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A study of resilience in West Australian small business owners

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Research suggests a relationship exists between the resilience of the Small Business Owner (SBO) and the resilience of their business, however the nature of this relationship is unclear. The current study investigated whether the internal resources of the SBO were significant in predicting the resilience of their business. A sample of 108 SBOs in the Perth metropolitan area completed an online questionnaire which measured aspects of individual and business resilience. A series of multiple regression analyses were used to test three hypotheses. The results from all three analyses consistently revealed that the internal resources of the SBO were the most important predictors of business resilience compared to other resilience factors. Furthermore, the resilience of the SBO was related to the resilience of their business through awareness and the SBO's internal perception of self. No other study could be found that has provided scientific evidence of a link between the owner's internal perception and the perception of their business, nor identified specific attributes of individual resilience that are predictive of business resilience. Future research should include studies of resilience which focus on the internal resources of the SBO.

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A Study of Resilience in West Australian Small Business Owners

Philip Roggio

A report submitted in Partial Fulfilment of the Requirements for the Award of Bachelor of

Arts (Psychology) Honours, Faculty of Computing, Health and Science,

Edith Cowan University.

Submitted (May, 2011)

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A Study of Resilience in West Australian Small Business Owners

Abstract

Research suggests a relationship exists between the resilience of the Small Business Owner (SBO) and the resilience of their business, however the nature of this relationship is unclear. The current study investigated whether the internal resources of the SBO were significant in predicting the resilience of their business. A sample of 108 SBOs in the Perth metropolitan area completed an online questionnaire which measured aspects of individual and business resilience. A series of multiple regression analyses were used to test three hypotheses. The results from all three analyses consistently revealed that the internal resources of the SBO were the most important predictors of business resilience compared to other resilience factors. Furthermore, the resilience of the SBO was related to the resilience of their business through awareness and the SBO's internal perception of self. No other study could be found that has provided scientific evidence of a link between the owner's internal perception and the perception of their business, nor identified specific attributes of individual resilience that are predictive of business resilience. Future research should include studies of resilience which focus on the internal resources of the SBO.

Philip Roggio

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And finally, I dedicate this thesis to Sharon Faye, in appreciation of her undying

commitment.

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A Study of Resilience in West Australian Small Business Owners

Michael Gerber (1995), author of the "E-Myth", has studied and worked with thousands of small business owners for more than three decades, in America and across the globe. Over the course of working closely with small businesses, Gerber noticed that most follow a common developmental trajectory characterised by a number of personal challenges and threats to the survival of the business. The current author's experiences as a small business owner (SBO) are consistent with Gerber's, both in the developmental pattern of the business, and the threats and personal challenges faced. Gerber's book is an all too familiar account of the journey that many SBOs experience in small business start up and growth. This study provides an insight into that journey and how through resilience, SBOs can respond productively to the personal challenges which threaten the survival of their enterprise.

The purpose of the current study was to investigate resilience in the context of small business. Small businesses are important for the economy of Australia and provide employment for millions of people (ABS 2010). However, owning and operating a small business can be very challenging and often the SBOs' mental and physical health is affected, along with family and social relationships. These factors impact negatively on the business, as the SBO has a significant influence over business operations, a fact that is often overlooked. Resilience holds the key to valuable resources which enable SBOs to respond productively to the many challenges they face in starting and growing a small business.

This project begins with an overview of the characteristics of small businesses and their owners. A common scenario in a typical small business lifecycle is used to establish

the importance of studying resilience within this context. A brief outline of the theory of resilience will be followed by a sample of the current literature on business resilience before moving to the research aims and hypotheses. The aim of this research was to examine how the owner influences his/her business.

Small Business Characteristics

Small businesses make a substantial contribution to the global economy (Morrison, Breen, & Ali, 2003; Reijonen, 2008) however their impact on society is often underestimated (Lepoutre & Heene, 2006). For example, in Australia almost 2 million actively trading businesses in the small business category contributed an estimated 46% of Australia's Gross Domestic Product in 2006, and employed almost half of the entire workforce in 2007 (ABS, 2010). The small business sector is responsible for providing 3.6 million jobs, or 47% of private sector, non-agricultural employment ("Council of Small Business of Australia ", 2011). In the most recent business counts reported by the Australian Bureau of Statistics as of June 2009, there were 2,051,085 actively trading businesses in Australia.

Of these businesses, the data indicated that the majority were small businesses (95%), and that 1.2 million, or 63% do not employ any staff. Of the remaining 820,803 businesses that employed staff, most employed fewer than 20 employees (89%). This comprised 497,098 (68%) businesses with 1-4 employees and 233,957 (32%) businesses with 5-19 employees. There were also 83,399 (10%) businesses with 20-199 employees and less than one percent (6,349) of businesses with 200 or more employees (ABS, 2010). Western Australia (WA) was one of only three states which contained a higher proportion of businesses than people (ABS, 2010).

The statistics reveal the high proportion of small businesses compared with large organisations, and demonstrate the importance of conducting research in the small business arena. Moreover, small and medium sized enterprises (SMEs) are distinctly different to large organisations in the way they operate (Reijonen, 2008). The most distinguishing characteristic of an SME is the importance of the owners' influence over business outcomes (Lepoutre & Heene, 2006; Wijewardena, Nanayakkara, & De Zoysa, 2008). With businesses often thought of as machine-like entities that simply churn out products and services for the economy, there is a tendency to overlook the substantial personal contribution of the SBO in the success of their enterprise (Denhardt & Denhardt, 2010). Despite the significant contribution of small business to the economy (Morrison et al., 2003), relatively few studies have examined the psychological characteristics of the individuals who own and run them.

Owner Characteristics

SBOs are either directly involved in, or responsible for, all of the functional areas of the business (Hill, 2001). Such areas may include finance, administration, operations, sales, and human resources, as well as the technical aspect of the business (Lepoutre & Heene, 2006). SBOs must make quick and effective decisions in a climate of constant change and uncertainty (Patzelt & Shepherd, 2009). They must provide the vision and values necessary to guide the business through turbulent times (Seville et al., 2006), and display effective leadership to retain valuable employees and maximise organisational performance (Norman, Luthans, & Luthans, 2005).

The challenges of small business ownership for many, can be a source of positive emotional experiences such as passion, excitement, and personal satisfaction (Patzelt & Shepherd, 2009). A number of small business owners surveyed in Perth, Western Australia

reported personal satisfaction, pride, and a flexible lifestyle were considered the most important aspects to small business ownership in terms of measuring their business success (Walker & Brown, 2004). However, a great deal of responsibility is bestowed upon a small business owner who must manage multiple tasks simultaneously to keep the business profitable, provide value to its customers, and maintain a safe, healthy, and stimulating working environment for its employees. Some business owners do not manage these expectations as well as others (Schwarz & McRae-Williams, 2009).

The personal challenges SBOs face usually begin early in the businesses' infancy when there is a greater level of risk and uncertainty surrounding the new venture, and the level of entrepreneurial effort is at its peak (Hill, Nancarrow, & Wright, 2002). The high job demands are usually associated with long working hours and high stress loads (Harris, Saltstone, & Fraboni, 1999) which in turn can impact on the quality of family and social relationships (Gumpert & Boyd, 1984; Steensma, Den Heijer, & Stallen, 2006). If the owner is distracted by problems in the family or in their relationships, and stress levels are elevated due to the constant pressure and long working hours, their effectiveness and decision making ability declines and it becomes difficult to maintain successful business operations (Legohérel, Callot, Gallopel, & Peters, 2004).

As the business grows into the adolescent phase and requires more resources, the owner realises the need for extra skills and knowledge, and a further set of crisis points arise. The SBO faces the realisation that his/her technical skills alone are insufficient to successfully run the business and they must increase their knowledge of small business management, or bring in external expertise (Gerber, 1995). However, the limited financial resources available to SBOs can be a barrier for seeking external assistance (Hankinson, 2000), and unlike large organisations, the SBO does not have the support of peers or

colleagues to turn to for assistance (Tetrick, Slack, Da Silva, & Sinclair, 2000). Entrepreneurs and SBOs often report feelings of loneliness and social isolation as a result of these circumstances (Gumpert & Boyd, 1984), which often leads to high anxiety and depression (Featherstone, 2011).

Depression and anxiety are common outcomes in small business contexts (Liossis, Shochet, Millear, & Biggs, 2009) which may lead to further negative health consequences for SBOs. For example, coronary heart disease is linked to negative emotions such as anxiety, depression, and stress, through the pathways of risky health behaviours (e.g., smoking, alcohol consumption, poor food choices) and biological mechanisms such as increased levels of circulating stress hormones and suppressed immune function (Gallo, Ghaed, & Bracken, 2004).

Other chronic physical disorders such as diabetes, stroke, cancer, and arthritis are all associated with an increased prevalence of depression when compared to the general population (Clarke & Currie, 2009). Higher incidence of depression and illness in turn leads to a decline in self care (Donohue & Pincus, 2007) and positive social interactions with immediate others (Steger & Kashdan, 2009). If the mental health and well being of the owner declines, it impacts directly on the business (Berman, 2009; Norman et al., 2005; Tiuraniemi, 2008) and the financial performance of the business may suffer, placing the business at risk of failure (Wijewardena et al., 2008).

However, with a great deal of determination and effort on the part of the SBO, some small businesses will eventually reach maturity (Gerber, 1995) although not before experiencing a cycle of success to failure, and then back to success again (Hamel & Välikangas, 2003). From this point on, the business stabilises and takes on a aura of sophistication and professionalism with diminished threat to its survival (Hill et al., 2002).

Although this lifecycle appears to be a dramatic representation of the experience of small business owners, and while many do live healthy and productive lives, clinical observations by organisational psychologists working with SBOs report this is a common scenario.

Owners who present with business problems usually present with a similar set of personal and relationship problems. The SBO does not realise how these personal problems are related to the problems in the business (S. Faye, personal communication, March 11, 2011). For example, Berman (2009), a consultant psychologist from Rhode Island, reported that during the credit crisis in America in 2008, business owners often felt the stress of keeping their company afloat while sales decreased. Stress was further impacted as owners were unable to obtain finance to keep the company solvent. In response, the SBO became pessimistic, adopted a 'downtrodden, forlorn demeanour', and showed a lack of vitality, which resulted in decreased staff productivity and morale. Through lack of self awareness, SBOs were unable to see how their mood was impacting on business performance (Berman, 2009),

In times of stress or crisis, SBOs may respond in a number of different ways (Coutu, 2002). While some may struggle helplessly in business for years under stressful circumstances, others will succumb to the adversity and the challenges they face, ending in bankruptcy, or by simply closing the doors and walking away (Gerber, 1995). SBOs who respond to challenges with confidence, flexibility and awareness will increase the business's capacity to survive and the owner and their business will become stronger for the experience (Denhardt & Denhardt, 2010). These individuals and their businesses are said to be "resilient" (Coutu, 2002).

Studies of resilience in the context of small business are however sparse (Luthans, Norman, Avolio, & Avey, 2008). Even fewer, are studies of resilience that involve the SBO

(Ferguson, Cohen, Pooley, & Harms, 2010). One that showed the benefit of promoting

adult resilience in the workplace was the intervention study by Liossis et al, however this

was with employees and not the owner of the business (2009). The employees from a

Brisbane based government organisation found they were better able to manage the

demands of their work and home lives. Participants of the program reported reduced levels

of depression and stress, and an increase in coping self efficacy post test, and these gains

held constant at six month follow up (Liossis et al., 2009). Although, just how resilience

manifests within the individual has been the topic of discussion for more than forty years

(Luthar, Cicchetti, & Becker, 2000).

Resilience

Among the many definitions of resilience, a recent interpretation by Pooley and

Cohen (2010) was chosen for the current study as it highlights the multidimensional and

contextual nature of resilience. They propose that resilience is; "the potential to exhibit

resourcefulness by using available internal and external resources in response to different

contextual and developmental challenges" (Pooley & Cohen, 2010, p. 34). Resourcefulness

is a key factor of resilient individuals, who have a unique ability to improvise or acquire

whatever they need to survive (Atkinson, Martin, & Rankin, 2009).

Internal and external resources refer to the combination of individual attributes,

family, and social factors, identified as essential elements for healthy adjustment under

challenging circumstances (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003).

Developmental challenges generally refer to those experienced in childhood (Luthar et al.,

2000), and there are many contexts in which risk and adversity occur over the lifespan. The

literature on resilience contains a vast array of concepts, ideas, and controversies (Masten,

2001) and it is beyond the scope of this paper to cover them all. As such, a brief outline will

establish the key points necessary to understand resilience and how it is placed within the context of business.

Longitudinal studies of resilience, such as the Kauai study by Werner (1993), observed that children with healthy adaption profiles despite their "at risk" environment, were able to draw upon favourable dispositional attributes, as well as family, and external support systems, to overcome their disadvantage in life (Luthar et al., 2000). Resilient children were found to be more flexible, with an internal locus of control (Skodol, 2010). They were resourceful, and adaptable, and had at least one person in their lives to whom they could turn for support (Masten & O'Dougherty Wright, 2010). These resourceful internal and external characteristics enabled children to develop strengths which allowed them to respond to future negative life events and long term stress more functionally than their maladaptive peers (Werner, 1993).

Resilience researchers found that in later life adults draw upon the same internal resources and external support structures to navigate successfully through the challenges they face (Masten & O'Dougherty Wright, 2010). According to Coutu (2002), there are core characteristics which are consistent among resilient adults. Resilient adults are guided by a strong set of values, with a deep belief that life is meaningful. They accept their reality and have a unique ability to improvise (Coutu, 2002, p. 48). It has been argued that these characteristics develop through the process of learning to deal with hardship (Gillespie, Chaboyer, & Wallis, 2007). However some theorists disagree and view these characteristics as personality traits rather than a developmental process, or the outcome of experiencing hardship (Block & Kremen, 1996; Connor & Davidson, 2003).

For example, Ego-Resilience refers to personality traits that facilitate adaptive responses to life stressors and does not pre-suppose exposure to adversity (Block &

Kremen, 1996). Ego-Resilience as a trait also has connotations of being fixed and stable

and therefore not easily developed. Whereas resilience is considered a dynamic

developmental process which by definition assumes the experience of considerable

adversity, and availability for development throughout the lifespan (Luthar et al., 2000).

Masten and Obradović (2006) caution against adopting a particular view, and instead argue

that resilience "is not a single trait or process but a complex family of concepts" (p. 22).

The complexities of resilience manifest in many contexts (Pooley & Cohen, 2010), and

recently the concept has been extended to include the context of business (Tompkins,

2007).

Business Resilience

The idea of resilient businesses is relatively new (Tompkins, 2007), however the

contemporary view of organisations operating in today's turbulent business environment, is

that the ability to survive and prosper will depend largely on its resilience capacity (Coutu,

2002; Parsons, 2010). There are several definitions emerging, however business resilience

broadly refers to the capacity of the organisation to perform well, irrespective of the

economic climate or the organisational environment it operates in. This can occur through

the implementation of risk management strategies (Tompkins, 2007), or by adopting

innovative management practices which prepare the organisation for the inevitable

challenges they will face (Hamel & Välikangas, 2003).

In a recent New Zealand study benchmarking business resilience, Stephenson,

Seville, Vargo, and Roger (2010) identified two predominant dimensions which included

thirteen indicators of organisational resilience. The two dimensions were 'planning' and

'adaptive capacity' and these accurately reflect the two current areas of focus in the

business resilience literature (Hamel & Välikangas, 2003; Tompkins, 2007). Planning

involves risk management strategies, scenario planning exercises, and building strength through bolstering external resources in anticipation of a crisis (Stephenson et al., 2010).

An organisation's adaptive capacity is evidenced through several indicators which focus on the capability and capacity of internal resources such as; strong leadership, effective management, devolved and responsive decision making, an organisation free from cultural and behavioural barriers, and one where innovation, creativity, and situational awareness are recognised as key to the organisations' future performance (Stephenson et al., 2010). In the study by Stephenson and colleagues, 68 organisations took part in an on-line survey with the majority scoring more highly on adaptive capacity than planning (73% compared to 58%). Particular strengths were situational awareness (e.g., the ability to monitor the internal and external environments) and effective decision making. Risk management appeared to be less important to New Zealand businesses (Stephenson et al., 2010).

Various other models said to constitute a resilient organisation have been proposed (Hamel & Välikangas, 2003; Parsons, 2010; Tompkins, 2007). Parsons (2010) cites eight key attributes of resilient organisations, situational awareness, agility and flexibility, change readiness, interdependency, teamwork, culture, leadership, and communication. Tompkins (2007) proposes that a four step action plan is necessary in building resilience to impending business disruptions; develop a comprehensive resilience plan, set goals, create strategies, and, evaluation and re evaluation. Whereas Hamel and Välikangas (2003) state that for an organization to become resilient, they must address four challenges.

The cognitive challenge involves being free of denial and facing reality. The strategic challenge requires awarenss of opportunities and alternatives. The political challenge involves innovation of ideas, diverting resources from old programs to new

innovations. The ideological challenge is about optimization of the business model through continous renewal and reinvention (Hamel & Välikangas, 2003). Whilst beneficial to any organisation, it could be argued that these models are simply a reflection of the changing business environment and heightened need for effective business management strategies. The majority of these concepts can be found in contemporary management and leadership publications (e.g., DuBrin, Dalglish, & Miller, 2006; Samson & Daft, 2009).

The significant impact of the owner/manager on determining the resilience of the organisation has not been considered in many of these business resilience models. The relationship between individual resilience and organisational resilience reflects an interaction of organisational capabilities, and the actions of the individual (Lengnick-Hall, Beck, & Lengnick-Hall, in press). The complex social network in which resilience is enacted alters both the development and realisation of the business' capacity for resilience (Lengnick-Hall et al., in press). It is argued that the ultimate focus should be on how the internal resources and perspective of the owner enable the organisation to be resilient.

For example, a study by Reijonen (2008) examined how SBOs' perception of success influences the growth of their business through their goal-oriented behaviour. The study based in Finland, used questionnaires distributed to a total of 181 small business owners from two different industry sectors. The results were analysed using basic statistical methods, such as frequencies and cross tabs, with chi-square used to test for significant differences. A small sample (n = 59) within this group also participated in semi structured interviews, which together with the statistical results, identified the motives and goals of SBOs based on their perception of success.

Small business owners perceived success both from a financial and non financial perspective (Reijonen, 2008; Walker & Brown, 2004). Owners with a financial orientation

measured success in terms of increased revenue, profitability, and the accumulation of personal wealth. In contrast, owners who perceived success in terms of non financial rewards measured success by the fulfilment of personal goals such as, work life balance, professional development, and freedom of choice. Dependent upon their perception of success, the SBOs' motivation, attention, and behaviours were directed in different ways within the business in order to achieve their goals (Reijonen, 2008).

In a qualitative study involving Australian small businesses operating in drought affected agricultural communities, the capacities which made up individual resilience were identified as important factors influencing the resilience of the business (Schwarz & McRae-Williams, 2009). Ten small businesses took part in the research, which used a case study approach. Positive attitudes, life experience, and willingness to change, were some of the person-level attributes identified. Business level attributes included changing the core business focus, creating a niche business for the town, and selling products and services beyond the local market. The importance of community support and small business knowledge were also identified as important to the survival of SMEs during drought (Schwarz & McRae-Williams, 2009).

In other examples, successful SBOs were found to have an internal locus of control, high social awareness and involvement, and confidence in their ability to deal with the social environment (Lepoutre & Heene, 2006). Many claimed to also have a stable happy family life despite the relatively little time they seemed to spend with the family due to company demands impinging on their private life (Hankinson, 2000). However, while these studies are useful for identifying aspects of the SBO's characteristics important to the operation of their business, the research methods adopted do not establish any real scientific relationship between the SBO and their business.

Furthermore, the conceptualisation of business resilience is far from reaching theoretical consistency, as can be seen by these examples. This presents a problem in terms of assessment and measurement of business resilience in both small and large organisations. In a recent pilot study in the South West of WA, members of the Lifespan Resilience Research Group (LRRG) Ferguson, Cohen, Pooley, and Harms (2010), examined dimensions of business resilience using a newly developed scale for use in small business, which they named the Lifespan Resilience Scale – Business (LRS-B).

The LRS-B was based on an extensive review of the current literature on business and individual resilience. Members of the LRRG combined their expertise in questionnaire development, small business management, and extensive knowledge of resilience, to develop a series of questions to assess and measure resilience in small business. The scale reflected three aspects of individual resilience (e.g., personal, family, and community resources) and a further two aspects specific to business (e.g., risk management, and the ability to be innovative, seek out opportunity, and be adaptable/flexible in challenging circumstances). Perceived business resilience (measured by a single question "how resilient is your business") was used as a proxy for the LRS-B measure in testing the scale's effectiveness for the first time. The authors did not provide a rationale for using this single item variable.

To compare the owners' resilience to that of their business, Ferguson and her colleagues also assessed SBOs' resilience using the Resilience Scale for Adults (RSA; Friborg et al., 2003). In terms of the relationship between individual and business resilience, the variables most predictive of the SBOs' perceived business resilience (PBR) were the ability to be flexible, innovative, and seek out opportunity ($r = .57$), as measured by the LRS-B, and the individual resilience of the owner as measured by the RSA ($r = .60$).

It was claimed that due to a strong positive correlation ($r = .60$) between the RSA score and PBR, a link existed between the resilience of the owner and the resilience of the business. A potential limitation of the findings was the low number of participants (n =50), which was reported by the authors (Ferguson et al., 2010). The results are therefore tentative.

The current research extends the investigation of both individual and business resilience in the context of small business ownership in Perth, Western Australia. Previous researchers have argued that resilience is important in the context of business (Coutu, 2002; Lengnick-Hall et al., in press), and that there is a relationship between the resilience of the SBO and the resilience of their business (Ferguson et al., 2010). Research has established the considerable influence of the SBO on business operations and outcomes (Gerber, 1995), and that the resilient capacities of the SBO were important (Schwarz & McRae-Williams, 2009). However, very few studies have investigated how the resilience of the SBO is related to the resilience of their business.

Research Aims and Hypotheses

The aim of the current study was to examine how the business owner influences his or her business. In order to achieve this aim, three hypotheses were developed. In the first hypothesis, the five variables forming subscales of the LRS-B were examined using the single item criterion adopted by Ferguson et al (2010), "perceived business resilience" (PBR). Based on the research discussed, it was anticipated that internal resources would predict business resilience. The internal resources variable reflects characteristics of individual resilience, such as resourcefulness, clear sense of purpose and being in control of one's own destiny.

In the second hypothesis, the nature of the relationship between the SBOs' perception of their business, and the LRS-B measure was examined. The aim was to

establish the accuracy of the SBOs' perception in determining business resilience as measured by the LRS-B. The criterion was the mean LRS-B total score, and the predictor was the mean PBR score.

In the third hypothesis, the five dimensions forming subscales of the RSA were examined using the mean LRS-B total score as the criterion. From the research presented so far, that the personal attributes of the SBO influence business outcomes, it was anticipated that personal competence would predict business resilience as measured by the LRS-B. Personal Competence measures dispositional attributes such as self esteem, self efficacy, self liking, hope, determination, and a realistic orientation to life.

Hypothesis 1. Internal resources will significantly predict perceived business resilience.

Hypothesis 2. Perceived business resilience will significantly predict business resilience.

Hypothesis 3. Personal competence will significantly predict business resilience.

Method

Design

The current study was of cross-sectional design and used an online questionnaire survey method to record participants' responses. The current study is a variable-focussed study of resilience in that it uses multiple regression to examine the relationship among a set of predictors, and measures their independent or combined contribution to the variability in the criterion (Masten, 2001). In this instance, the predictors are the factors that make up the RSA, and the variables within the LRS-B. The criterion variables are perceived business resilience (PBR), and business resilience as measured by the LRS-B.

Participants

Participants (n = 108) were owners of SMEs based in the Perth metropolitan area employing between 0 and 80 staff ($M = 5.62$, $SD = 11.20$). Further inspection of the data revealed that the majority of respondents were sole operators, or employing only two staff members. This was consistent with Australian Business Counts data (ABS, 2010) which reported 84% of businesses employed less than five employees. The mean age of business owners was 44.7 years, ranging from 23 to 72 years of age. There were 51 male and 57 female respondents.

This purposive sample of Small Business Owners (SBOs) was targeted through the Small Business Centre North West Metro (SBCNWM) and Joondalup Business Association (JBA), which collectively provided over 50% of the final sample. The remainder of the sample were recruited through various other business organisations and networks. The sample represented a diverse range of industry, for example; Trades Services, Building and Construction, Mining, Manufacturing, Wholesale and Retail Trade, Finance and Insurance, Hospitality, Communication and Information Technology, Health and Community Services, Law, Advertising, and others. Of the business owners who responded, most (69%) reported their business had been established for more than five years ($M = 12.05$, $SD = 9.60$) and only a small percentage (7%) were new businesses in their first year of operation.

Materials

A questionnaire designed to assess both individual and business resilience was presented to participants via an on-line survey. The first section assessed personal resilience using the Resilience Scale for Adults (RSA; Friborg et al., 2003). The second section assessed business resilience using the Lifespan Resilience Scale-Business (LRS-B)

designed by Ferguson et al. (2010). A number of qualitative questions were included in the questionnaire to further qualify certain quantitative responses, (for example,*" Please tell us briefly why you rated your business as you did in the above question"*) and to collect demographic information (such as; age, gender, length of time in business, number of employees, and business sector). The demographic information was collected in order to ascertain if the sample was representative of the general population of small business owners, and may provide information for further analysis in future studies to be conducted by the LRRG.

Resilience Scale for Adults (RSA).

The RSA is a multidimensional scale designed to assess characteristics of resilience in adults. It was developed primarily to measure empirically derived factors that promote adult resilience. The questionnaire is comprised of 33 questions that account for five aspects of resilience (personal competence, social competence, family cohesion, social resources, and structured style) (See Appendix A).

The RSA has demonstrated good internal consistency and reliability with the respective dimensions having Cronbach's alphas of 0.90, 0.83, 0.87, 0.83 and 0.67, and four-month test-retest correlations of 0.79, 0.84, 0.77, 0.69 and 0.74 (Friborg et al., 2003). The resilience items have been examined for correlations with indices of social desirability, acquiescence, and nay-saying bias and were found to be small, ranging between 0.11 to 0.27 (Friborg et al., 2003).

Construct validity was confirmed with positive correlations with the Sense of Coherence scale (SOC; Antonovsky, 1993) and negative correlations with the Hopkins Symptom Checklist (HSCL; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974).

Discriminant validity was indicated by differential positive correlations between RSA subscales and the SOC scale (Friborg et al., 2003).

In the current study, the 33-item RSA was presented using a 9-point Likert scale with positive and negative semantic phrases at each endpoint. A higher total sum score of the responses on the Likert scale indicates a higher level of individual resilience. Sixteen items are reverse scored to control for response bias. Individual scores are further calculated for each of the five dimensions comprising resilience (e.g. personal competence, social competence, family cohesion, social resources, and structured style). The scale authors state that "*the five dimensions should be regarded as subscales measuring different, but all various and positive aspects of the concept of resilience*" (Friborg et al., 2003, p. 72). However, there appears to inconsistencies in the use of total sum scores and the individual subscale scores.

For example, in the RSA validation study, Friborg, Hjemdal, Rosenvinge, and Martinussen (2003) emphasise the use of the subscales to determine age and gender effects, and to examine construct validity against a variety of other measures. Whereas, Friborg, Hjemdal, Rosenvinge, Martinussen, Aslaken and Flaten (2006) specifically chose to use the total sum score to measure resilience in relation to pain and stress, citing methodological and statistical considerations specific to the research. In cross-cultural validation of the RSA, both the total, and subscale sum scores were used in a series of *t*-tests to indentify significant differences between a group of at risk females to those from a stable psychosocial environment (Jowkar, Friborg, & Hjemdal, 2010).

Examination of several other studies using the RSA as a measure of resilience, revealed the predominant use of total sum scores (e.g., Baldwin, Kennedy, & Armata, 2008; Franklin & Doran, 2009; Munro & Pooley, 2009; Narayanan, 2008). However

Mikolajczak, Roy, Luminet, and De Timary (2008) while not specific, appeared to total the RSA scores and provide a mean across all the factors, reporting a mean of 5.13 (SD 0.71) in their sample of young men. Davydov, Stewart, Ritchie, and Chaudieu (2010) suggested that the comparison of subscale scores between at risk and control groups may be useful for indentifying potential intervention points for increasing resilience and positive mental health.

Based on the above literature findings, it would appear that both the total sum score and subscale sum scores are used interchangeably and for different purposes dependent upon the context or statistical methods adopted by the researcher. The RSA scoring methods are therefore left to the researcher's discretion and this presents a problem in terms of the consistency of interpretation across studies which use the RSA. The lack of scientific rigour in resilience research is an issue that has been raised before by sceptics, and proponents as well (Luthar et al., 2000).

Lifespan Resilience Scale-Business (LRS-B).

The second questionnaire, which investigates business resilience, is in the early stages of development and has been designed by Ferguson et al. (2010). The questionnaire was based on a comprehensive review of the current literature on both individual and business resilience. Research is continuing on the validation of the LRS-B measure which includes the contribution of the current study. The LRS-B includes 35 questions grouped into five specific themes which are based on aspects of individual resilience (e.g., personal, family, and community resources) with two other themes that include risk management, and the use of innovation, the seeking out of opportunities, and adaptability/flexibility in the face of challenging situations. The themes are therefore (1) internal resources, (2)

family support for the business, (3) external resources including community relationships, (4) innovation/ opportunity/ adaptability and, (5) risk management (Ferguson et al., 2010)

The LRS-B is scored similarly to the RSA, using a 5-point Likert scale with positive and negative semantic phrases at each endpoint. A higher total sum score of the responses on the Likert scale indicates a higher level of business resilience. Subscale scores are also calculated for each of the five themes comprising business resilience. The questions and the themes are shown in Appendix B.

Procedure

Following clearance from the Faculty Research Ethics Committee, business owners listed in the data base of the Small Business Centre North West Metro and Joondalup Business Association were invited via email notification to participate in the research. The researcher had previously sought the support of both the SBCNWM and JBA in recruiting participants for the current study (see Appendix C and D) and provided all recruitment information to be included in the email sent to SBOs (see Appendix E). Those who wished to participate followed a link contained in the email which provided direct access the questionnaire hosted on line by Qualtrics Software. Consent was assumed if participants completed and submitted the questionnaire. Anonymity was preserved by the absence of any identifiers in the response and only the researcher and his supervisor had access to the online data through individual passwords.

To enhance the response rate, prior to the study going live on Qualtrics, the researcher gave a short presentation of the study to members of the local business community at a JBA breakfast in Joondalup, and notified them of the impending email seeking their participation. Of the combined SBCNWM and JBA database, 52 responses were received in the first 48 hours after which response rates fell to almost zero. A follow

up email was sent four weeks later to increase participation (e.g., Newby, Watson, & Woodliff, 2003) however very few businesses responded. To recruit more participants, the researcher spoke personally to many other business owners, business enterprise centers, and industry groups, over the course of the data collection period. Media publications promoting the study were arranged with Edith Cowan University (Appendix F) and circulated through the Master Plumbers and Gasfitters Association of WA, and Community Newspaper Group.

Recruitment of participants for research in small business can require considerable effort on the part of the researcher as most SBOs report they are too busy or do not see any value for the business in participating (Stephenson et al., 2010). However it was observed in the current study, that when the researcher spoke personally to business owners and explained the potential benefits to their organisation of studying resilience, more than 90% completed the survey upon receiving the online email link to Qualtrics. The data collection period went from the 23rd November 2010 to the 18th March 2011 after which time all responses were downloaded from Qualtrics and the survey closed.

Data analysis

Prior to analysis, data screening was conducted. There were no missing values for the RSA or LRS-B questionnaires as the electronic survey database Qualtrics would not submit the response unless all questions were completed. Nine participants were identified as starting but not completing the survey and therefore could not be included in the final analysis. Not all respondents answered the optional demographic questions however this was not considered detrimental to the overall analysis.

Analysis of the data was performed using PASW version 18 for Windows (PASW Statistics, 2009) to test the three hypotheses. The raw data was imported directly into

PASW from the electronic survey data base and transformed into the respective RSA and LRS-B subscales after first saving the original data set. Reverse score items were recomputed and the total sum scores of each subscale were divided by the number of questions in each to provide a mean score.

A total RSA or LRS-B score represented the mean of the subscale mean scores, which facilitated a comparison of scores with their respective Likert scale values. For the RSA, the scale anchors were one to nine, and for the LRS-B one to five, where a low numeric value equalled a low score and a high numeric value equalled a high score. This particular scoring method was based on guidance from the LRS-B authors (C. Ferguson, personal communication, March 18, 2011), and the RSA was similarly treated for the purposes of comparison. No normative data were available to compare RSA scores with the current sample.

Prior to conducting the analysis to test each of the three hypotheses, descriptive statistics were presented. Means, standard deviations, and Cronbach's alpha were calculated for each of the five factors comprising the respective measures. The bivariate correlations between the RSA and LRS-B factors were calculated as part of the series of forced entry Multiple Regression Analyses (MRA) used to examine each hypothesis. Prior to conducting the MRA, the assumptions of normality, linearity and homoscedastiscity were tested. No violations were found.

Power Analysis

The sample size (n = 108) was considered adequate for regression analysis based on the formula (50 + 8m) where m = the number of predictors (Tabachnick & Fidel, 2007, p. 123). Based on this formula, the minimum number of participants required for the current study was 90.

Results

Sample Characteristics

Table 1 presents an overview of the sample characteristics. The number of employees and number of years in business both showed an uneven distribution of cases across the range of scores. Although skewed, the size of business was representative of the normal distribution of businesses in Australia according to the ABS statistics reported earlier. The anomalies in sample distribution were however noted and further investigation was conducted to determine their significance to the regression analysis.

Table 1

Sample Characteristics

Characteristic	n	*M*	*Median*	*Mode*	*SD*
Age	107	44.8	45	45	10.41
Number of Employees	107	5.6	2	0	11.20
Years in Business	106	12.0	10	6	9.60
Participants	108	Male (n = 51)		Female (n = 57)	

Descriptive Statistics

The resilience of SBOs was assessed using the RSA (Friborg et al., 2003). Table 2 shows the summary statistics and reliability coefficients for this sample. In the original RSA validation study (Friborg et al., 2003), the reported Cronbach's alphas of 0.90, 0.83, 0.87, 0.83 and 0.67 respectively, were comparable with those calculated in the current study with exception of structured style. Structured Style was considerably lower ($\alpha = 0.54$) than the original reliability coefficient. Reliabilities of .80 and above are generally recommended for commonly used scales cited within the organisational literature (Lance,

Butts, & Michels, 2006). The overall alpha for the RSA was considered acceptable for the

purposes of this research.

Table 2

Descriptive statistics for RSA total and subscales

	M	*SD*	*Cronbach's α*
RSA Total	6.9	1.03	.90
Personal Competence	7.0	1.36	.90
Social Competence	6.7	1.56	.84
Family Cohesion	6.9	1.39	.79
Social Resources	7.3	1.44	.86
Structured Style	6.5	1.34	.54

Note: Mean scores represent the average score on a scale of 1 to 9.

Inspection of table 2 revealed the mean subscale scores used to assess the various

dimensions of resilience were consistent across the five factors and therefore did not reveal

any deficiencies in SBOs' personal, family, or social resources.

Business resilience was assessed using the LRS-B (Ferguson et al., 2010). As the

LRS-B business resilience measure has not been formally validated, a reliability analysis

was conducted using Cronbach's alpha to assess the internal consistency of the variables.

Cronbach's alpha for the five item LRS-B questionnaire was .91. Four out the five variables

of the LRS-B demonstrated acceptable internal consistency indicating they were all

measuring the same underlying construct.

However, the variable 'external resources' was below the recommended level of

reliability. A coefficient alpha of .70 is considered acceptable in early stage exploratory

measures (Nunnally, 1976., cited by Lance et al., 2006). Scanning of the Corrected Item-

Total Correlations for the 'external resources' variable revealed that question 72 was below 0.3, and deleting the question would raise the alpha level from .61 to .65. This may indicate poor internal consistency. Table 3 shows the means, standard deviations, and reliability coefficients for this sample.

Table 3

Descriptive statistics for LRS-B total and sub themes

	M	*SD*	*Cronbach's α*
LRS-B total	3.9	.53	.91
Internal Resources	4.0	.54	.84
External Resources	3.8	.54	.61
Innovation, Opportunity/ Adaptability	4.1	.46	.73
Family Resources	3.7	.84	.86
Risk Management	3.9	1.01	.85

Note: Mean scores represent the average score on a scale of 0 to 5.

Multiple Regression Analysis (MRA)

MRA was used to test all three hypotheses. However the results of hypothesis one and three were the main focus. Prior to interpreting the results, the assumptions of multiple regression were evaluated according to the recommendations of Field (2009). Inspection of the normal probability plot of standardised residuals as well as the scatter plot of standardised residuals against standardised predicted values indicated the assumptions of normality, linearity, and homoscedastiscity of residuals were met. The data were also examined for multivariate outliers. Mahalanobis distance did not exceed the critical $\chi 2$ for $df = 5$ ($\alpha = .001$) of 20.51 indicating that no multivariate outliers were present. Collinearity statistics revealed acceptable tolerances (TOL > 0.2) for all predictors in the regression

model indicating that multicollinearity was not of concern to the interpretation of the MRA

(Field, 2009). The correlations between predictors were all significant and below 0.8

indicating that while they are correlated with each other, they are not so highly correlated as

to suggest multicollinearity (Field, 2009). Inspection of the correlations of LRS-B business

resilience variables against the criterion PBR indicated that all five factors were related.

Inspection of the correlations of RSA factors against the criterion LRS-B also indicated that

all five factors of the RSA were related. However, inspection of Table 5 indicated that

Structured Style was not significantly correlated with Family Cohesion. The remaining four

predictors of the RSA were significant and below 0.8 and therefore did not indicate

multicollinearity (Field, 2009). Table 4 displays the correlation tables for hypothesis one

and table 5 shows the correlations for hypothesis three.

Table 4

Correlations between Perceived Business Resilience and Business Resilience variables

	1	2	3	4	5	6
1. PBR	1.000	.51**	.39**	.47**	.30**	.41**
2. Internal Resources		1.000	.49**	.69**	.68**	.68**
3. Family Resources			1.000	.46**	.38**	.46**
4. Innovation- opp/Adapt.				1.000	.37**	.60**
5. Risk Management					1.000	.44**
6. External Resources						1.000

** Correlation is significant at the 0.001 level (1-tailed).

Table 5

Correlations between Business Resilience and the RSA factors

	1	2	3	4	5	6
1. LRS-B Total	1.000	.49**	.38**	.19*	.40**	.51**
2. Personal Competence		1.000	.67**	.29**	.32**	.68**
3. Social Competence			1.000	.19*	.28*	.61**
4. Structured Style				1.000	.14	.27*
5. Family Cohesion					1.000	.48**
6. Social Resources						1.000

** Correlation is significant at the 0.001 level. *Correlation is significant at the 0.05 level (1-tailed).

The results from the MRA conducted for hypothesis one indicated the five variables, internal resources, external resources, innovation/opportunity adaptability, family resources, and risk management, accounted for 31% of the variability in perceived business resilience, $R^2 = .31$, adjusted $R^2 = .28$, $F(5,102) = 9.15$, $p < .001$. The level of internal resources was the only predictor of perceived business resilience that was significant at the 0.05 level, $t(102) = 2.19$, $p = .03$. The bivariate correlation between internal resources and perceived business resilience represents a large effect size, $r(106) = .514$, $p < .001$ (Cohen, 1992). Internal resources accounted for 3.2% of the unique variance in participants perceived business resilience rating.

The results from the MRA conducted for hypothesis one are shown in table 6 The unstandardised (B) and standardised (β) regression coefficients, t values, and significance levels (p) for each predictor in the regression model are displayed.

Table 6

Summary of Multiple Regression Analysis for LRS-B variables predicting PBR

	B	*SE of B*	β	*t*	*p.*
(Constant)	.17	.58		.29	.77
Internal Resources	.49	.22	.35	2.19	.03*
External Resources	.05	.16	.04	.31	.75
Innovation, Opp/Adapt.	.28	.20	.17	1.42	.16
Family Resources	.13	.09	.15	1.49	.14
Risk Management	-.05	.09	-.07	-.61	.54

Note: * indicates p < .05. Criterion Variable: Perceived Business Resilience

The unstandardised regression coefficient (*B*) value indicates that as SBOs rate their level of internal resources one point higher on the scale, their PBR score would increase by 0.49. The standardised (β) regression coefficients, or Beta weights, indicate the predicted change (in standard deviations, *SD*) in the criterion that is associated with a 1 *SD* change in the predictor. Therefore, after controlling for the effects of the other variables, a 1 *SD* increase in internal resources would result in a .35 *SD* increase in PBR. These values are true only if the effects of the other variables are held constant (Field, 2009).

In the final regression model internal resources on its own accounted for 26% of the variance in PBR scores, R^2 = .26, adjusted R^2 =.26, $F(1,106)$ = 38.04, p < .001. Further investigation was carried out to determine the potential effect of the uneven distribution of businesses by size, and years in business. Both were analysed for their influence on the final regression model. Years in business was found to have a non significant influence on the criterion so it was decided to disregard this aspect of the skewed distribution. Similarly, a further regression analysis was conducted removing the two most extreme cases of size of

business (Field, 2009). No improvement to the predictive utility of the regression model was evident and therefore no action was taken to remove outliers, and all cases were retained for the analysis. Age and gender were also considered, however these variables were not significant, nor did they alter the predictive utility of internal resources in the final regression model.

In relation to the second hypothesis, the predictive validity of perceived business resilience (PBR) on actual business resilience (LRS-B) was examined using MRA. Prior to interpreting the results, assumptions of normality, linearity and homoscedastiscity were evaluated according to the recommendations of Field (2009). All assumptions were met as previously reported. PBR significantly predicted business resilience as measured by the LRS-B total score ($t(106) = 6.09$, $p < .001$) and accounted for 26% of the variability in business resilience scores, $R^2 = .26$, adjusted $R^2 = .25$, $F(1,106) = 37.14$, $p < .001$. The bivariate correlation between PBR and the LRS-B represents a large effect size, $r(106) = .51$, $p < .001$ (Cohen, 1992). Table 7 displays the unstandardised (B) and standardised (β) regression coefficients, t values, and significance levels (p) for PBR in a regression model with LRS-B scores.

Table 7

Summary of Multiple Regression analysis for PBR and LRS-B

	B	SE of B	β	t	p.
(Constant)	2.59	.29		11.59	.00**
Perceived Business Resilience	.35	.04	.51	6.09	.00**

Note: ** indicates p < .001. Criterion Variable: LRS-B total

In relation to the third hypothesis, the predictive validity of personal competence on business resilience (LRS-B) was examined using a standard MRA. Prior to interpreting the results, assumptions of normality, linearity and homoscedastiscity were evaluated according to the recommendations of Field (2009). All assumptions were met as previously reported. The results of the MRA are shown in table 8 which displays the unstandardised (*B*) and standardised (β) regression coefficients, *t* values, and significance levels (*p*) for each predictor in the regression model.

Table 8

Summary of Multiple Regression Analysis for RSA factors and business resilience (LRS-B)

	B	SE of B	β	t	p.
(Constant)	2.0	.30		6.56	.00
Personal Competence	.10	.05	.25	2.06	.04*
Social Competence	.00	.04	.00	.06	.95
Structured Style	.01	.03	.03	.31	.76
Family Cohesion	.07	.03	.19	2.07	.04*
Social Resources	.09	.05	.24	1.92	.06

Note: * indicates p < .05. Criterion Variable: LRS-B Total Score

The results from the MRA indicated the five factors, personal competence, social competence, structured style, family cohesion, and social resources accounted for 33% of the variability in business resilience, $R^2 = .33$, adjusted $R^2 = .30$, $F(5,102) = 10.18$, $p < .001$. Inspection of the significance values indicated that personal competence ($t(102) = 2.06$, $p < .05$) and family cohesion ($t(102) = 2.07$, $p < .05$) both significantly predicted business resilience. The bivariate correlations between business resilience and both personal competence ($r(102) = .49$, $p < .001$) and family cohesion were positive and strong, $r(102) =$

.40, $p < .001$ (Cohen, 1992). In a final regression model, 'personal competence' and 'family cohesion' together accounted for 30% of the variance in LRS-B scores, $R^2 = .30$, adjusted $R^2 = .29$, $F(2,105) = 22.99$, $p < .001$.

In a further analysis to test the relationship between hypotheses one and three, a correlation between perceived business resilience and the RSA total score was conducted. The bivariate correlation between PBR and the RSA was significant ($r = .29$, $p < .001$), although this was a moderate correlation according to Cohen (1992). Inspection of the correlations between the significant RSA factors and PBR, revealed that only personal competence was significantly correlated with PBR ($r = .34$, $p < .001$). The correlation between family cohesion and PBR was not significant ($r = .14$, $p = .07$).

Discussion

The aim of this study was to examine the relationship between the resilience of the business owner and the resilience of the business. Three hypotheses were developed to test this relationship. It was expected based on the study rationale, that the internal resources of the owner would be mirrored in the business. All three hypotheses supported this notion. Furthermore, it was found that the perception of the owner's internal resilience was mirrored in the perception of their business. The three hypotheses are discussed in more detail in the following paragraphs.

In hypothesis one, all five of the LRS-B variables considered to be aspects of business resilience (e.g., internal resources, external resources, innovation/opportunity adaptability, family resources, and risk management) were entered into a regression model. Internal resources was the only significant predictor of perceived business resilience (PBR). Furthermore internal resources and PBR were positively and strongly correlated, and in the final regression model, internal resources accounted for 26% of the variance in PBR. An r^2

of .26 is considered a large effect size by Cohen (1992). Age, gender, size and length of time in business, were not significant and therefore had no effect on the final regression model.

These findings do not support that of Ferguson et al (2010), although were partially consistent with Stephenson et al (2010) and Schwarz and McRae-Williams (2009). Ferguson et al found that the ability to be innovative, seek out opportunity, and be flexible and adaptable, were most significant in predicting business resilience in rural WA. Stephenson found businesses scored more highly on adaptive capacity. Adaptive capacity was evidenced by several aspects of resilience, which included internal resources and innovation. Innovation through refocusing the business, and creativity of niche markets, were themes also identified by Schwarz and McRae-Williams (2009) in rural Australia. However, Schwarz and McRae-Williams also indicated a need for person level attributes. The current study indentified only internal resources as significant to business resilience.

The variable 'internal resources' reflects characteristics of the business owner such as resourcefulness, clear sense of purpose, and being in control of one's own destiny. In this study, 'internal resources' predicted the owner's perception of the business. The strong correlation between them means that as the business owner builds his/her internal resources, his/her perception of the business improves. Unless the owner has these internal characteristics, it will be difficult to build adaptive capacity in the business, or be innovative, adaptable, or flexible.

This is also consistent with the current author's experience, in that building internal resources facilitated the resilience of the business. For example, a decline in physical and mental health resulted in a decline in the business. A low perception of self made it difficult to make the necessary changes in the business that would enable it to grow. For instance,

every attempt to improve the business through implementation of business strategies failed. It was only through building internal resilience first that the strategies were successfully implemented and the business began to grow. Interestingly, relationships with staff, as well as family, improved at the same time.

The second hypothesis that perceived business resilience (PBR) would significantly predict actual business resilience (LRS-B) was supported. The owners' perception of business resilience and their actual score on the LRS-B were significantly and strongly correlated ($r = .51$, $p < .001$). PBR accounted for 26% of the variance in the LRS-B total score, which is considered a large effect size by Cohen (1992). However there is still a large proportion of unexplained variance in the LRS-B. Therefore further investigation is required by the scale's authors in order to firmly establish the psychometric properties of the LRS-B.

The rationale for using the owner's perception of resilience as a single item proxy measure in a regression analysis with the LRS-B was to test the scale's usefulness as a measure of business resilience. The results suggest that the LRS-B is useful for measuring business resilience, as the scale accurately captured the SBOs' perception of their business. Those who rated their business one point higher in perceived resilience would increase their LRS-B score by .35 on the scale. On the other hand, it could also be argued that the owner's perception of the business was accurate.

In the third hypothesis, the results of the regression analysis provided partial support for the hypothesis that personal competence would predict business resilience. All five factors comprising the RSA were entered into a regression model (e.g., personal competence, social competence, family cohesion, social resources, and structured style) which accounted for 33% of the variance in business resilience. Personal competence and

family cohesion were the only significant predictors of business resilience. In a final regression model, personal competence and family cohesion together accounted for 30% of the variability in LRS-B scores.

However further correlational analysis of the two significant RSA predictors established that while personal competence was significantly correlated with perceived business resilience, family cohesion was not. Although both perceived business resilience and family cohesion predicted scores on the LRS-B, only personal competence was related to perceived business resilience.

From this finding, it is concluded that the owners' perception of his/her business is based on how personally competent he/she feels. Therefore personal competence is more important than family cohesion in predicting business resilience. This would make sense in terms of building the internal resources of the business, as the variable 'internal resources' also reflects characteristics of the owner. This isn't to say that the many other factors that comprise resilience are not important.

Rather the current study findings highlight that building resilience from within the person first, will facilitate the building of other resilient resources. For example, the importance of family and social relationships has been fundamental to many studies of resilience (Luthar et al., 2000) and family cohesion predicted business resilience in the current study. However, in fostering these relationships, it has been suggested that favourable dispositional attributes of the person such as self-esteem, self-efficacy, and self-liking, in turn promote successful relationships with others (Friborg et al., 2003; Werner, 1993). In the context of small business this would include family, staff, clients, suppliers, and members of the wider business environment.

Self-efficacy is linked to self-confidence (Skodol, 2010). If SBOs feel confident, they will feel confident about the business and their own ability to make effective decisions to ensure the business maintains profitability during difficult times. In contrast, if the SBO perceives him/herself to be lacking in business skills and knowledge, or is preoccupied with personal problems within the family or relationship, then his/her attention will not be focused on the business. The subsequent behaviors will manifest in the business through feelings of inadequacy to deal with personal and business problems, and as a consequence, poor decisions are likely to be made which do not favor the business in terms of its resilience capacity.

Research presented earlier also demonstrated how perceptions of success direct the attention and behaviors of the SBOs toward different goals (Reijonen, 2008). The current research further identified a relationship between the SBOs' perceptions and business resilience. The SBOs' perceptions were found to be significant in two different scales measuring resilience (e.g., the RSA and LRS-B). However without awareness, the business owner does not know what their internal perceptions are or how they impact on the business (Berman, 2009).

Awareness is particularly critical in small business where the owner has a major influence on business outcomes (Norman et al., 2005; Wijewardena et al., 2008). 'Situational awareness' was identified as one of several attributes of resilient organisations (Parsons, 2010; Stephenson et al., 2010). According to Parsons, awareness facilitates the anticipation of emerging organisational threats, and enables the SBO to recognise their own and others limitations, prompting early response to situations which may otherwise go unnoticed. Awareness is therefore regarded as an important variable for resilience and should be considered in future research.

The current study is believed to be the first that links the owner's internal perception with the perception of their business. As such these findings have important implications for SBOs, as the research now indicates that to be resilient in business one should focus on building internal resources. This is consistent with the clinical observations and outcomes reported by Faye in personal communications, and validate the experiences of the author in starting and growing a small business. According to Faye, in ten years of working with businesses in decline, focusing attention on the SBOs' internal resources provides the most significant and sustainable outcomes of any other strategic business intervention available.

Faye's observations are comparable to the intervention studies of Liossis et al (2009). Although Liossis et al conducted the intervention with employees and not business owners, promoting the internal resilience of the individual significantly improved levels of coping self efficacy from pre to post test. At six month follow up, these gains were maintained. Furthermore, employees reported the internal skills they developed during the trial improved their family relationships, as well as relationships with co-workers (Liossis et al., 2009).

Limitations

In providing a balanced assessment of the current study, the following limitations are noted. Firstly, the LRS-B is in the early stages of development as a measure of business resilience. Although it had good overall reliability, only 26% of the variability was accounted for by the proxy measure PBR. This indicates that a large proportion of the LRS-B is yet to be accounted for. Further validation studies with larger samples would be required in order that the structure of the LRS-B could be examined in more detail using the appropriate statistical analyses.

A second limitation worthy of mention is the potential for response bias. Although there appeared to be a reasonable cross section of industry categories, the sample was purposively selected through small business centres and business associations. Members of such organisations tend to join because they are interested in the support and networking opportunities available to them through membership. This could be considered an aspect of resilient behaviour in itself.

As such, the bias is toward those SBOs who are interested in business improvement and therefore may fail to capture others who may not see the benefits of such research to their business. Furthermore, as the researcher was known to some of the participants, this may have enhanced the level of social desirability in these cases even though the responses were anonymous. Although the RSA has been examined for indices of social desirability, the LRS-B has not. Furthermore, the purpose of this study was not to show direct cause and effect relationships, but to establish a significant correlational relationship between the SBO and their business such that further studies would be warranted. This aim has been achieved in the current study.

Conclusion

In conclusion, 108 small business owners from the Perth, metropolitan area took part in the current study. Aspects of individual and personal resilience were measured via an online survey questionnaire. The questionnaire consisted of a well-known measure of individual resilience, and a novel measure of business resilience. Three hypotheses were proposed to investigate the relationship between the resilience of the business owner and the resilience of their business. The study aim was to examine how the owner influences their business. Responses were analysed using standard multiple regression analysis.

The results of the analysis supported all three hypotheses. 'Internal resources', as defined by the LRS-B, was the only significant predictor of perceived business resilience. 'Perceived business resilience' also predicted scores on the LRS-B and both were strongly correlated. Throughout these findings, it was the owner's perception that was constant. The RSA factors 'personal competence' and 'family cohesion' were the only significant predictors of business resilience, however it was established that 'personal competence' was more important in terms of building resilience in the business.

Together, these findings pave the way for the development of strengths based interventions which can assist SBOs in overcoming the daily stressors and major challenges which are likely to be encountered in the process of small business ownership. This study also provides the catalyst for a number of future enquiries, which include validation of the LRS-B, and future studies which determine the impact of the SBOs' internal perception on business performance, using indicators such as profitability and cash flow. Pre and post test intervention studies which involve the SBO, would also further validate the current study's findings and establish a valuable resource for small business once proved successful.

The implications of these findings suggest that small business owners may wish to focus on building their internal resources and personal competence first and foremost. Maintaining a healthy lifestyle, spending time with family and friends, and engaging in pleasurable activities outside of the business, are some of the ways the current author suggests will help SBOs strengthen their internal resources, and ability to deal effectively with business stressors. A mentally and physically healthy owner will have the capacity and awareness to make effective decisions in the business regarding strategies for building organisational resilience.

Organisational psychologists, business consultants, and coaches, can provide assistance both in developing resilient business strategies, and in building personal competencies. Local business associations and small business development centres are also a valuable resource, and can provide cost effective assistance to owners who are struggling, or unsure of where to turn for support. They provide business development programs and information to assist small business owners, along with opportunities for networking and building supportive relationships with other business owners.

In terms of the business, it would be helpful for the owner to focus on those factors which make up the 'internal resources' variable. For example, creating a vision and set of values for the business will help guide the SBO in times of uncertainty by providing a clear sense of direction. It is also important for the SBO to be in control of their business and learn about every aspect of their enterprise. Developing a business plan will help identify the strengths and weaknesses of the business so that the owner can be confident in making decisions about the future direction of the company. In turn, the above strategies will not only help build the internal resources of the business, but also increase the owner's perception of his/her personal competence, and therefore overall resilience.

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APPENDICES

Appendix A

Resilience Scale for Adults (RSA) - Questionnaire, Subscales and Scoring

Themes

Social competency (6 items)	8*, 14, 19*, 22, 23*, 26
Social resources (7 items)	6, 9*, 10, 12*, 15*, 20, 27*
Family cohesion (6 items)	3, 7*, 13, 16*, 25, 29
Personal competence (10 items)	1, 2*, 4*, 5*, 11, 17*, 18, 31, 32, 33*
Structured Style (4 items)	21*, 24, 28*, 30

*indicates a question that should be reverse scored.

	Subscale	Question		
Social Competency (6)				
8	SC	**I enjoy being :**	Together with other people	By Myself
14	SC	**To be flexible in social settings:**	Is not important to me	Is really important to me
19	SC	**New friendships are something:**	I make easily	I have difficulty making
22	SC	**Meeting new people is:**	Difficult for me	Something I am good at
23	SC	**When I am with Others:**	I easily laugh	I seldom laugh
26	SC	**For me thinking of good topics of conversation is:**	Difficult	easy
Social Resources (7)				
6	SR	**I can discuss personal issues with:**	No one	Friends/Family members
9	SR	**Those who are good at encouraging me are:**	Some close friends/family members	No one
10	SR	**The bonds among my friends are:**	Weak	Strong
12	SR	**When a family member experiences a crisis / emergency:**	I am informed right away - It takes quite awhile before I am told	
15	SR	**I get support from:**	Friends/Family members	No one
20	SR	**When needed I have**	No one who can help me	Always someone who can help me
27	SR	**My close Friends/Family members:**	Appreciate my qualities	Dislike my qualities
Family Cohesion (6)				
3	FC	**My families understanding of what is important in life is:**	Quiet different than mine	Very similar to mine
7	FC	**I feel:**	Very happy with my family	Very unhappy with my family
13	FC	**My family is characterised by:**	Disconnection	Healthy coherence
16	FC	**In difficult periods my family:**	Keeps a positive outlook on the future	Views the future as gloomy
25	FC	**Facing other people our family acts:**	Unsupportive of one another	Loyal towards one another
29	FC	**In my family we like to:**	do things on our own	Do things together
Personal Competence (10)				
1	PC	**My plans for the future are:**	Difficult to accomplish	Possible to accomplish
2	PC	**When something unforseen happens:**	I always find a solution	I often feel bewildered
4	PC	**I feel that my future looks:**	Very Promising	Uncertain
5	PC	**My future goals:**	I know how to accomplish	I am unsure how to accomplish
11	PC	**My personal problems:**	Are unsolvable	I know how to solve
17	PC	**My abilities:**	I strongly believe in	I am uncertain about
18	PC	**My Judgement and decisions:**	I often doubt	I trust completely
31	PC	**In difficult periods I have a tendency to:**	View everything gloomy	Find something good that helps me thrive/prosper
32	PC	**My goals for the future are:**	Unclear	Well thought through
33	PC	**Events in my life that I cannot influence:**	I manage to come to terms with	Are a constant source of worry/concern
Structured Style (4)				
21	SS	**I am at my best when I:**	have clear goals to strive for	Can take one day at a time
24	SS	**When I start on new projects:**	I rarely plan ahead	I prefer to have a thorough plan
28	SS	**I am good at:**	Organising my time	Wasting my time
30	SS	**Rules and regular routines:**	Are absent in my everyday life	Simplify my everyday life

Appendix B

Lifespan Resilience Scale-Business (LRS-B) - Questionnaire, Themes and Scoring

Internal Resources [12]	37, 38, 39, 41, 45, 55, 56, 59, 60, 68, 69, 70
External Resources/ Community [6]	46, 48, 64, 65, 71, 72
Innovation/opportunity/adaptability [5]	40, 42, 44, 61, 66
Family Resources [5]	43, 47, 62, 67,73
Risk Management [7]	50, 51, 52, 53, 54, 57,58

	Theme	Question
35	General	How resilient is your business?
36	Qualitative	Please tell us briefly, why you have rated your business as you did in the above question
Internal Resources [12]		
37	IR	Business planning is important for the success of a business?
38	IR	It is important for a business to have a vision and/or mission statement
39	IR	The business can source expert assistance in times of need
41	IR	There is a clear sense of direction in the business
45	IR	The business is confident in its future
55	IR	A workplace health and safety plan?
56	IR	A financial management plan? (This could be part of your business plan)
59	IR	A plan to strengthen your business? (This could be part of your business plan or a plan that addresses any or all of the above risks, or any other risks that you can foresee for your business)
60	IR	A plan to address governance and compliance issues
68	IR	The business is good at finding help when it is required
69	IR	There is a sense of control about what happens to the business
70	IR	There is a culture of putting in the best effort in the business
External Resources [6]		
46	ER	The business belongs in the community
48	ER	The business has strong relationships with its customers/clients
64	ER	The business is well supported by the local community
65	ER	Strong relationships with suppliers have been developed by the business
71	ER	The business has a lot of contacts
72	ER	The business has a mentor or someone with whom the owners can freely discuss business matters
Family Resources [5]		
43	Family	The business has family support
47	Family	My family likes to be informed about what is happening in the business
62	Family	My family is involved in the business on a daily basis
67	Family	My family supports the business
73	Family	My family is proud of the business
Risk Management [7] The business would benefit from developing the following plans?		
50	RM	A business continuity plan for your absence from the business?
51	RM	A plan to accommodate fluctuations in the economy? (Increased or decreased activity)
52	RM	A disaster plan?
53	RM	A plan to accommodate climate change or a plan that addresses environmental issues?
54	RM	A plan of action if there is a pandemic?
57	RM	A security plan (in relation to records, computer records, building security?
58	RM	A plan to ensure that your supply of materials will continue to meet your own business needs?
Innovation/ opportunity/ adaptability [5]		
40	IOA	The business seeks out new opportunities
42	IOA	When usual resources are not available, the business can improvise
44	IOA	The business provides solutions to my customers needs and problems
61	IOA	The business adapts well to differing conditions
66	IOA	The business can deal with whatever challenges come its way
74	Qualitative	The following assistance would improve the resilience of my business

Appendix C

Letter of Support –Small Business Centre Northwest Metro

From: Bruce Thomas [mailto:Bruce.Thomas@sbcnorthwestmetro.com.au]
Sent: Thursday, 19 August 2010 5:11 PM
To: Phil Roggio
Subject: RE: ECU Research Project

Hi Phil

I'm very happy to assist you in your project.

We have a client database of approx 2,500 business clients and I am more than happy to send a questionnaire or link to a questionnaire to the entire database.

Let me know the details as and when you are ready

Thanks and regards

Bruce Thomas | Manager

Small Business Centre
4/189 Lakeside Drive
Joondalup WA 6027

Phone: +61 8 9300 1418 | **Fax:** +61 8 9300 9239 | **Mobile:** 0430 117 567 |
Email: Bruce.Thomas@sbcnorthwestmetro.com.au
Web: www.sbcnorthwestmetro.com.au

The Small Business Centre North West Metro is a **free** service to **new** and established **businesses** in the North West metropolitan corridor of Perth, from Girrawheen to Yanchep.

We are here to assist you to develop your business idea and/or improve your business success. Located in Joondalup and Wanneroo, we provide free, confidential and practical assistance on a wide range of business related issues including:

• Practical business coaching
• Reference to specialist advisers
• Help through the maze of government departments and regulations
• Problem solving
• Marketing
• Financial management
• Legal structures
• Business licenses
• Customer service
• Staffing matters
• Business planning
• Govt. regulations
• Finance

Appendix D

Letter of support – Joondalup Business Association

From: Joondalup Business Association [mailto:terry@jba.asn.au]
Sent: Tuesday, 23 November 2010 4:50 PM
To: terry@jba.asn.au
Subject: JBA - BUSINESS RESILIENCE PROJECT
Importance: High

Hi everyone

Phil Roggio is a JBA member and the proprietor of **Lakeside Plumbing and Gas** and is investigating resilience in small business owners in conjunction with the Lifespan Resilience Research Group at **Edith Cowan University**. Phil was a guest speaker at our recent Business Breakfast where he sought the assistance of JBA members in completing a survey which is designed to provide a better understanding of what is required to enhance personal and business resilience.
See the attached flyer for details and a link to the survey which should only take around 15 minutes to complete - it can also be completed in part (your previous responses will be automatically saved). The questionnaire is anonymous and the results are collated directly by the researchers.
Please take the time to participate ~ you may find you will get something out of it by simply completing the survey ☺.
Cheers
Terry

Terry Darby-Smith JP
Manager
Tel: 9300 1414 Fax: 9300 1858 Mob: 0412 264 653
PO Box 24 Joondalup 6919
www.jba.asn.au

Appendix E

Information Letter

Researcher Contact Details:
Phil Roggio
Mobile No: 0430 355 320
Email: proggio@bigpond.net.au

A Study of Resilience in West Australian Small Business Owners

Information letter

The aim of this research is to investigate personal resilience in small business owners and contribute to the development of a new business resilience measure. The outcomes of this research will provide valuable information that could lead to greater success in your business and a healthier work-life balance.

The questionnaire should take about 15 minutes to complete (in total) and you can complete it in parts if you wish (your previous responses will be automatically saved). The questionnaire is anonymous and the results are collated directly by the researchers. There will be no negative impact to you or your business if you do not wish to participate in this research.

Should you wish to participate, please click on the link below. This will take you directly to the questionnaire. The first section relates to personal resilience, and the second relates to your business. Consent will be assumed if you complete and submit the questionnaire.

http://ecupsych.qualtrics.com/SE/?SID=SV_5tHL5gAcAeK30fq

This research project is being undertaken as a requirement of an Honours degree in the School of Psychology and Social Science at Edith Cowan University and has been approved by the ECU Human Research Ethics Committee. If you have any questions or require any further information about the research project please contact me using the above contact details. Alternatively, you can contact my supervisors:

Dr Cath Ferguson   Dr Ken Robinson
Phone: 6304 5834   Phone: 6304 5526
Email: c.ferguson@ecu.edu.au   Email: k.robinson@ecu.edu.au

If you would like to raise any concerns regarding this research with a person independent of the researchers directly involved, you can contact the 4th year coordinator:

Dr Andrew M Guilfoyle
Tel: 6304 5192; Fax: 6304 5834
E-Mail: a.guilfoyle@ecu.edu.au

Appendix F

ECU Media Release

14 December 2010

Small Business Research at ECU

Small businesses make up a vital part in Western Australia's economy, accounting for 96 per cent of all businesses in WA and employing an estimated third of the state's labour force.

Successful businessman and Edith Cowan University (ECU) Psychology Honours student, Mr Philip Roggio is working with the Joondalup Business Association (JBA) and Small Business Centre (SBC) North West Metro to research personal and business resilience in small businesses, with the aim to help small businesses thrive during stressful times.

The research will consist of a 15 minute-questionnaire completed by small to medium business owners in the Perth metropolitan area with the aim to understand the psyche behind small businesses and how they can remain successful during conditions of enormous stress and change.

Mr Roggio believes the research will help businesses understand how to successfully negotiate the workplace and provide valuable information that could lead to greater business success and sustainability.

"Growing a business from start up 21 years ago, navigating through the boom and bust cycles of the WA economy, skills shortages, partnership dissolutions, family commitments, and full time university study, to present day employing over 20 staff and being acknowledged for excellence in the industry, has not been without its challenges," said Mr Roggio.

"I believe that to successfully negotiate these challenges requires a level of mental and emotional strength, and the ability to be resilient, and it is my intention that this research be used to assist business owners understand the concept of resilience and how it may be useful in maintaining a successful business during troubled times."

Mr Roggio is the owner of Lakeside Plumbing and Gas, which recently won the *2010 Master Plumbers and Gasfitters of WA and Plumbing Licensing Board Award for Excellence: Best Workplace Health and Safety Practice in a Business Award.*

If you are a small-medium size business owner and wish to complete the questionnaire, visit the School of Psychology and Social Science webpage.

For more information on the research, contact Mr Roggio on proggio@bigpond.net.au.

- ends –

Media contact: Natasha Richards, Corporate Communications Officer, 6304 2208 or 0422 326 745