of them. So, a lot of what its about is how you conduct yourself. So, your professionalism, sort of turn up on time to training, if, you go to a meeting or something like that bring a notepad, bringing boots, just remembering all your kit, so just that professionalism and how you hold yourself. Ehm, when you're away from training how you conduct yourself, so, obviously when you're trining you're gonna be eating really well, all that, but, its not making sure that as soon as you go home you just like go an pig out, and, get a load of junk food - it's sort of keeping the same standards that's you are when you're sort of in camp and in the academy environment. [Int: good] uhm a lot, another one is sort of 'train how you play', so you're not just going through training half-assed, you're like, you're putting everything into it, you're keeping up your - although it's only training you wanna train as you play, so you're not dropping balls, all that sort of thing. Eh... what else have we got... I think its just like putting 100% into everything, whether that be in the actual training session or if its in the gym doing your lifts, or even if it's just at the end doing a few extras, sort of just kicking a few extra balls, works on, working on something where you're maybe not so good at, just sort of press it.	Res
00:23:03.1	00:23:07.1	Kay, how did you guys come up with these values and code of conduct?	Int
00:23:07.1	00:23:33.7	Uhm so at the start of the, when the academy was first setup, all the sort of boys came together, and basically coaches sat down and they were like 'as an academy player, what do you feel should be, what do you feel like should be implemented in training?'. So, we all put like a load of sort of	Res

		these words in, and then, stick them, on like the wall, and that's just sort of what we train by.	
00:23:33.7	00:23:49.3	Really good, okay, very interesting, thank you. Alright, so, last question for this section. Uhm, this identity we've been talking about, okay; how does this identity affect how you respond to the support that's given to you?	Int
00:23:49.3	00:24:20.8	Uhm, I think it, it makes you grateful of it, it uhm, yeah there's definitely sort of nobody walking about thinking they're bigger than what they are, so thinking, walking about like 'yeah I get all this support, I'm more like really sort of arrogant', then knowing that you've got all the support and all that sort of thing it makes you obviously makes you feel very privileged to have it, and its yeah, yeah I'd just say it makes you privileged really...	Res
00:24:20.8	00:24:36.9	Good okay, so just to probe that a little bit more, do you feel there are instances where your relationship with like, lets say someone whose providing support to you, does that influence whether you trust, accept or use their support more than you would otherwise?	Int
00:24:36.9	00:25:18.6	Uhm, I wouldn't say it influences no, I think, you're always going to use the support, but I think, it will make you more comfortable around the person? So, if you've got someone that you really get on with, then you're obviously going to have a bit more of a laugh with them, and you'll not make it a bit, it will make it an easier environment to sort of train in. Whereas if there's someone that you maybe, you don't 'not get on with them', but you're not as comfortable around them, and you don't really know them that well, then you'll you'll be a little bit more you'll be a bit quieter, a bit shy. So I think it definitely, forming a good relationship with who you are training with and your support networks is a key thing.	Res
00:25:18.6	00:25:25.3	So what is it that influences whether or not you form that good relationship with those people?	Int
00:25:25.3	00:25:46.1	Uhm, I think its, just sort of your first, when you first meet these people its having the confidence to go up and sort of talk to them, cause they're not gonna change they're sort of perception of you. They're first view of you is sort of: if you go up, you're confident with them, you just speak general	Res

		chat, so ask them how they are, then I think that sort of sets it from there, then you can just work on it from there.	
00:25:46.1	00:25:55.9	And what about from their perspective? What do you feel when they, what they bring to that interaction, what is it that makes that relationship get off to a good start?	Int
00:25:55.9	00:26:17.7	I think if you're willing to put the effort in, and you're willing to work 100% and doing what they say, then they're going to be happy with you. If you're you're the one that's always messing about, not really taking part and sort of doing half the things they're asking, then they're not going to be too happy, but as long as you put 100% in for them that's all they can really ask for.	Res
00:26:17.7	00:26:41.8	Good, kay, thank you. Okay, so the last couple of questions is around basically player needs and strat- and sort of strategy moving forward, okay? So, I know we spoke at the beginning about ehm kind of what your understanding of support is and things like that, this questions is; can you describe some examples of your support needs as a player?	Int
00:26:41.4	00:27:04.4	Uhm, [Int: any particular needs?]... I wouldn't say its a need but I'd think something that would be a good help is - like you said at the start - that uhm financial support? Like I think if something like that was in place, I think it definitely big, it'd be a huge help to, I'd probably say most academy players.	Res
00:27:04.4	00:27:07.4	Can you say a bit more about that?	Int
00:27:07.4	00:27:50.0	So, obviously most academy players they're in this sort of professional environment training, for most days of the week. So you don't necessarily have time to get a full time job or if they're at Uni as well, then its hard to sort of fit work in with that. And then, on top of that it's trying to sort of be self-sufficient, so, if you can, sort of provide the financial support, then that'll maybe give them ways where they can help, either save up or they can sort of budget their money a bit better, and help. Cause I know for myself as well, and I know a lot of other boys as well that that'd be a huge help with just having that sort of support and knowing what to do with it.	Res
00:27:50.0	00:27:56.9	And you don't feel like you currently get that kind of perhaps advice and how to manage finances that sort of thing?	Int

00:27:56.9	00:28:08.7	No, not finance, [Int: not from the SRU anyway], not not financial like specific, you get support like maybe, from what sort of college work and all that sort of stuff [Int: yeah], but not specific financial support.	Res
00:28:08.7	00:28:17.8	Okay, really interesting thank you. Are there any other gaps or challenges you feel that you need in terms of support?	Int
00:28:17.8	00:28:43.4	Uhm, I wouldn't say so, no. I think everything is pretty much covered, so, everything, every rugby-specific need that you might need is covered. They obviously give you the help with working and your academy training with college and uni cause they'll speak to like lecturers and stuff like that, so that's good, but I just think, like I said before like that financial, I think that'd be a huge bonus to any academy player, receiving that support.	Res
00:28:43.4	00:28:56.9	Okay, interesting, thank you very much. Alright, so, as a broader question, what support do you think should be provided to players and how?	Int
00:28:57.1	00:29:35.1	Uhm... yeah so. You get like the financial managers, is that what they're called? So I think every so often, maybe, even 4 times a year, so just every sort of season, you get uhm this, they get em to come in and just basically like again its on the academy player himself to sort of take that support if he wants it, so if you get him coming in and having a sort of speak with us all, come and take notes about it, and even just like an hours session about it, I think that'd be a big help.	Res
00:29:35.1	00:29:36.9	Good, okay, anything else that jumps to mind?	Int
00:29:36.9	00:29:41.3	No, I think that's, that's the only thing I can really think of, everything else is pretty much covered.	Res
00:29:41.3	00:29:48.1	Things like uhm, helping you with things like education development alongside rugby, or career development?	Int
00:29:48.1	00:29:51.2	That's covered through the, they help they do help with that.	Res
00:29:51.2	00:29:53.6	Can you tell a bit more about it, how is that done?	Int
00:29:53.6	00:30:26.6	So if you're they'll have sit downs, so the SRU's in contact with a lot of unis and colleges so they'll put you in contact with so, if you're wanting to study	Res

		a certain subject they'll put you in contact with someone that they know through that, and then you'll go speak to that person and just sort of speak about it a bit [Int: good] if they'll give you sort of advice and how to go about it and how, if you're wanting to do that subject, whats best to do, so...	
00:30:26.6	00:30:32.7	Okay, and is it the same for sort of career stuff, like if someone's looking to do some work experience or work shadowing?	Int
00:30:32.7	00:30:34.8	Uhm, I'm not so sure about work experience, but I do know that they do that with like college and uni.	Res
00:30:38.5	00:30:46.4	Okay, and in that instance, who is the sort of go to person for you if you wanted to do that at the SRU?	Int
00:30:46.4	00:30:56.4	Ehm, you'd probably speak to your academy manager. So each region has got a different manager, but if you speak to your academy manager he's usually the one that will get in contact and make it happen.	Res
00:30:56.4	00:31:00.3	So have you got an example of you having done that before with him?	Int
00:31:00.3	00:31:50.1	Yeah so I spoke to my manager and he put me in contact with someone from, he works at Stirling Uni, I don't know if he's based here. [Int: okay] uh a guy called Rory, so I sat down with him a bit and we spoke about, although we spoke about rugby as well, he spoke about what my - so if I was to go to uni what I would preferably like to study but, even more basic than that, he just talked to me and say like if I've ever watched TV, do I ever watch like a program and think 'oh I'd really like to do that job', something like that. So he'll just go through the basics of that, and then through that, he'll sort of build his sort of portfolio up and just, at end come to it and go 'this is your best option here'.	Res
00:31:50.1	00:32:02.0	Interesting, that's really good, okay. So... considering the aim of the study, uhm have we missed anything? Is there anything you'd like to add?	Int
00:32:02.0	00:32:05.7	Uhm, I don't think so, I think we've pretty much covered everything.	Res
00:32:05.7	00:32:09.0	Okay! [Res: Yep] Right, thank you very much Hugh.	Int
00:32:09.0	00:32:09.1	That's alright.	Res

Appendix 4 – Study 3 (Chapter 5) Field Journal and Reflective Journal Entries with Pseudonyms

Stakeholder interviews

26/09/2017 – Robert (stakeholder). I think the story he told me as we were walking towards to the interview venue was quite telling. I asked him about his experiences of being a player, and he said he was very much on the first-hand receiving end of transitional support and career transitions – his last game was on a Saturday and he walked into his first office job as a development officer on the Monday. It was highlighted to him through his own experiences of the importance of addressing these support an transitional needs early on, and he feels he was unusual in this respect because he knew as a player that this would just be a short stint in his life and he accordingly planned his post-rugby career from day 1. He also mentioned during the interview that some of the support he provides and the vision he has for Scottish Rugby comes from his own experiences as an athlete and head coach, and knowing the challenges that these people face and things they maybe don't tend to consider but should.

I think the interview went quite well, we were in a private office. He had lots to say, and he was particularly pleased about the questions I was asking, he felt it was touching upon the right areas of interest for the project (he made explicit reference to the part of the PhD summary that he said he liked in the Stakeholder interview). It seems that things are already going quite well in terms of support within Scottish Rugby, but player perceptions about what is needed seems to be a problem, and educating players about what they should do outside of Rugby is a challenge. Furthermore, sport-life balance support isn't necessarily there, and Robert doesn't really know how to address this need. They haven't identified exactly what resources are needed, and they don't know how they're going to get them either (e.g. in terms of funding). Interestingly, for academy and pro-team level stuff, he said their biggest need was a full-time performance psychologist and life-style consultant. The stuff he was talking about was very much at a 'operational-managerial level', and he was talking a lot about vision, and indirect markers of player performance (not so much wellbeing, very little social validation data collected from players in this process).

05/10/2017: Steve (stakeholder). He elaborates on his job title in the recording, he may be considered as part of the HR team. After interviewing some other people, I've realised that Steve is regarded as a key resource for implementing the 'Rugby for Life'

programme, mostly because he acts as an interface between the managerial level staff and the players. He is 'key' because he has good rapport with players, and due to his identity as a successful international rugby player, players respond and utilise the support he provides very well.

I think it went pretty well, it lasted about 40 minutes. It might be worth thinking about whether he truly is a high-level stakeholder, because he does a lot of 'on the ground' work with players, and the supportive acts and needs he was describing was very much at a micro player-support provider level. This was the first interview with the 'refined' schedule following my debrief session with Pete, and unfortunately I feel like the schedule had gotten worse. There were at least two instances during the interview where he didn't understand the question and needed clarification. In fact, when I asked 'how does the identity you have with Scottish Rugby influence the support you provide', he looked really confused. He also seemed confused around the identity questions, and this was a common theme throughout the day; recipients were unsure if I was asking them to comment on 'their' social identity within Scottish Rugby, or on 'Scottish Rugby's social identity' more generally. He also seemed to display some very mild uncertainty and anxiety during the interview, saying twice that he feels as if his cultural differences might mean he misses the right areas, perhaps he was worried he wasn't answering the questions in the right way.

26/09/2017: John (stakeholder). I'm noting that the interviews seem to be getting shorter. In this instance, I was 1) weary of his senior position and worried about taking up too much of his time, 2) trying to stick to the 30-min time frame by not probing for examples, 3) wary that his 'senior speak' was going over my head and I was asking the same questions which he'd already touched upon. I finished just short of 30 mins. He seemed quite serious, brisk, and to the point. He had the occasional laugh prior to starting his reply, which made me weary that I was asking childish questions that were missing the point.

26/09/2017: Amy (stakeholder). She was the least comfortable with being interviewed so far, in fact she openly said she dislikes being interviewed. She regularly displayed uncertainty with regards to her replies, asking me 'does that answer your question?'. However, she gave some nice insights once we got talking, and I managed to probe for some examples. Finished around 30 mins again, worried that I wasn't getting enough out of the interviewees at this stage.

26/09/2017: Jane (stakeholder). I think this went much smoother than the first three today. I had been adjusting the questions throughout the last few interviews, so they were less hard to interpret and came across more naturally – although I'm worried we're not touching upon the right areas anymore. She responded to both interpretations of "in terms of identity, what does it mean to be part of Scottish Rugby?", and I changed "how does your identity with Scottish Rugby influence the support you provide?" to "Do you feel the identity of Scottish Rugby influences the support provided to players?". This was a good interview though, she touched upon some really nice theoretical areas and it was an opportunity for me to clarify some things around the project from her perspective.

11/10/2017: Michael (stakeholder). The interview went pretty well, Michael was chatty and comfortable. However, right at the start we had about a 15-20-minute interruption because he had to take two separate work related phonecalls. After this, he switched his phone off and we got into some really nice interviewing, a lot of which complemented what was said in some of the other interviews. I will probably note that I spoke a bit too much and treated some of what he said as a regular discussion. For example, I commented on and summarised some of the things he said ('ah, so you mean something like rapport building'?), and this may have put words in his mouth through leading questioning. However, this conversational style really helped to build rapport with the interviewee.

Player interviews

19/12/2017: Matt, Jerry, Rickie. These went quite well; I only spent about 30 mins with each of them because I got through all the questions and most probes quite quickly. The second interviewee struggled to understand the questions I asked him. The players in general seemed a bit worried that what they were saying might influence their position within the academy (e.g. often reiterating to excess that 'the support they get here is great'.) One very interesting and persistent thing to emerge from the Borders and East Lothian Academy data collection was their consistent mentioning around 'Academy Values', which were a personalised set of 'identity values' the borders academy set up and police themselves, it seemed to be of importance to them and it was very engrained.

22-29/03/2018: Hugh, Sheila, Sean. I think these went very well, I am becoming more flexible with the use of qualitative interviewing. For example, I am providing a clearer explanation between the differences of perceived and received support and have 'grouped'

the questions together into 3 sections (support, identity, strategy). Before my interview with Sheila, I felt that I wasn't really getting at the identity stuff; I wanted more insight into what the 'norms' of being a member of 'rugby' is all about. I wanted to understand if these identities condition whether support-seeking behaviour is seen as identity-firming and therefore normative, or if there was a 'stigma' around assessing support. In fact, in Sheila's interview I just asked about stigma directly, which gave me some really nice answers, so I will include this in the schedule moving forward. I did Sean's interview outdoors. It went pretty well, aside from noise and potential distraction from people coming and going.

5-27/04/2018: Nemo, Irene, Donald, Laura, Oliver. My interview with Nemo went very smoothly, and I asked all the relevant questions, didn't prompt him much because he talked lots. A few weeks later, I met with Donald, Oliver, Irene and Laura all in one day. The interview with Donald went quite well, but I deviated from the questions significantly to pursue what I felt was emerging to be of interest from the data analysed thus far. The main problem was that I may have led Donald's answers when he was talking about the need to have someone educate players around the use of agents, he said "someone who can…" and then I completed his sentence for him by saying "tell you what to expect" (which he of course agreed with, but this dynamic again served to build rapport). When interviewing Irene, I was rushing through the interview due to her arriving late, so I didn't ask all the questions but I think we touched upon all the areas we needed to. I also met with Laura, who is a Stage 3 player, which went quite well. In general, I was changing the nature of the questions quite flexibly to pursue the areas of interest. I didn't feel that some of the questions were getting at what we wanted (e.g. 'Describe what it means to be a member of Scottish Rugby' was eliciting short answers about pride and nothing else), while others were redundant (e.g. 'How is support provided to you' seemed to be redundant and wasted time, because when discussing support that is available and/or received the interviewees inevitably ended up discussing 'how' this support is available and/or provided). Some of the 'open-ended questions' elicited closed responses (e.g. 'Why does this make you satisfied' prompted repetitions of previous responses) and vice-versa (e.g. despite 'To what extent do you identify with those who provide support to you' perhaps risking short Likert-style responses, it actually elicited quite descriptive and rich answers unprompted). Many questions had to be rephrased or clarified on the fly to help the interviewee understand them, and some probes and questions were instigated in the moment to help answer an area that I felt was of interest. I do feel I can justify the changes, as I'm not '*walking them through a questionnaire*'.

There was an interesting trend that started to appear. For female players, they tended to feel frustrated that they are held to the same standards of male players, but don't feel like they have as much support available to them. The lack of clarity in the 'role and pathway' of a female rugby player in Scotland is a source of confusion and irritation. The other thing that struck me during these player interviews is the vast differences in understanding around what support is available amongst players and staff, and whether there is a stigma around accessing support or not. Some seem clear on what's available and what to do, whereas some feel there is a definite stigma and it is a barrier.

Support Staff Focus Groups

19/12/2017: Adam, Brian, William, Luke. I don't think this went as well as it could have. One of the staff members, William, seemed quite annoyed at the prospect of having to sit through a focus group. He said at the start 'You've got 9-minutes mate', with lots of sighing and shuffling throughout the focus group. Some of them seemed actively distracted from the interview. There were only 4 of them so their answers were quite long and individual, not much interaction between them, and everyone seemed to be echoing what the academy manager was saying. One very interesting and persistent thing to emerge from the Borders and East Lothian Academy data collection was their consistent mentioning around their 'Academy Values'; a distinct and personalised set of 'identity values' the Borders Academy set up and police themselves, it seemed to have great importance to them and it was very engrained.

15/02/2018: Jordan, Magnus, Gregor, Richard, Joana. This focus group went much better than the Borders one. The staff were much more at ease and seemed supportive and quite keen to talk to me (they had just had their weekly 'team meeting' beforehand, so had specifically put time aside for this). We were seated in a circle in a huge open-plan function room, overlooking the rugby pitch. The main problem was that Jordan and Magnus did most of the talking. They would keep playing off each other, giving me very little time to actually move onto the next question. Gregor and Joana were the quietest, I could have probably encouraged them a bit more, but Jordan and Magnus were very dominant. I feel that the somewhat refreshed order of questions allowed the focus group to flow much better by structuring it into three distinct sections, and taking a moment to explain to the participants 'okay, the next section focuses on… X'. I also provided some academic context to each question by saying 'okay this question may seem a bit weird, but the theoretical basis is…'

This seemed to put them at ease more (they even smiled!), and they were accordingly more willing to engage with the questions than the Borders group were. There were two instances which caused disruption. Richard's phone went off and he had to answer it, and left the room for over 5 minutes during which discussion continued. Then an athlete and some coaches came into the room and had to have a conversation with Magnus, so he left the group for a while also while the discussion continued (it would not have been possible to prevent this).

27/03/2018: Marlin, Alvin, Billy, Derek. This went pretty well, although I didn't make the distinction between perceived/received support for any of the questions – however, they were clearly talking about the distinction between the two, and probe points emerged organically which allowed me to get into all the areas of interest. I also interjected at several points and treated the focus group as a conversation, while this may not have been 'textbook procedure' I felt this was necessary to establish rapport and get them talking. We started the focus group in a noisy café, and when the noise became unbearable we decided to move rooms. Towards the end, a lunch lady came in and caused a lot of commotion while she was unloading food from a trolley.

05/04/2018: Pete, Elliot, Andrew, Megan, Larry. This went pretty well, although Elliot brought in a seeing-eye dog which caused a lot of distraction and urinated on the carpet halfway through the focus group! I quite flexibly adjusting the focus group questions as I went along to probe the areas I felt were of interest.

General Study 3 Data-Collection Reflections

At several points during interviews, I started to think of my positionality within interviews to stay objective. Specifically managing distractions during interviews (e.g. disciplining the group to stay focused) and managing feelings of awkwardness. This was challenging at times due to my past experiences on performance-pathway support programmes as an athlete, but also in my current capacity working as a sport psychology practitioner. In these instances, I had to make a distinction between myself as researcher, person (athlete), and practitioner; and instead show 'interest' without being judgemental or over-identifying with the content being discussed. During the familiarisation interviews and as data collection proceeded, I was able to reflect on my interviewing approach and identify what allowed for more meaningful disclosures to occur. I noted how, at times, the interviews felt unstructured and the interview guide was temporarily abandoned, yet all the relevant

topics were covered through analytically interesting probing and prompting through the participants' evolving narratives.

Study 3 Analysis Reflections

12/01/2019: I tried to write a story for each of the relevant analytical themes as sub-headings, being as concise as possible to answer the research question. However, I found it hard to analyse the player data 'solely' from the perspective of the players. For example, because I already knew how the support providers provided support on a day-to-day basis, I felt this might have influenced how I interpreted players' perceptions of how their support providers attended to their needs on a day-to-day basis. Furthermore, although my reflexivity skills might be refined due to my training as an applied psychologist, I was conscious about inevitable 'contamination' of my findings with my lived experience. Therefore, I attempted to understand how I perceive and understand social support based on my scientific and athletic background and experience, and how this influenced my interpretation and understanding of the data.

15/03/2019: Moving from 'description to interpretation' (Bruan & Clarke, 2006). I aimed to (1) theorise the significance of the patterns, their meanings and implications, and (2) go beyond description and make an argument in relation to my research questions, for example, asking myself:

'What does this theme mean?' 'What are the assumptions underpinning it?' 'What are the implications of this theme?' 'What conditions are likely to have given rise to it?' 'Why do people talk about this thing in this particular way (as opposed to other ways)?' and 'What is the overall story the different themes reveal about the topic?'

Thematic analysis at this latent level goes beyond the semantic content of the data, and starts to identify or examine the underlying ideas, assumptions and conceptualizations. This fits within the realist philosophy because it allows me to uncover the reality/phenomena that I am trying to study.

28/03/2019: Today, I reached a crux where I wanted to create three themes:

1) Social identity characteristics define the structure of support
2) Identity processes allows support provision to be adaptive and meaningful

3) Identity processes define the desired and acceptable commonalities in social support exchanges.

However, the issue I kept running into is that social support cannot be distinctly split into 'provision' and 'receipt'. It seems to be a truly dynamic 'exchange' where the both the provider influences receipt and the recipient influences provision.

03/04/2019: Some take-aways for analytical process:

- I am worried about having only two analytical themes, because I am concerned they seem too abstract. However, I am certain that having two overarching analytical themes is the only way to organise the sub-themes so they are truly distinctive.
- It is okay for the sub-themes ***within*** each analytical theme to be related to one-another. Indeed, the way I've written the order of paragraphs explains the inter-linking story between the sub-themes.

03/05/2019: Generally speaking, there needs to be a clearer alignment between study purpose, aims, the research questions, and *how* the themes help to answer the research questions. For example, grouping the findings from the themes under broad headings to address the questions? Also, perhaps I may try communicating the meaning more simply and clearly (e.g. by avoiding technical language such as social identity versus shared identities, counter-firming, counter-normative, etc.). I might try keeping the language simpler (e.g. assume that the reader has no theoretical knowledge).

21/05/2019: Having addressed some additional feedback from my 'critical friends', I decided to abandon the sub-theme 'identities were infectious'. I felt that this was not truly distinct (the idea was actually based-on only one focus group). Instead, I felt this was merely a mechanism of how identities shape understanding (an existing separate theme) and engagement (existing separate them). Accordingly, I moved any supporting quotes to those sub-themes, with the concept of 'infectious' was used to describe the mechanisms.