Basic psychological needs and self-determined motivation as antecedents of female consumers' voluntary simplistic clothing consumption practices in South Africa

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PhD Consumer Science: Clothing Management

September 2019

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

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by

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Thesis submitted in fulfilment of the requirements for the degree
PhD Consumer Science: Clothing Management

In the

Faculty of Natural and Agricultural Sciences

UNIVERSITY OF PRETORIA
Department of Consumer and Food Sciences

This work is based on the research supported in part by the National Research Foundation of South Africa (Grant numbers: 118025 and 98902). Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.

Study Leader: Dr Nadine Sonnenberg (University of Pretoria)

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Basiese sielkundige behoeftes en selfbepaalde motivering as antesedent vir vroulike verbruikers se vrywillige kledingverbruikspraktyke in Suid-Afrika

deur

Hanri Taljaard

Tesis voorgelê ter vervulling van die vereistes van die graad
PhD Verbruikerswetenskap: Kledingbestuur

In die

Fakulteit van Natuur- en Landbouwetenskappe

UNIVERSITEIT VAN PRETORIA
Departement van Verbruikers- en Voedselwetenskappe

Hierdie werk is gebaseer op die navorsing wat gedeeltelik deur die Nasionale Navorsingstigting (NNS) (Toekenningsnommers: 118025 en 98902) ondersteun word. Menings in hierdie werk uitgespreek of gevolgetrekkings waartoe geraak is, is dié van die outeur en moet nie beskou word as noodwendig dié van die NNS nie.

Studieleier: Dr Nadine Sonnenberg (Universiteit van Pretoria)

September 2019

DEDICATION

The author dedicates the research to the following people:

To my sisters, parents, fiancé and the Lord

- **Tialise** and **Danielle** (my sisters) - Thank you for your everlasting love and your encouraging chats when the end feels far away. Thank you for always cheering me on and reminding me that you are proud of me and my sometimes, crazy endeavours. Both of you inspire me every day and encourage me to live a life that is full of adventures. I can't imagine my life without you in it – love you lots like jelly tots.

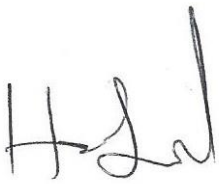
- My **parents**, **Johan** and **Sandra** – You are always just a call away. You are constant and caring, always sharing your thoughts and inspirations, guiding us and loving us (your children) unconditionally. Dankie dat julle altyd in my glo, trots is op my en nooit ooit twyfel in my vermoë om elke avontuur in my lewe met die grootste passie en deursettingsvermoë aan te pak nie. I love you so much.

- **Gerhard**, my soulmate – Thank you for always being there, encouraging me, supporting me, loving me, caring for me, making me laugh when life gets me down, comforting me when I become desperate and being a constant companion and voice of reason. Dankie vir jou konstante liefde en toewyding, en aanmoedinging in die laaste drie jaar. Ek het jou oneinding lief.

- The **Lord –** He constantly reminds me that He is always with me…"Have I not commanded you? Be strong and courageous. Do not be afraid; do not be discouraged, for the LORD your God will be with you wherever you go" (Joshua 1:9).

DECLARATION

I, **Hanri Taljaard**, hereby declare that this thesis, which I hereby submit for the degree **PhD Consumer Science: Clothing Management** at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution. I also confirm that all reference material in the thesis has been duly acknowledged.



HANRI TALJAARD

September 2019

ACKNOWLEDGEMENTS

Throughout the duration of this thesis various people have assisted and encouraged me for which I am very grateful for:

- My supervisor, **Dr Nadine Sonnenberg** for always lending an ear, welcoming me into the office if I unexpectedly pop in, providing guidance and words of encouragement, and always being there for me, as a mentor, supervisor and a caring and loving friend.

- The **National Research Foundation (NRF)** for their financial assistance towards this research. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.

- The **University of Pretoria** for granting financial support for my studies.

- **Lisel Krige** and "**Solid Stuff Creative Studio**" for translating my summary into Afrikaans and providing an excellent service with a quick turn-around time.

- All my **colleagues** in the Department of Consumer and Food Sciences for your continuous encouragement and interest in my studies.

- All my **friends** and **family** that kept enquiring about the thesis and the progress of it as well as always encouraging me and cheering me on.

SUMMARY

Basic psychological needs and self-determined motivation as antecedents of female consumers' voluntary simplistic clothing consumption practices in South Africa

by

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Department: Consumer and Food Sciences
Degree: PhD in Consumer Science (Clothing Management)

Keywords: Clothing consumption; voluntary simplicity; well-being; self-determination theory; self-determined motivation; basic psychological needs; sustainability

Consumers' clothing consumption is the cause of many social and environmental consequences, especially in emerging economies where consumption continues to escalate with the ever-increasing populations. It is therefore vital that consumers adopt more voluntary simplistic lifestyles with regards to sustainable clothing practices. This study therefore relied on the self-determination theory to explore the influence of basic psychological needs (i.e., competence, autonomy, and connectedness) and self-determined motivation (i.e., identified- and integrated regulation as well as intrinsic motivation) on female consumers' voluntary simplistic clothing consumption practices. Furthermore, the study also explored the classifications of female consumers based on their engagement in voluntary simplistic clothing consumption practices to determine whether these consumers are voluntary simplifiers or not.

A quantitative, non-probability purposive sampling approach was used to collect 482 responses via structured, self-administered online questionnaires of which 469 (97.3%) responses were used for descriptive and inferential statistics as well as structural equation modelling and cluster analyses, and 13 (2.7%) were deemed incomplete and thus discarded. During the initial inferential statistics all the key concepts were subjected to exploratory- and confirmatory factor analysis, of which basic psychological needs and self-determined motivation presented similar outcomes to previous literature. Voluntary simplistic clothing consumption practices presented the following

sub-sections: ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing and need-based clothing consumption. Additionally, structural equation modelling was performed in which competence was identified as the most influential basic psychological need, followed by the need for connectedness and autonomy. Moreover, intrinsic motivation is the strongest predictor of voluntary simplistic clothing practices, while integrated regulation is deemed insignificant and identified regulation has a negative association with the practices in question.

Using SPSS software, various methods of cluster analyses (two-step and k-means) were implemented to classify female consumers based on their engagement in voluntary simplistic clothing consumption practices. Concluding results indicated that these female consumers are either voluntary simplifiers, who have committed themselves to living simpler lifestyles by recycling, reusing, reducing, repurposing and repairing clothing before either purchasing new clothes or discarding of old clothes, or partial voluntary simplifiers (including partial to non-voluntary simplifiers), who seem to be less engaged in these practices, and have adopted some of these practices or have barely adopted any sustainable clothing consumption practices. This cluster might only be engaging in certain practices because they lack competence to participate in other forms of voluntary simplistic clothing consumption practices and are not intrinsically motivated, or because they are restricted by limited resources and infrastructure.

In summary, it would seem that female consumers are keen on adopting voluntary simplistic clothing behaviours, which may be due to their intrinsic motivation and competence rather than their exposure to extrinsic influences, but further research into this topic could present valuable information that could enhance research pertaining to the topic at hand. From a theoretical point of view, this study contributes to existing literature and creates a basis for further empirical research, especially in terms of voluntary simplistic clothing consumption practices in emerging markets such as South Africa. Additionally, it provides evidence related to existing theories and concepts to explain female consumers' basic psychological needs and self-determined motivation regarding voluntary simplistic clothing consumption practices as well as classifies female consumers based on their levels of involvement in these practices. Insight gathered from this study could be used to tailor strategies such as the National Strategy for Sustainable Development and Action Plan (NSSD) and the South African Green Economy strategy. Marketers could also benefit by fully comprehending the degree to which local female consumers engage in voluntary simplistic clothing consumption practices in order to develop effective and focused campaigns that promote social responsibility and sustainability.

OPSOMMING

Basiese sielkundige behoeftes en selfbepaalde motivering as antesedent vir vroulike verbruikers se vrywillige kledingverbruikspraktyke in Suid-Afrika

deur

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Graad: PhD Verbruikerswetenskap: Kledingbestuur

Sleutelwoorde: Kledingverbruik; vrywillige eenvoud; welstand; selfbepalingsteorie; selfbepaalde motivering; basiese sielkundige behoeftes; volhoubaarheid

Verbruikers se kledingverbruik het talle maatskaplike en omgewingsgevolge, veral in ontwikkelende ekonomieë waar verbruik in ooreenstemming met die immer groeiende bevolkingsgetalle bly toeneem. Dit is dus noodsaaklik dat verbruikers meer vrywillig simplistiese lewenstyle met betrekking tot volhoubare kledingpraktyke moet aankweek. Hierdie navorsingstudie het derhalwe staatgemaak op die selfbeskikkingsteorie om die invloed van basiese sielkundige behoeftes (naamlik bevoegdheid, outonomie en verbondenheid) en selfbepaalde motivering (naamlik geïdentifiseerde en geïntegreerde regulering sowel as inherente motivering) op die vrywillige simplistiese kledingverbruikspraktyke van vroulike verbruikers te ondersoek. Die studie het voorts ook die klassifisering van vroulike verbruikers ondersoek op grond van hul deelname aan vrywillig simplistiese kledingverbruikspraktyke om te bepaal of hierdie verbruikers vrywillige vereenvoudigers is of nie.

'n Kwantitatiewe, nie-waarskynlikheid-, doelgerigte steekproefbenadering is gebruik om 482 respondente se menings in te win deur middel van gestruktureerde, selfbestuurde aanlyn-vraelyste waarvan 469 (97.3%) terugvoere gebruik is vir beskrywende en afgeleide statistieke sowel as strukturele vergelykingsmodelle en groepsontledings, terwyl 13 (2.7%) as onvolledig en dus onbruikbaar beskou is. In die aanvanklike fase van afgeleide statistieke is al die sleutelkonsepte onderwerp aan ondersoekende en bevestigende faktor-ontleding, waarvan

basiese sielkundige behoeftes en selfbepaalde motivering uitkomste opgelewer het wat soortgelyk is aan bestaande literatuur. Vrywillig simplistiese kledingverbruikspraktyke het die volgende onderafdelings opgelewer: etiese kleding, lang lewensduur van kleding, heraanwending van kleding, unieke handgemaakte kleding en behoefte-gebaseerde kledingverbruik. Bykomend hiertoe is ‘n strukturele vergelykingsmodel gebruik waarin bevoegdheid as die invloedrykste basiese sielkundige behoefte geïdentifiseer is, gevolg deur die behoefte aan verbondenheid en dié aan outonomie. Boonop is inherente motivering die sterkste voorspeller van vrywillig simplistiese kledingpraktyke, terwyl geïntegreerde regulering as onbenullig geag word en geïdentifiseerde regulering het ‘n negatiewe assosiasie met die betrokke praktyke.

Deur die gebruik van SPSS-sagteware is verskeie metodes van kluster-ontledings aangewend, naamlik die tweestap en k-metodes, om vroulike verbruikers op grond van hul deelname aan vrywillig simplistiese kledingverbruikspraktyke te klassifiseer. Slotbevindings het aangedui dat hierdie vroulike verbruikers òf vrywillige vereenvoudigers is wat hulself tot eenvoudiger leefwyses verbind het deur die herwinning, hergebruik, vermindering, heraanwending en herstel van klerasie eerder as om nuwe klere te koop of ou klere weg te maak, òf deels vrywillige vereenvoudigers (wat gedeeltelike tot nie-vrywillige vereenvoudigers insluit). Laasgenoemde groepering blyk minder betrokke te wees by genoemde praktyke en het van die praktyke aangekweek, of het skaars enige volhoubare kledingverbruikspraktyke aangekweek. Hierdie groepering neem moontlik deel aan sekere praktyke slegs omdat hulle nie die bevoegdheid het om ander vorme van vrywillig simplistiese kledingverbruikspraktyke aan te neem en nie inherent daartoe gemotiveerd is nie, of omdat hulle deur beperkte hulpbronne en infrastruktuur verhinder word.

Opsommend blyk dit dat vroulike verbruikers gretig is om vrywillig simplistiese kledingpraktyke aan te neem, moontlik vanweë hul inherente motivering en bevoegdheid eerder as hul blootstelling aan ekstrinsieke invloede, hoewel verdere navorsing in hierdie veld waardevolle inligting sou kon oplewer wat navorsing oor die betrokke onderwerp ‘n hupstoot sou kon gee. Vanuit ‘n teoretiese oogpunt lewer hierdie studie ‘n bydrae tot bestaande literatuur en skep dit ‘n grondslag vir verdere empiriese navorsing, veral in terme van vrywillig simplistiese kledingverbruikspraktyke in ontwikkelende markte soos Suid-Afrika. Voorts verskaf dit stawende getuienis wat verband hou met bestaande teorieë en konsepte ter verduideliking van die basiese sielkundige behoeftes en selfbepaalde motivering van vroulike verbruikers met betrekking tot vrywillig simplistiese kledingverbruikspraktyke. Dit klassifiseer ook vroulike verbruikers op grond van hul vlakke van betrokkenheid by hierdie praktyke. Insigte wat deur hierdie studie verkry is, sou gebruik kon word om strategieë soos die Nasionale Strategie vir Volhoubare Ontwikkeling en Aksieplan (NSSD) en die Suid-Afrikaanse Groen Ekonomie-strategie te verfyn. Bemarkers sou ook kon voordeel trek uit

‘n meer omvattende begrip van die mate waarin plaaslike vroulike verbruikers meedoen aan vrywillig simplistiese kledingverbruikspraktyke, ten einde doeltreffende en toegespitste veldtogte te ontwikkel wat maatskaplike verantwoordelikheid en volhoubaarheid bevorder.

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CHAPTER 1: THE STUDY IN PERSPECTIVE

Chapter one provides an overview of the research, by introducing the topic of interest, stating the overall research problem, providing a justification for conducting research of this kind, and providing the structure by setting out the objectives and hypotheses of this study. Furthermore, the methodology is summarised, after which definitions of relevant concepts are tabulated and lastly the remainder of the thesis is set out to act as a guideline for the study.

1.1 INTRODUCTION

Globally, biodiversity has declined by 60% between 1970 and 2014 (World Wide Fund, 2018). Developed countries (representing approximately a quarter of the world's population) consume almost 90% of the earth's natural resources and nearly 75% of the energy resources (Intergovernmental Panel on Climate Change, 2018). In 2012, the amount of natural resources that humanity consumed globally in one year was already equivalent to 1.6 earths (World Wild Fund, 2016). Although the consumption of developed nations clearly adds to the current status quo, developing countries such as South Africa, are moving towards the same realisation where they are currently faced with ever-increasing populations and consumption patterns that affect the environment and society alike. In this regard, the clothing and textile industry specifically is a major culprit of environmental issues such as environmental degradation, climate change, extensive amounts of waste, as well as social issues such as human rights violations and importing, that supresses the empowerment of local communities (Fashion Revolution, 2018; Wahnbaeck & Roloff, 2017). More specifically, environmental issues include, but are not limited to the production of synthetic fibres that release harmful toxins and garment production that generates waste and pollution (Choudhury, 2014; Gwozdz, Steensen Nielsen & Müller, 2017; White, Nielsen & Valentini, 2017). This industry therefore requires new ways to reduce the environmental footprint, from the raw, natural resources to the production processes, care, maintenance, as well as the disposal of products (Armstrong, Niinimäki, Kujala, Karell & Lang, 2015; Wahnbaeck & Roloff, 2017). In terms of the social aspects relating to the clothing and textile industry, garment manufacturing is for example negatively associated with issues such as human rights violations, low wages and poor labour standards in many developing countries (Ma, Lee & Goerlitz, 2016).

Many of the aforementioned issues can be ascribed to the concept of “fast fashion”, which is a major contributor of environmental and social issues surrounding the clothing and textile industry. Fast fashion can be described as a fast-response system in which low-cost garments that reflect the newest trends, are manufactured and sold to consumers in a matter of weeks, encouraging increased disposability of clothing (Fletcher, 2008; Joy, Sherry Jr, Venkatesh, Wang & Chan, 2012). That said, various fast fashion retailers make use of suppliers situated in countries such as India, Sri Lanka and Bangladesh, where labour costs are low and production is high to ensure a quick turnaround time. More often than not, the working conditions in these factories are below standard and workers are often over-worked and under paid (McMullen & Majumder, 2016). Despite efforts to encourage the slowing down of this movement in recent years, many retailers still offer fast fashion to keep up with consumer demands, gain competitive advantage and increase their profit margins (McNeill & Moore, 2015). These environmental and social issues surrounding fast fashion might vary from country to country, but remains prevalent in many developed as well as developing countries such as South Africa where consumers’ disposable incomes and consumption increases as the population increases and evolves.

In recent years, the South African apparel retail industry has experienced substantial growth and it is expected to continue growing until 2022. In 2017 alone, the local apparel retail sector grew by 4.8% to reach a value of $7,502 million, with a compound annual growth rate (CAGR) of 4.3% between 2013 and 2017 (Marketline, 2018). In terms of market segmentation, the womenswear segment accounts for 33.1% of the industry and furthermore, the clothing, footwear and accessories specialists form part of the top distribution channels in the South African apparel retail industry, accounting for 72.7% share of the total industry’s value. Based on the market value forecast, the South African apparel retail industry is said to reach a value of $9,577.7 million by 2022, which is a 27.7% increase since 2017 (Marketline, 2018). This has attracted international retailers such as Zara and H&M to compete for local market share. Conversely, growth in the retail sector has not benefitted local manufacturing. In fact, approximately 90% of the apparel that is available in the local South African market is imported (Flanders Investment & Trade, 2016; PwC and Economist Intelligence Unit, 2012) resulting in the reduction of local garment manufacturing, mass factory closures, and significant job losses over the past few years (Hoskins, 2015). Apart from the social impact, imports have severe environmental repercussions linked to the transportation and distribution of the products with associated carbon emissions. This in conjunction with the environmental consequences of initial fibre and garment production in the country of origin (Gwozdz *et al.*, 2017) calls for more stringent effort among various stakeholders in the clothing value chain to curb overall natural resource depletion, loss of biodiversity and climate change (Hermes, 2014).

Establishing a more sustainable value chain requires focus throughout the product life cycle i.e. from the raw, natural resources to the production processes, care, maintenance, as well as the disposal of products (Armstrong *et al.*, 2015; Wahnbaeck & Roloff, 2017), but, importantly, also depends on consumers' willingness to adapt their lifestyles towards lowering consumption levels and/or choosing more sustainable alternatives. Yet, introducing such alternatives into an emerging market context such as South Africa remains challenging. Notwithstanding the country's economic progress, many third world issues endure e.g. local consumer populations are characterized by extreme levels of income inequality with a growing middle-class segment that continue to consume conspicuously, while other segments are subject to poor living standards. Ultimately, all segments are affected by social and environmental problems relating to unsustainable ways of living and overconsumption. For these reasons, voluntary simplistic clothing consumption lifestyles must be adopted across the entire spectrum of the population, but especially amongst the upper- and middle-class consumers who tend to burden the entire population by overconsuming and living conspicuously (Joanes, 2019).

Reduced consumption and opting for local, ethical and sustainable alternatives all relate to a lifestyle of voluntary simplicity. Voluntary simplicity can be traced back to the work of Richard Gregg in 1936 and can be described as a lifestyle that acts in service of both the goals of personal well-being and sustainable consumption (Kasser, 2009). Elgin and Mitchell (1977), who produced seminal work on this topic, explain that voluntary simplicity involves a personal choice to become inwardly rich by living a simple life based on underlying views that such a lifestyle creates stronger communities and reduces ecological harm. Essentially, consumers may adopt voluntary simplistic lifestyles to counteract environmental and social problems, such as those caused by the acquisition, use and disposal of clothing. Voluntary simplicity can further be sub-divided into various dimensions, namely material simplicity (i.e. consuming less), self-determination (i.e. desire to control one's destiny and striving toward self-sufficiency), ecological awareness (i.e. concern for environmental issues) and human scale (i.e. supporting community and small scale/ local institutions) (Leonard-Barton, 1981). Over time the concept of voluntary simplicity has evolved and even though it still encapsulates the macro goal of simplifying one's life, different consumers have exhibited a wide range of micro strategies in achieving voluntary simplicity through their own interpretation of simplification (Bekin, Carrigan & Szmigin, 2005). Some researchers have proposed the five "R" approach, namely recycle, repair, reuse, reduce and refuse (Zamwel, Sasson-Levy & Ben-Porat, 2014) to live a more sustainable voluntary simplistic lifestyle. In terms of clothing consumption, consumers could for example reduce the amount of clothing they buy, use or throw away (e.g. buying good quality and/ or classic styles that surpasses seasonal trends) and repair or repurpose clothing (e.g. making rags out of worn out clothing). They could also opt

for a more sustainable option such as recycling or reusing clothing in an eco-friendly manner (e.g. donate it to friends/charities or engage in re-selling/ exchanging activities) (Hiller Connell, 2010). They may also refuse to buy clothing that is detrimental to the environment and instead opt for eco-friendly alternatives such as organic cotton or recycled polyester (Shen, Zheng, Chow & Chow, 2014). In addition, they would forego unethical or imported goods, and opt for locally produced garments instead. Such behavioural changes are crucial to counter the impact of overconsumption (Wahnbaeck & Roloff, 2017) and to ensure a sustainable economy in which consumers live more sustainably and ensure that future generations' needs are met (Gwozdz *et al.*, 2017).

Based on the underlying assumptions of Deci and Ryan's (1985) theory of intrinsic motivation and self-determination (more commonly known as the Self Determination Theory (SDT)), the concept of "eudaimonia" i.e. living well and/ or actualising the human potential (Deci & Ryan, 1985b; Deci & Ryan, 2008; Ryan & Deci, 2001; Ryan, Huta & Deci, 2008; Waterman, 1993) might be key in realising the aforementioned goals. Outcomes resulting from living well include vitality, health as well as a sense of meaning and community (Ryan *et al.*, 2008). It is argued that in the universal pursuit of happiness, people focus on personal achievement, possessions and financial wealth, or alternatively, on living simply. Behaviour is often guided by the desire to consume; however many consumers are starting to distance themselves from overconsumption and adopting more simplistic, sustainable lifestyles (Boujbel & d'Astous, 2012). According to the assumptions of the SDT, such lifestyles and behaviours require self-determined motivation in the form of either intrinsic motivation, integrated regulation or identified regulation. Intrinsic motivation is associated with the human need for competence and self-determination whereas integrated regulation is focused on personal outcomes. During the process of identified regulation, a person identifies with the behaviour (e.g. voluntary simplistic lifestyles) on a conscious level and personally endorses it, thus leading to a high level of perceived autonomy (DeHaan & Ryan, 2014). In addition, motivation can only be deemed self-determined if three basic psychological needs are met namely competence (i.e. allowing consumers' to have a sense of control and proficiency), autonomy (i.e. the ability to act independently) and connectedness or relatedness (i.e. a sense of belonging to a social group) (Darner, 2009).

Based on the aforementioned background, the SDT was deemed an appropriate theoretical basis for exploring the influence of basic psychological needs, and particularly self-determined motivation, on consumers' voluntary simplistic clothing consumption lifestyles and practices in the local emerging market context. The study purposively focused on upper- and middle-income

groups as they are inclined to spend more on clothing and more specifically female consumers, who tend to be early adopters of particular clothing practices.

1.2 THEORETICAL BACKGROUND

Well-being is a broad term that is used to explain people's positive life experiences and includes concepts such as happiness, satisfaction and morale (Diener, 1984; Rich, Hanna & Wright, 2017). Well-being is centred on an ideal psychological state that may relate to two opposing views of human nature namely hedonism and eudaimonism (Deci & Ryan, 2008). Hedonism is associated with positive and negative affect in the short-run, whereas eudaimonism encompasses long-term perspective. Though pleasure might be derived from short term outcomes and wellness in the forms of selfishness, materialism and ecological destructiveness, it cannot be described as eudaimonic (Ryan *et al.*, 2008). Eudaimonia can be defined as living well or actualizing human potential and fulfilling one's true nature (Ryan & Deci, 2001). Essentially, it is a lifestyle and emphasizes the content and processes involved in living well, rather than specific outcomes such as in the case of hedonism (Ryan *et al.*, 2008). Research has in fact established that consumers who have intrinsic goals for personal growth tend to display psychological well-being as an indicator of eudaimonia (Deci & Ryan, 2008). Psychological well-being is associated with six aspects of human actualization, namely autonomy, personal growth, self-acceptance, life purpose, environmental mastery and positive relatedness (Ryan & Deci, 2001). Autonomy, in particular, is a concept that refers to having the experience of choice and making the right choices (such as opting for voluntary simplistic lifestyles), and is closely related to eudaimonia (Deci & Ryan, 2008). Ryan *et al.* (2008) further argued that eudaimonic living can be characterized by four motivational concepts, namely pursuing intrinsic goals rather than external goals, behaving autonomously, being mindful and aware and behaving in ways that satisfy basic psychological needs for competence, autonomy and relatedness. These aspects are captured in the Self-Determination Theory, which served as an appropriate theoretical basis for this study.

Deci and Ryan's (1985) Self-Determination Theory (SDT) embraces the concept of eudaimonia as the basis of well-being and further emphasizes actualization of the self and how it can be accomplished. Humans are seen to be active in their pursuit of behaviours to such an extent that these behaviours will lead to desired goals or outcomes (Deci & Ryan, 1985b; Jantarat & Shannon, 2016). As an initial basis to the development of the SDT, Deci and Ryan (1980) postulated that

there are two types of motivated behaviours, namely (1) self-determined behaviours, that are chosen based on conscious information-processing in the service of intrinsic and extrinsic needs, and (2) automated behaviours or "mindless" behaviours that require much less involvement and are unintentionally chosen. Self-determined behaviours thus require a strong relationship between the mind and the behaviour.

In further developing the SDT, Deci and Ryan (1985b) proposed various motives (i.e. regulations) that form part of a self-determination continuum, and identify psychological conditions (i.e. nutriments) that are accountable for motivational development (Ryan & Deci, 2000a). Social contexts in which the behaviours take place satisfy the basic psychological needs (i.e. competence, autonomy, relatedness) that, in turn, cultivates the development of more self-determined regulations, to enhance the persistence and ultimately the psychological well-being of the person performing the task (Ryan & Deci, 2000a). A motivational sequence thus occurs, as suggested by Vallerand and Losier (1999), in which one's social context leads to the fulfilment of basic psychological needs, which in turn, influences one's motivation, that ultimately predicts one's cognitive, affective and behavioural consequence.

1.3 RESEARCH PROBLEM

The unsustainable lifestyles of people in developed countries have contributed significantly to various environmental and social issues pertaining to the loss of biodiversity, climate change and resource scarcity (Seegebarth, Peyer, Balderjahn & Wiedmann, 2016; Steg, Bolderdijk, Keizer & Perlaviciute, 2014). In addition to that, emerging markets such as South Africa are becoming equally accountable as population figures and consumption keeps rising. The clothing and textile sector, in particular, is a significant perpetrator, being the world's second largest polluter, and has been severely criticised with appeals for more stringent effort to promote sustainable consumption practices that would minimise the impact on the environment and the larger community (Kang & Kim, 2013; Kang, Liu & Kim, 2013; Wahnbaeck & Roloff, 2017; Walter, 2009). Environmental issues include environmental degradation, climate change, and extensive amounts of waste, while the social issues include, but are not limited to human rights violations and importing that supresses the empowerment of local communities (Choudhury, 2014; Gwozdz *et al.*, 2017; Ma *et al.*, 2016; White *et al.*, 2017). On the other hand, consumers also contribute to the afore mentioned issues by purchasing, wearing, washing, and disposing of clothing on a regular basis – often not

in an environmentally friendly manner. On a societal level, consumers are constantly pulled away from voluntary simplistic lifestyles by factors such as consumerism and overconsumption (Ryan et al., 2008). Consumerism is promoted by the continuous exposure of advertisements and marketing campaigns that prompt a sense of need for the products. It is also encouraged by numerous fashion outlets providing fast fashion at reasonable prices, which tempts consumers and convinces them that they need the newest fashion to fit in to the society.

Therefore, it is equally important to establish more sustainable value chains in the clothing and textiles industry as well as encourage consumers to adapt their lifestyles by lowering consumption levels and / or choosing more sustainable alternatives (Wahnbaeck & Roloff, 2017). This remains quite a challenge in third world countries such as South Africa that suffers with issues like income inequality and poor living standards among certain population segments while other segments live conspicuously. Regardless, no one is untouched by environmental and social problems relating to unsustainable ways of living and therefore, voluntary simplistic lifestyles, especially in terms of clothing consumption, need to be adopted by the entire population, but especially amongst the larger margin of upper- and middle-class consumers who overconsume and live conspicuously at the cost of everyone around them (Joanes, 2019). In recent years, sustainability as a whole has become much more prominent due to the severity of the environmental and social issues arising every day, and consumers have subsequently become more aware of the effect they have on the environment and society at large; in general, and in terms of their clothing practices. Due to this revelation, an increase in the willingness of people to adopt more sustainable clothing practices e.g. reducing, repairing, recycling, reusing and reducing, has been observed.

This occurrence can be explained through the voluntary simplicity concept that involves a personal choice to live a simple life based on underlying views that such a way of life creates stronger communities and reduces ecological harm (Elgin & Mitchell, 1977). Being aware of this notion, individuals may adopt voluntary simplistic lifestyles to counteract environmental and social problems such as those caused by the clothing and textile industry. Voluntary simplistic clothing consumption practices stems from the 5 “R” approach and is adapted to the clothing domain to include the following practices: (1) reducing the amount of clothing consumers buy, use or throw away by for example buying good quality clothing or classic styles that surpasses seasonal trends, (2) repairing or repurpose clothing by for example making rags out of worn out clothing, (3) recycling or reusing clothing in an eco-friendly manner by donating it to friends/charities, engaging it and / or re-selling it, (4) refusing to buy clothing that is bad for the environment and rather choosing more eco-friendly alternatives (e.g. organic cotton or recycled polyester), and lastly (5)

refusing to purchase unethical or imported goods by purchasing "Proudly South African" locally produced clothing instead (Zamwel *et al.*, 2014).

Based on the assumptions of the Self Determination Theory (SDT), such lifestyles and behaviours require self-determined motivation in the form of either intrinsic motivation, integrated regulation or identified regulation. However, motivation can only be deemed self-determined if three basic psychological needs are met namely competence (i.e. allowing consumers' to have a sense of control and proficiency), autonomy (i.e. the ability to act independently) and connectedness or relatedness (i.e. a sense of belonging to a social group) (Darner, 2009). Together with the afore mentioned background and literature, the SDT was therefore chosen as the theoretical perspective as it encapsulates the relevant concepts in a framework to indicate the relationships and relevance of the significant concepts pertaining to this study. This research also focused exclusively on female consumers as they are generally more willing to take part in socially responsible initiatives and could possibly act as early adopters of voluntary simplistic clothing consumption practices. They could also be prominent role players in households' overall clothing consumption practices and may encourage fellow household members to adopt more sustainable behaviour in their daily lives (Mitchell & Walsh, 2004; Mostafa, 2007a; Zelezny, Chua & Aldrich, 2000). That said, very few studies, if any, have focussed specifically on female consumers where the SDT and sustainable clothing practices are concerned.

Although extensive research has been done on the topic of voluntary simplicity abroad (i.e. the United States of America and Europe) (Armstrong, Connell, Lang, Ruppert-Stroescu & LeHew, 2016; Etzioni, 1998; Ruppert-Stroescu, Armstrong, LeHew & Connell, 2015; Zavestoski, 2002), little is known about it in South Africa, particularly with regard to its application in clothing consumption. That said, previous studies have mainly focused on abstaining from clothing acquisition for a period of time, clarifying the types of voluntary simplicity and relating it back to psychological implications in general, as well as exploring the social-psychological bases of anti-consumption attitudes (also in the general sense). On the other hand, very few studies have implemented the SDT together with voluntary simplicity to explore and explain sustainable clothing practices in an emerging market context. Together with that, the SDT has to date, mostly been used to explore and explain research relating to medical situations, education or exercise, as well as environmental motivation, but none have addressed it together with voluntary simplicity in terms of consumers' clothing consumption practices (Baena-Extremera, Granero-Gallegos, Baños & Ortiz-Camacho, 2018; Darner, 2009; Niemiec & Ryan, 2009). Thus, research specifically relating to voluntary simplicity, together with the SDT theoretical framework and associated constructs, in the field of sustainable clothing consumption practices, remains unknown and vague, justifying a

valid problem that needs to be addressed within the research domain to clarify, understand and promote this specialised topic.

Based on the aforementioned arguments, this research will focus on the influence of *basic psychological needs and self-determined motivation as antecedents of female consumers' voluntary simplistic clothing consumption practices in South Africa.*

1.4 JUSTIFICATION OF THE RESEARCH

Protecting the environment and living more sustainably is a worldwide concern for organisations as well as consumers. It is essential that consumers are provided with accurate knowledge and skills to adopt a more sustainable view and possibly a more environmentally friendly, socially responsible lifestyle in order to combat further degradation of the planet. To date, empirical evidence pertaining to voluntary simplicity has mainly originated in developed countries such as the United States of America and other European countries (Armstrong *et al.*, 2016; Etzioni, 1998; Ruppert-Stroescu *et al.*, 2015; Zavestoski, 2002), which might not reflect the contextual realities of consumption patterns in South Africa. Furthermore, very little is known regarding consumers' involvement in voluntary simplistic clothing consumption behaviour. It is therefore important to research the local consumers' engagement in practices that demonstrate ecological awareness, self-sufficiency and sponsorship of human scale such as their support for the local clothing and textile industry. The findings of this study may therefore address an important theoretical gap in existing literature and create a basis for further empirical research, especially in terms of the applicability of Deci and Ryan's (1985) Self Determination Theory (SDT) and voluntary simplistic clothing consumption practices in emerging markets such as South Africa.

Empirical evidence gained through research of this nature, can assist in developing effective policies to facilitate the transition to voluntary simplistic clothing consumption lifestyles that originate from the consumers themselves, rather than rules and regulations that enforce such behaviours. In addition, insight gathered from the findings can for example be added to strategies such as the National Strategy for Sustainable Development and Action Plan and the South African Green Economy strategy in terms of voluntary simplistic clothing consumption (Department of Environmental Affairs, 2019; Enviropaedia: Rethinking Reality, 2017; National Strategy for Sustainable Development and Action plan, 2011). Furthermore, government institutions could

benefit by making use of the research to encourage businesses to market the sustainable options in such a way that will promote self-determined behaviours amongst consumers. The findings could further serve as imputes for marketers to create awareness and educate consumers through for example proper labelling (i.e. providing information regarding the country of origin, sustainable ways of washing) and advertising (i.e. explaining the benefits of purchasing the product and including information on how best to take care of and recycle the product). This may enhance consumers' basic psychological needs by making them feel competent to search for and acquire sustainable clothing options, as well as giving them the choice to make decisions regarding sustainable clothing based on their own free will (Chekima, Wafa, Igau, Chekima & Sondoh Jr, 2016). Furthermore, marketers could market it in such a way (i.e. adding labelling that includes the entry to an online community via social media) that consumers feel a sense of belonging when they purchase sustainable clothing options and consume it in a voluntary simplistic manner.

The South African government has also initiated sustainable consumption behaviours through the implementation of Local Agenda 21 programs. They play a key role in promoting the principles of sustainable development at the local level, and also encourage the population of South Africa to work towards a society where everybody contributes to living more sustainably and preserving the environment for future generations. In various countries eco-friendly and sustainable products still have an insignificant market share, and the same seems to be true for South Africa (Anvar & Venter, 2014; Du Toit & Crafford, 2003; Luiz, Bowen & Beswick, 2011; Sonnenberg, Jacobs & Momberg, 2014). Empirical evidence is thus needed to create strategies to improve these products' market share.

1.5 OVERALL AIM AND OBJECTIVES OF THE STUDY

The overall aim of this study is to investigate the basic psychological needs and self-determined motivation as antecedents of female consumers' voluntary simplistic clothing consumption practices (VSCCP). Based on the introduction, research problem and justification presented in the preceding sections, four main objectives were formulated for this study:

OBJECTIVE 1: To investigate and analyse female consumers' basic psychological needs to engage in voluntary simplistic clothing consumption practices, specifically regarding their:

1.1 Competence

1.2 Autonomy

1.3 Connectedness/ Relatedness

OBJECTIVE 2: To investigate and analyse female consumers' self-determined motivation to engage in voluntary simplistic clothing consumption practices, specifically regarding their:

2.1 Identified regulation

2.2 Integrated regulation

2.3 Intrinsic motivation

OBJECTIVE 3: To determine and describe female consumers' engagement in voluntary simplistic clothing consumption practices that reflect dimensions of material simplicity, self-determination, ecological awareness and a regard for human scale.

OBJECTIVE 4: To cluster female consumers (i.e. full voluntary simplifiers and partial/non-voluntary simplifiers) based on their level of engagement in voluntary simplistic clothing consumption practices.

Following the initial analyses (exploratory- and confirmatory factor analyses) pertaining to objectives 1, 2 and 3, the most prominent voluntary simplistic clothing consumption practices were identified and retained for further investigation and analysis (i.e. structural equation modelling). Construct associations were subsequently hypothesized as follows:

H1: There is a significant positive relationship between competence and self-determined motivation, more specifically:

H1a*: There is a significant positive relationship between competence and identified regulation.*

H1b*: There is a significant positive relationship between competence and integrated regulation.*

H1c*: There is a significant positive relationship between competence and intrinsic motivation.*

H2: There is a significant positive relationship between autonomy and self-determined motivation, more specifically:

H2a*: There is a significant positive relationship between autonomy and identified regulation.*

H2b*: There is a significant positive relationship between autonomy and integrated regulation.*

H2c*: There is a significant positive relationship between autonomy and intrinsic motivation.*

H3: There is a significant positive relationship between connectedness and self-determined motivation, more specifically:

H3a*: There is a significant positive relationship between connectedness and identified regulation.*

H3b*: There is a significant positive relationship between connectedness and integrated regulation.*

H3c*: There is a significant positive relationship between connectedness and intrinsic motivation.*

H4: There is a significant positive relationship between self-determined motivation and voluntary simplistic clothing consumption, more specifically:

H4a*: There is a significant positive relationship between identified regulation and voluntary simplistic clothing consumption.*

H4b*: There is a significant positive relationship between integrated regulation and voluntary simplistic clothing consumption.*

H4c*: There is a significant positive relationship between intrinsic motivation and voluntary simplistic clothing consumption.*

Figure 1.1 provides an overview of the hypothesized relationships:

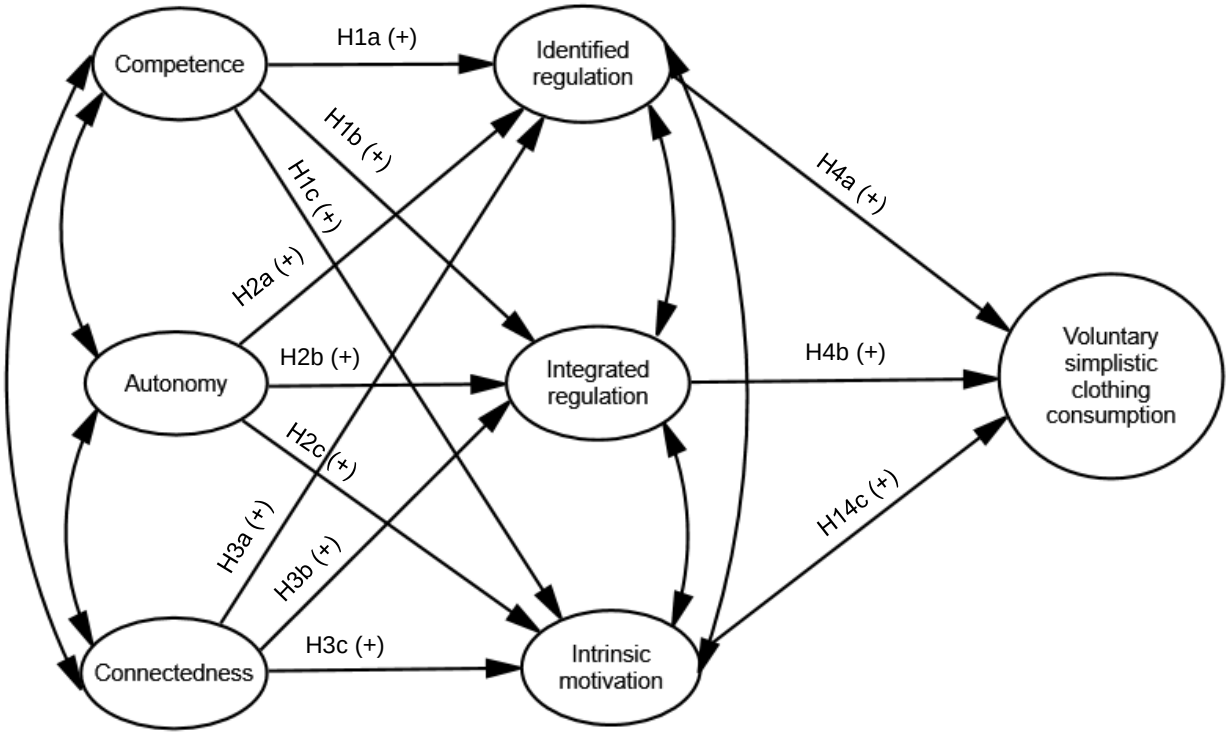


FIGURE 1.1: SCHEMATIC ILLUSTRATION OF THE MODEL AND THE HYPOTHESIZED RELATIONSHIPS BETWEEN CONSTRUCTS

1.6 RESEARCH DESIGN AND METHODOLOGY

A quantitative survey approach was followed to gain information and address the purpose of this study at a specific point in time. A structured, self-administered questionnaire was developed and distributed online via Qualtrics in 2018 among a target population of female consumers aged 21 to 65 (Addendum A). The questionnaire included 15 items pertaining to basic psychological needs (i.e. competence, autonomy and relatedness) (section F). The items were derived from a combination of the Basic Psychological Needs Scale (Deci & Ryan, 2000) and the Psychological Need Satisfaction in Exercise scale (Wilson, Rogers, Rodgers & Wild, 2006). The items were adapted and rephrased to specifically relate to voluntary simplistic clothing consumption practices in an emerging market context and included seven response options ranging from “Definitely false” to “Definitely true. The section relating to self-determined motivations (i.e. intrinsic motivation, integrated regulation and identified regulation) included 12 items that were derived from the Motivation Toward the Environment Scale (Pelletier, Tuson, Green-Demers, Noels & Beaton, 1998) that was also adapted to relate to the topic of investigation (section G). Respondents were asked to indicate their responses on a seven-point Likert scale ranging from “Strongly disagree” to “Strongly agree”. Consumers’ engagement in voluntary simplistic clothing consumption practices was measured by means of 22 items (section E). These items were originally patterned after the behavioural index of Leonard-Barton (1981) but was further adapted to specifically tap into clothing consumption practices and to comply with local conditions. The adapted items were used in a study by Reis (2019) and were further adapted and phrased for the purposes of this study. A seven-point Likert-scale was used to record responses ranging from “Strongly disagree” to “Strongly agree”. Although the questionnaire consisted of 10 sections, only sections A (screening questions), C (general information pertaining to voluntary simplistic clothing consumption practices (VSCCP)), D (current VSCCP), E (VSCCP), F (basic psychological needs), G (self-determined motivation) and I (demographic information) were used during this study for inferential analyses, structural equation modelling and cluster analyses purposes. *It is however important to note that the other sections of the questionnaire (sections B (objective knowledge), H (subjective knowledge and experience) and J (follow-up blog inquiry)) form part of ongoing research and are therefore excluded from this thesis for future interpretation and expansion on the topic of interest.*

The online survey was pre-tested to eliminate problems prior to main data collection. Before initiating data collection, the confirmation of the Ethics Committee of the Faculty of Natural and

Agricultural Sciences at the University of Pretoria was sought, and ethics approval was subsequently granted in January 2018 (reference code: EC1711128-165). Data collection yielded 482 responses of which 469 (97.3%) responses were useable and 13 (2.7%) were deemed incomplete and thus discarded. Obtaining representative data in emerging market contexts such as South Africa is often challenging due to the lack of sampling frames and the diverse composition of the population. For these reasons, a non-probable purposive sampling approach was used that exclusively focused on younger to middle-aged, female consumers because they are generally more willing to take part in socially responsible initiatives and may possibly act as early adopters of voluntary simplistic clothing consumption behaviour. They could also be prominent role players in households' overall clothing consumption practices and may encourage fellow household members to adopt more sustainable lifestyles.

Descriptive statistics, as well as a variety of inferential statistics, including exploratory factor analyses (EFA), confirmatory factor analyses (CFA), structural equation modelling (SEM) and cluster analyses (two-step and k-means) was performed on the data in order to extract new knowledge for this research. The eventual sample thus only included female consumers of whom the majority were between 21 and 39 (78.7%), White (77.4%) and had some sort of tertiary degree or diploma (78.5%). Almost half of the respondents (46.9%) indicated that they earn an approximate income of between R 5 001 ($ 345) and R 25 000 ($ 1720) per month and may therefore have more disposable income to spend on clothing compared to those in lower income groups (1 USD = 14.50 ZAR). In this regard it should be noted that the concept of voluntary simplicity with accompanying sustainable clothing consumption practices does not always carry the same weight throughout the various income and population groups due to factors such as evolving lifestyles, historical events and cultural differences. The local population groups have evolved substantially in terms of their lifestyles over the last 20 years due to political changes and empowerment (Bevan-Dye, Garnett & De Klerk, 2012; Kaus, 2013). Yet, it must be emphasized that the intention of this study was not to generalise the findings but rather to discover specific areas of interest that warrant further investigation and to create future research agendas.

1.7 DEFINITIONS OF TERMS AND CONCEPTS

Definitions of important concepts and terms used throughout the study are listed below for the sake of clarity and to increase the theoretical validity of the study.

TABLE 1.1: DEFINITIONS OF TERMS AND CONCEPTS

TERMS AND CONCEPTS		
TERM OR CONCEPT	**DEFINITION**	**REFERENCE**
Accidental simplifiers	People who may have been forced to become voluntary simplifiers because of factors such as poverty.	(McDonald, Oates, Young & Hwang, 2006; McGouran & Prothero, 2016)
Amotivation	Not being motivated to a specific behaviour at all.	(Darner, 2009; Deci & Ryan, 2002:17; Ryan & Deci, 2000a).
Apprentice simplifiers	People who are not necessarily always aware of all the benefits relating to eco-friendly products, but rely on product information to inform and guide them, thus gaining knowledge of more sustainable options and then deciding where to make use of these options.	(McDonald *et al.*, 2006)
Autonomy	The need to engage in activities out of own free will – it is important that the origin of behaviour should reside within the person itself.	(Darner, 2009; Deci & Ryan, 2002:8; Kasser, 2009; Pelletier, 2002; Ryan *et al.*, 2008)
Basic psychological needs	The reception of psychological nutriments (i.e. autonomy, competence, connectedness) that facilitate psychological growth, integrity and well-being.	(Deci & Ryan, 2000; Olafsen, Deci & Halvari, 2018; Weinstein & Ryan, 2010)
Competence	A basic psychological need that is accomplished when social behaviours of others are perceived to provide structure. This, in turn, provides consumers with a sense of control and an effective interaction with the environment, while producing the desired outcomes.	(Darner, 2009; Deci & Ryan, 2002:7; Kasser, 2009; Pelletier, 2002; Ryan *et al.*, 2008)
Connectedness / Relatedness	A basic psychological need that emerges when consumers perceive others as being interested or concerned about them. It essentially relates to a sense of belonging to a social group.	(Darner, 2009; Deci & Ryan, 2002:7; DeHaan & Ryan, 2014; Kasser, 2009; Pelletier, 2002)
Consumption	Actions involved in acquiring and using the product until the point where it is destroyed.	(McGregor, 1998)
Downshifters	People who choose to make minor changes in their lives in order to live a more simplistic lifestyle; their changes are often deemed inconsistent and limited in scope.	(Bekin *et al.*, 2005)
Ecological awareness	The interconnection of people and resources, and evolves around concepts such as resource conservation, pollution reduction, and protecting the environment for future generations.	(Elgin & Mitchell, 1978; McDonald *et al.*, 2006)
Eco-friendly clothing	Clothing that is produced with consideration of the production processes' environmental impact; it also implies replacing damaging chemicals and products with more sustainable options.	(Brosdahl & Carpenter, 2010; Joergens, 2006)
Eudaimonia	Living well or actualising the human potential that one possesses; it is a process of fulfilling one's daimon or true nature.	(Deci & Ryan, 2008; Ryan & Deci, 2001; Ryan *et al.*, 2008; Waterman, 1993)
External regulation	The least autonomous type of motivation and includes behaviour that is performed to either avoid punishment or receive a controlled reward.	(DeHaan & Ryan, 2014; McDonough & Crocker,

		2007; Olafsen *et al.*, 2018; Ryan *et al.*, 2008)
Extrinsic motivation	Motivated behaviours that are performed to gain an outcome that is not necessarily linked to the activity itself.	(Niemiec & Ryan, 2009; Olafsen *et al.*, 2018; Ryan & Deci, 2000a)
Green consumerism	A multi-faceted concept that includes the preservation of the environment, reducing the effects of pollution, responsible use of non-renewable resources, and overall preservation.	(Mostafa, 2007a)
Green purchase behaviour	Consuming products that are beneficial to the environment, that are recyclable or that are consumed bearing in mind the environmental and ethical concerns related with the product.	(Luck & Ginanti, 2009; Mostafa, 2007b)
Hedonism	The physical pleasures and comforts as well as emotional-cognitive pleasures that include social interactions or art.	(Huta & Ryan, 2010)
Holistic simplifiers	People who have adjusted their whole lives in order to live simply.	(Ballantine & Creery, 2010; Bekin *et al.*, 2005)
Human scale	The improvement of peoples' overall working and living environment as well as patronizing small, personal businesses as opposed to large cooperations.	(Shama, 1985)
Identified regulation	Falls under the self-determined side of extrinsic motivation and plays an important part in the transitional process from external regulation into self-regulation in the sense that a person identifies with the behaviour on a conscious level and personally endorses it; thus, leading to a high degree of perceived autonomy.	(Deci & Ryan, 2002:17; Ryan *et al.*, 2008)
Integrated regulation	Closely related to intrinsic motivation, however it remains extrinsic in the sense that it is executed to accomplish personal outcomes rather than inherent enjoyment.	(Deci & Ryan, 2002:18)
Intrinsic motivation	Motivated behaviours that are associated with the human need for competence and self-determination and that have been executed in the absence of external stimulus; often described as being enjoyable and interesting.	(Deci, 1975b; Deci & Ryan, 2002:17; Niemiec & Ryan, 2009; Ryan & Deci, 2000a)
Introjected regulation	An external regulation that has been internalised, but not to such an extent that it is perceived as one's own; thus, it is partially internalised, but not considered as part of the integrated self.	(Deci & Ryan, 2002:17; McDonough & Crocker, 2007)
Material simplicity	Non-consumption practices and/ or consuming fewer products.	(Elgin & Mitchell, 1978)
Non-voluntary simplifiers	People who have not adopted any sustainable consumption practices.	(McDonald *et al.*, 2006)
Personal growth	The discovering and development of inner life; it involves freeing oneself from any external aspects in one's life in order to grow psychologically.	(Elgin & Mitchell, 1978)
Pro-environmental clothing consumption	Clothing acquisition, storage, use, maintenance and disposal that is environmentally preferable, because of the intent to reduce and consume fewer resources.	(Hiller Connell, 2010; Joung & Park-Poaps, 2013; Wang, Liu & Qi, 2014)
Pro-environmental consumer behaviour	Behaviour that improves social and environmental performances, in addition to meeting consumers' needs.	(Wang *et al.*, 2014)
Reuse	Already-purchased products that are sold to others, exchanged for other things or just donated.	(Joung & Park-Poaps, 2013; Solomon & Rabolt, 2004:457-458)
Self-determination	The desire to have greater control over one's destiny and includes notions of self-sufficiency such as repairing or even constructing one's own clothes.	(McDonald *et al.*, 2006)
Self-determination Theory (SDT)	A theoretical perspective of human motivation that embraces the concept of eudaimonia as the basis of well-being and further emphasises actualisation of the self and how it can be accomplished.	(Ryan & Deci, 2001; Ryan *et al.*, 2008)
Self-determined motivation	Motivation that leads to behaviours originating from the consumer and that are not controlled by any external forces.	(Darner, 2009)
Simplicity	A conscientious attitude towards material consumables, which could include decreasing one's consumption, consciously consuming, having a more focused life and having a greater appreciation for other things.	(Gambrel & Cafaro, 2010)
Strong simplifiers	People who give up successful, yet stressful lifestyles to live a simpler life while restricting their consumption.	(Ballantine & Creery, 2010; Bekin *et al.*, 2005)
Sustainability	A collective term that encompasses everything related to the responsibility consumers have towards the world and includes economic, social and environmental issues, such as consuming efficiently, sharing	(McCann-Erikson, 2007)

	accordingly and protecting and preserving the environment for future generations.	
Sustainable consumer behaviour	The capability to continue behaving and living in a manner which does not damage natural resources or the environmental quality which all humans and future generations depend on.	(Bell & Morse, 2008:9-12)
Sympathizers	Consumers who sympathise with values that are associated with voluntary simplicity, but do not act on it, thus they do not participate in voluntary simplicity despite being aware of it.	(Elgin & Mitchell, 1978)
Upcycling	A form of recycling, in which material from used clothing items are reused without damaging its composition to create newly constructed creations.	(Fletcher & Grose, 2012:69; Taljaard, 2015)
Voluntary simplicity	A lifestyle that acts in service of both the goals of personal well-being and sustainable consumption. A way of life in which people choose to minimize their consumption to cultivate non-materialistic resources of satisfaction and meaning.	(Kasser, 2009; Zamwel *et al.*, 2014).
Well-being	A very broad term that is used to explain the positive aspects in which people experience life; it encapsulates concepts such as happiness, satisfaction and morale.	(Diener, 1984; Rich *et al.*, 2017)

1.8 SCHOLARLY CONTRIBUTIONS

Throughout the duration of this study, subsets of this research have been used to publish multiple outputs over the past few years. **Table 1.2** below indicates the details surrounding the published article, as well as the information surrounding the published conference proceedings.

TABLE 1.2: SCHOLARLY CONTRIBUTIONS RELATED TO THIS RESEARCH

SCHOLARLY CONTRIBUTIONS	TITLE	CITATION	REFERENCE
Published journal article	Basic Psychological needs and Self-Determined Motivation as Drivers of Voluntary Simplistic Clothing Consumption Practices in South Africa.	(Taljaard & Sonnenberg, 2019a)	Taljaard, H. & Sonnenberg, N. 2019. Basic Psychological Needs and Self-Determined Motivation as Drivers of Voluntary Simplistic Clothing Consumption Practices in South Africa. *Sustainability*, 11(13):3742.
Published conference proceedings	Consumers' voluntary simplistic clothing consumption practices in South Africa: A proposed conceptual framework.	(Taljaard & Sonnenberg, 2018)	Taljaard, H. & Sonnenberg, N. 2018. *Consumers' voluntary simplistic clothing consumption practices in South Africa: A proposed conceptual framework.* Paper presented at 13th International South African Association of Family Ecology and Consumer Science (SAAFECS) Conference, Pretoria, SA, 5-9 March 2018.
Published conference proceedings	The development of a scale for measuring voluntary simplistic clothing consumption in the South African emerging market context.	(Taljaard, Sonnenberg & Reis, 2018a)	Taljaard, H., Sonnenberg, N. & Reis, T. 2018. *The development of a scale for measuring voluntary simplistic clothing consumption in the South African emerging market context.* Paper presented at International Textile and Apparel Association (ITAA) Annual Conference: Re-Imagine the Re-Newable, Cleveland, Ohio, USA [Online] Available from: https://lib.dr.iastate.edu/itaa_proceedings/2018/presentations/46 [Accessed: 2019-05-29].
Published conference proceedings	A South African take on voluntary simplistic clothing consumption practices from an emerging market perspective.	(Taljaard & Sonnenberg, 2019c)	Taljaard, H. & Sonnenberg, N. 2019. *Voluntary simplistic clothing consumption practices: A South African market perspective.* Paper presented at Global Fashion Management Conference, Paris, France, 11-14 July 2019:277-282.

Published conference proceedings	The move towards voluntary simplistic clothing consumption practices to improve human well-being and quality of life.	(Taljaard & Sonnenberg, 2019b)	Taljaard, H. & Sonnenberg, N. 2019. *The move towards voluntary simplistic clothing consumption practices to improve human well-being and quality of life.* Paper presented at 3rd Garden Route Interface Meeting (GRIM). Science and management co-learning to navigate social-ecological issues, Pine Lake Marina, Sedgefield, SA, 17-19 September 2019:30-31.

1.9 PRESENTATION AND OUTLINE OF THE THESIS

CHAPTER ONE encapsulates the essence of this study by briefly discussing the background of the research subject that includes concept such as social and environmental issues, the clothing and textile industry, voluntary simplicity, the Self-Determination Theory (SDT) and South Africa as an emerging market. Furthermore, it introduces the research problem, the justification of the research, the overall objectives and hypotheses, methodology as well as the definitions of terms and concepts of the study. The subsequent chapters of this study are outlined and summarised below:

CHAPTER TWO offers an overview of the theoretical perspective, namely the Self-Determination Theory (SDT) as well as various concepts pertaining to the literature surrounding this study (i.e. voluntary simplicity). The holistic concept of well-being, together with its dimensions, hedonia and eudaimonia, are discussed, after which the SDT with its components, namely the three basic psychological needs (i.e. competence, autonomy, connectedness/relatedness) as well as the self-determination continuum, showing the regulations and motives in varying degrees of self-determination, are explained. Thereafter the concepts of sustainable consumption and voluntary simplicity are discussed in detail, including the motivations, dimensions and categories of voluntary simplicity. Lastly, a comprehensive presentation of the proposed conceptual framework and overall objectives are presented to illustrate the incorporation of the theoretical framework as well as concepts relating to the associated literature. Discussions pertaining to the proposed conceptual framework have been published in the conference proceedings of the 13th International South African Association of Family Ecology and Consumer Science (SAAFECS) Conference, as can be seen in **Addendum E**.

CHAPTER THREE showcases various components of the research methodology, namely the research design, the sample and sampling technique, the instrument development, the data collection process as well as a brief summary of the data analysis that will be performed on the gathered dataset of 469 respondents. The inclusion of an operationalisation table at this point in

time is crucial to summarise the objectives, constructs relating to the literature and theoretical framework, measuring instruments, items and analysis, as well as showcase the study in the form of a summative table before commencing to the results section of the thesis. Lastly measures employed to ensure overall quality of data concludes the chapter.

CHAPTER FOUR includes the results, interpretations and findings of the study. The demographic information is based on a sample size of 469 female consumers between the ages of 21 and 65 who live in South Africa. A summary of all the demographic characteristics will be presented in this chapter together with a table indicating the numerical data such as frequencies and percentages to present the results using descriptive statistics. Thereafter the results pertaining to the respondents' current involvement and experience with regards to sustainable clothing practices will be discussed and presented in the form of graphs. These results were presented in the conference proceedings of the Global Fashion Management Conference (GFMC), as can be seen in **Addendum G**.

Lastly Exploratory Factor Analyses (EFA), Confirmatory Factor Analyses (CFA), Cronbach's Alphas, Average Variance Extracted (AVE), correlations and a Structural Equation model (SEM) will be used to interpret the results and indicate which basic psychological needs and self-determined motivations lead to the female respondents' VSCCP. Results and discussions pertaining to the EFA and CFA have been published in the conference proceedings of the International Textile and Apparel Association (ITAA) Annual Conference, as can be seen in **Addendum F.** Additionally, the results and discussions pertaining to the SEM analysis have been published in the Journal of Sustainability, as can be seen in **Addendum D**. Lastly, the results pertaining to the cluster analyses (two-step and k-means) will be illustrated and discussed to determine whether the female respondents that participated in this study are full, partial or non-voluntary simplifiers.

CHAPTER FIVE is the concluding chapter of this thesis, and contains the deductions and summaries derived from the main findings of this study. In addition to that, the implications for the industry and policy formulation are discussed, as well as the theoretical implications that are linked to this study. Lastly, the limitations and future recommendations are highlighted. An overarching perspective of this study, namely "the move towards voluntary simplistic clothing consumption practices to improve human well-being and quality of life" was presented at the 3rd Garden Route Interface Meeting (GRIM) where science and management co-learning to navigate social-ecological issues, were key topics. This conference proceeding can be seen in **Addendum H**.

1.10 CONCLUSION

Chapter one offered an overview of the study, by providing the necessary background information relating to the topic of interest. Thereafter the research problem and theoretical framework was stated as well as the justification to validate why the research is deemed significant. Furthermore, the methodology was included to provide a short overview of how the data was collected and analysed, and lastly definitions were stated to familiarise the reader with relevant concepts that occur in the study.

CHAPTER 2: THEORETICAL PERSPECTIVE AND REVIEW OF LITERATURE

Chapter two provides an overview of the theoretical perspective together with the literature relating to the various research objectives and hypotheses. In addition to that, the proposed conceptual framework with the associated objectives are also presented and explained as a concluding summary of the chapter.

2.1 INTRODUCTION

Considering the brief overview of the study in Chapter one, Chapter two elaborates on the concepts relating to the theoretical perspective as well as various concepts pertaining to the literature surrounding this study. Firstly, well-being, hedonia and eudaimonia are clarified. Thereafter the Self-Determination Theory (SDT), with all its components, is introduced and explained. These components include the three basic psychological needs (i.e. competence, autonomy, connectedness/relatedness) as well as the self-determination continuum, showing the regulations and motives in varying degrees of self-determination regulations (i.e. identified regulation, integrated regulation, intrinsic motivation). The voluntary simplistic and sustainable outcomes of self-determined motivation conclude the section pertaining to the theoretical perspective, before commencing with the review of literature. Special attention will be given to the overall concept and understanding of the term sustainable consumption, voluntary simplicity and gender differences. More specifically, the motivations, dimensions and categories of voluntary simplicity will be discussed in detail. Furthermore, the proposed conceptual framework and overall objectives of this study will be presented to illustrate the incorporation of the theoretical framework as well as concepts relating to the associated literature. Theoretical validity is thus ensured by means of showcasing the literature and theoretical framework relating to this study and creates an understanding of the basic psychological needs and self-determined motivation as antecedents of female consumers' voluntary simplistic clothing consumption practices in an emerging market context such as South Africa.

To put this chapter into context and consolidate all the main concepts that form part of this chapter, it is important to explain how well-being and sustainability relate to each other. Firstly, well-being

is often interpreted as the satisfaction of human beings' preferences; the more these preferences are satisfied, the greater their well-being becomes. It is a very complex concept and includes, but is not limited to freedom, experience of nature, health, education, freedom, autonomy, and recreation (Neumayer, 2004). Secondly, sustainability presents similar challenges in terms of its depth and complexity, but could broadly be described as a collective term that encompasses everything related to the responsibility of consumers towards the world; this includes economic, social and environmental issues such as efficient consumption, economic development, human well-being and protecting and preserving the environment for future generations (Bandarage, 2013; McCann-Erikson, 2007). It could furthermore be explained as meeting the needs of the current generations without compromising future generations and their needs (Kjell, 2011).

From the above discussions surrounding the concepts of well-being and sustainability, it is clear that these two concepts have connecting focus areas to some degree and could be linked to ultimately enhance each other and jointly form part of policy making in the present as well as in the future. Well-being could assist in the clarification of sustainability aims and provide insight and guidelines to facilitate and improve the sustainability process. Some researchers have described this relation as a sustainability goal in which the pursuit of present and future generations' happiness comes to the forefront (Kajikawa, Ohno, Takeda, Matsushima & Komiyama, 2007; Kjell, 2011). That said, happiness could either enhance sustainability or be the cause of many unsustainable behaviours and lifestyles, depending on the philosophical approaches of well-being and happiness (eudaimonia and hedonia), which will be discussed in further detail below.

2.2 WELL-BEING, HEDONIA AND EUDAIMONIA

Well-being is a very broad term that is used to explain the positive aspects in which people experience life and it encapsulates concepts such as happiness, satisfaction and morale (Diener, 1984; Rich *et al.*, 2017). Well-being is centred on an ideal psychological state that may relate to two opposing views of human nature namely hedonism and eudaimonism (Deci & Ryan, 2008). *Hedonism* includes physical pleasures and comforts as well as emotional-cognitive pleasures that include social interactions or art (Huta & Ryan, 2010) and is closely related to the concept of subjective well-being (Kjell, 2011). From a subjective perspective, well-being can be defined as a concept where people decide for themselves to what extent they experience a sense of wellness (Deci & Ryan, 2008) and this term has often been associated with the concept of "happiness" or

"pleasure" that links it back to hedonism (Deci & Ryan, 2008; Hansen, 2015; Ryan & Deci, 2001; Ryan *et al.*, 2008). Hedonism is furthermore associated with high levels of positive affect, low levels of negative affect, and high degrees of satisfaction in the short-run, whereas eudaimonism encompasses long-term perspective (Boujbel & d'Astous, 2012; Deci & Ryan, 2008; Diener, 1984; Ryan & Deci, 2001). This could be explained by means of overconsumption of clothing, where consumers purchase the newest trends on a regular basis because it makes them feel good and creates a sense of pleasure, however it is short-lived, because sooner or later the next trends appear in retail stores and the "old" clothes become obsolete, encouraging disposability and increased materialism. Though pleasure might be derived from short term outcomes and wellness in the forms of selfishness, materialism and ecological destructiveness, it cannot be described as eudaimonic.

Eudaimonia can be defined as living well or actualising the human potential that one possesses; it is a process of fulfilling one's daimon or true nature (Deci & Ryan, 2008; Ryan & Deci, 2001; Ryan *et al.*, 2008; Waterman, 1993). Eudaimonia includes acts of kindness or gratitude, as well as developing one's potential (Huta & Ryan, 2010). Outcomes resulting from living well include vitality, health as well as a sense of meaning and community (Hansen, 2015; Ryan *et al.*, 2008). Essentially, it is a lifestyle and emphasizes the content and processes involved in living well, rather than specific outcomes such as in the case of hedonism (Ryan *et al.*, 2008). In terms of sustainable clothing and voluntary simplistic lifestyles, eudaimonia could include concepts such as reducing the amount of clothing one consumes to ultimately reduce the disposal of it for the sake of preserving the environment for future generations, or recycling and donating clothing items rather than disposing of it, to positively contribute towards providing a basic need, such as clothing, to communities who might not have the means to acquire it as an act of kindness and care. The concept of eudaimonia can be traced back to Aristotle, who defined it as the active, yet voluntary pursuit of virtues and excellences, which are intrinsically valued, in order to engage one's best human capacities rather than pursuing wealth, power or materialism (Ryan *et al.*, 2008). Research has in fact established that consumers who have intrinsic goals for meaningful relationships or personal growth tend to display psychological well-being as an indicator of eudaimonia (Deci & Ryan, 2008; Ryan *et al.*, 2008). Psychological well-being is associated with six aspects of human actualisation, namely autonomy, personal growth, self-acceptance, life purpose, environmental mastery and positive relatedness (Ryan & Deci, 2001; Ryan *et al.*, 2008; Ryff & Keyes, 1995; Ryff & Singer, 1998; Seegebarth *et al.*, 2016). These aspects are classified as indicators of a life lived well rather than a measure of eudaimonic living (Ryan *et al.*, 2008). With that being said, Huta and Ryan (2006) indicated that the concepts of psychological well-being (as indicated in Ryff and Singer (1998)) including striving to be the best person one can be, development of a person's

potential and having some sort of concern for the greater good are positively related to the measures of eudaimonia (Ryan *et al.*, 2008).

Waterman (1993) stated: “If a person experiences eudaimonic living, he or she will necessarily also experience hedonic enjoyment; however, not all hedonic enjoyment is derived from eudaimonic living”. Researchers mostly agree that these two concept are correlated and do overlap (Deci & Ryan, 2008; Ryan & Deci, 2001). Well-being can be described as including aspects of both hedonism and eudaimonia (Ryan & Deci, 2001; Ryan *et al.*, 2008). However, research has also indicated that eudaimonia emphasises the content of a person’s life and the processes involved in living well, while hedonism emphasises the outcome, such as the positive affect or lack thereof (Ryan *et al.*, 2008).

Autonomy, in particular, is a concept that refers to having the experience of choice and making the right choices (such as opting for voluntary simplistic lifestyles), and is closely related to eudaimonia (Deci & Ryan, 2008). Therefore, Ryan *et al.* (2008) made use of the self-determination theory (SDT) as the basis for presenting a model of eudaimonia. Ryan *et al.* (2008) further argued that eudaimonic living can be characterised by four motivational concepts, namely pursuing intrinsic goals rather than external goals, behaving autonomously, being mindful and aware and behaving in ways that satisfy basic psychological needs for competence, autonomy and connectedness/relatedness. These aspects are captured in the Self-Determination Theory, which served as an appropriate theoretical basis for this study.

2.3 SELF-DETERMINATION THEORY

Various researchers have developed theoretical perspectives to better understand how consumers can achieve a more sustainable lifestyle (Gardner & Stern, 1996; Geller, Winett, Everett & Winkler, 1982), but one particular theoretical perspective of human motivation has been in the spotlight in the last few years, namely Deci and Ryan’s (1985) Self-Determination Theory (SDT). The SDT embraces the concept of eudaimonia as the basis of well-being and further emphasises actualisation of the self and how it can be accomplished (Ryan & Deci, 2001; Ryan *et al.*, 2008). It furthermore theorises that humans are active in their pursuit of behaviours to such an extent that these behaviours will lead to desired goals or outcomes (Deci & Ryan, 1985b; Jantarat & Shannon, 2016).

Before applying the SDT (Deci & Ryan, 1985b) in the context of this study, an overview must be given of the underlying assumptions of this theory as initially proposed by Deci and Ryan (1980). According to Deci and Ryan (1980), there are two types of motivated behaviours relating to the SDT, namely self-determined behaviours, that are chosen based on conscious information-processing in the service of intrinsic and extrinsic needs, and automated behaviours or "mindless" behaviours that require much less involvement and are not consciously chosen. Therefore, it can be deducted that self-determined behaviours indicate a strong relationship between the mind and the behaviour. Based on the afore-mentioned, elements from self-determined behaviour appear as the dominant, horizontal insertion in **Figure 2.1** below.

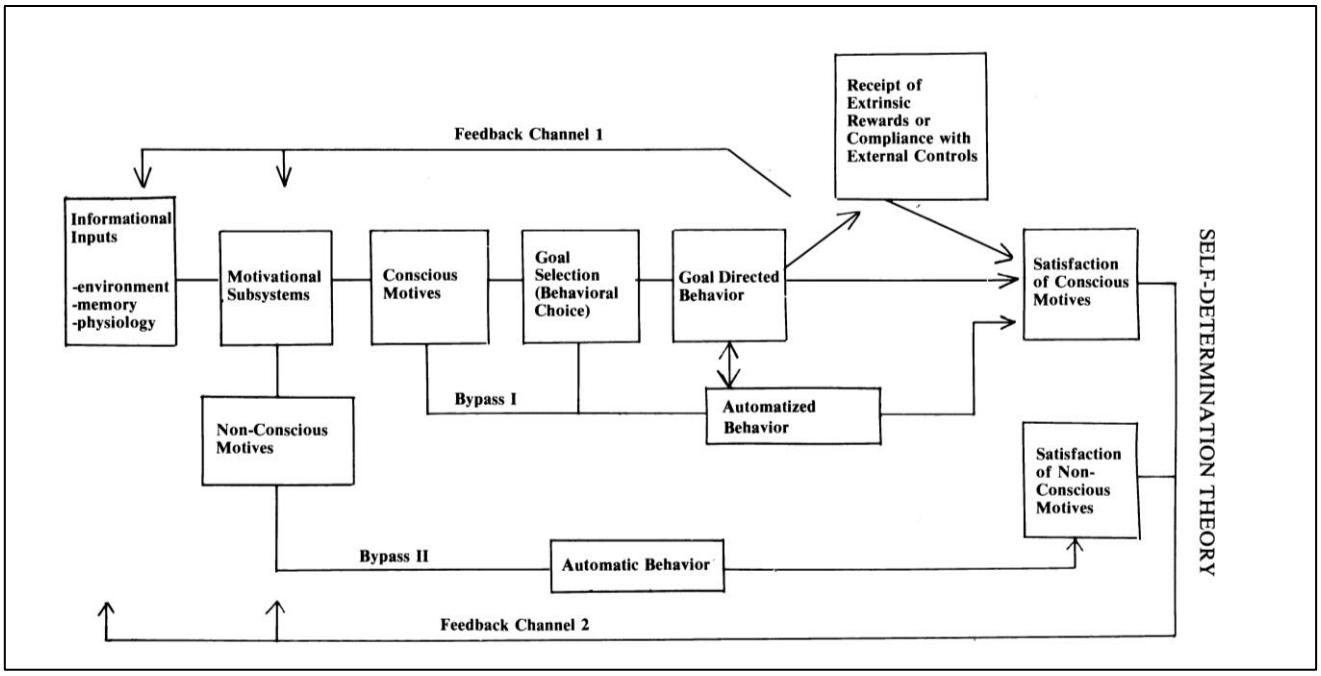


FIGURE 2.1: SCHEMATIC REPRESENTATION OF SOME ELEMENTS OF THE SELF-DETERMIATION THEORY (Deci & Ryan, 1980)

According to Deci and Ryan (1980), self-determined behaviour is initiated by informational inputs from the environment as well as from the person itself, such as memory of physiology of a person; often characterised in terms of personality and motivation. The information that is retrieved from the environment is based on the person's relevant needs, and together with the inputs from the person, the informational inputs that initiate behaviour might enter conscious awareness, also known as conscious motives (Deci & Ryan, 1980). Intrinsic or self-determined motivation powers the decision-making process and facilitates the management of motives which often leads to the selection and engagement of many chosen behaviours, which will produce the desired satisfaction

of these conscious motives (Deci, 1975a; Deci & Ryan, 1980). Thereafter, the chosen behaviours and communications provide feedback in the form of experience which makes the person feel more competent when performing future motivated behaviours (Deci & Ryan, 2002:12).

Deci and Ryan (1985b) later proposed that the SDT comprises of motives (i.e. regulations) that form part of a self-determination continuum, and indicates psychological conditions (i.e. nutriments) that are accountable for motivational development (Ryan & Deci, 2000a). Furthermore, the social contexts in which the behaviours take place satisfy the basic psychological needs (i.e. competence, autonomy, connectedness/relatedness) that, in turn cultivates the development of more self-determined regulations, to enhance the persistence and ultimately the psychological well-being of the person performing the task (Ryan & Deci, 2000a; Wilson, Rodgers, Blanchard & Gessell, 2003).

Furthermore, Vallerand and Losier (1999) suggested a motivational sequence, originally based on the SDT (as seen in **Figure 2.2**), in which one's social context leads to the fulfilment of basic psychological needs, which in turn, influences one's motivation, that ultimately predicts one's cognitive, affective and behavioural consequence (McDonough & Crocker, 2007; Vallerand, 2000).

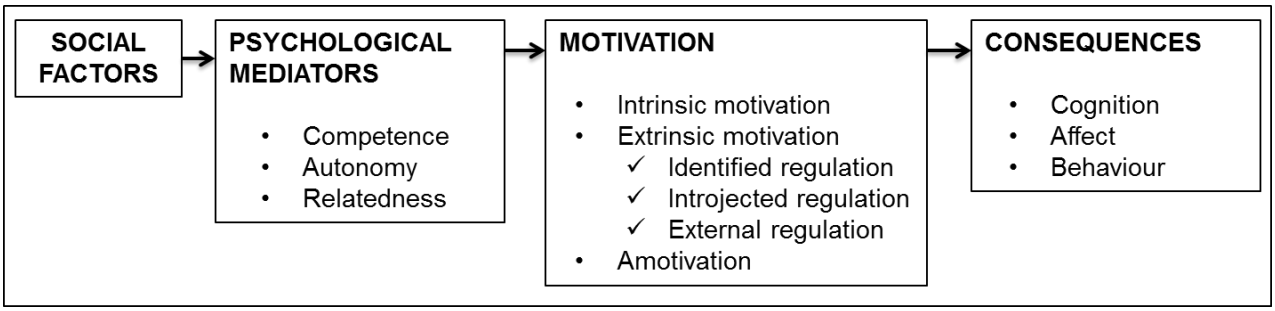


FIGURE 2.2: MOTIVATIONAL SEQUENCE BASED ON THE SELF-DETERMINATION THEORY (Vallerand & Losier, 1999)

From the above mentioned, it is evident that the SDT has been interpreted and explained in various manners, by various researchers in terms of many different contexts, but throughout the discussions, there are clearly a few cardinal concepts that remain crucial to the Self-Determination theory and that form the skeleton of this theory. Majority of these concepts are closely related to eudaimonia and voluntary simplistic ways of living where people strive to be the best person they can be by fulfilling their basic psychological needs and enhancing their self-determined motivation to live a simplistic life filled with the desire to continually develop their potential and strive to

preserve the natural resources while benefitting communities around them. These cardinal concepts will be discussed in further detail and incorporated as part of the objectives, hypotheses and conceptual framework of this study.

2.3.1 Basic psychological needs – social and contextual influences on motivation

Basic psychological needs can be described as the reception of psychological nutriments that facilitate psychological growth, integrity and well-being, while motivation, which will be discussed later in the chapter, can be described as the quality of experience that energises behaviour (Deci & Ryan, 2000; Olafsen *et al.*, 2018; Weinstein & Ryan, 2010). Studies have indicated that little attention is given to motivation as a direct influence on behaviour. Based on the underlying assumptions of the SDT, consumers are motivated if the frequency or intensity of their behaviours such as particular sustainable clothing consumption practices, are elevated in the presence of certain social/ contextual factors (Pelletier, 2002). In addition, the degree to which motivated actions are self-determined would depend on three psychological needs, namely competence, autonomy and connectedness/ relatedness (as seen in **Figure 2.3**) (Darner, 2009; Deci & Ryan, 1985b; Pelletier, 2002). Furthermore, the SDT states that well-being is enhanced when a person's behaviours satisfy their basic psychological needs (Ryan & Deci, 2000b; Weinstein & Ryan, 2010). The basic psychological needs will be discussed in further detail below to gain a better understanding of the concepts that form part of this study.

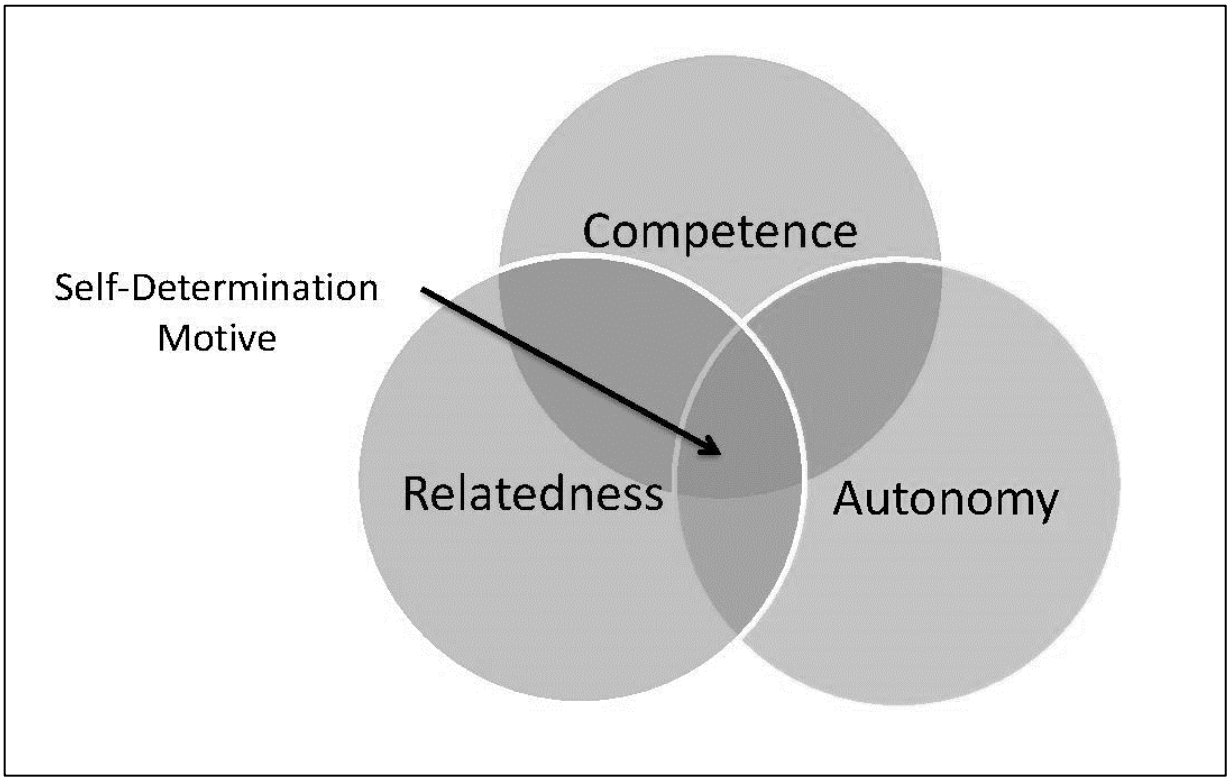


FIGURE 2.3: FULFILMENT OF BASIC PSYCHOLOGICAL NEEDS GENERATES SELF-DETERMINATION MOTIVES (Deci & Ryan, 2000)

Competence is accomplished when social behaviours of others are perceived to provide structure. This, in turn, provides consumers with a sense of control and an effective interaction with the environment, while producing the desired outcomes (Darner, 2009; Deci & Ryan, 2002:7; Kasser, 2009; Pelletier, 2002; Ryan *et al.*, 2008). The need for competence encourages consumers to challenge themselves and to continuously attempt to maintain and enhance their skills through new activities (Deci & Ryan, 2002:7). This could be a challenging need to satisfy when consumers try new activities (such as consuming clothing in a voluntary simplistic manner) and the behaviours of others cannot provide the desired structure (Kasser, 2009). Once consumers overcome these obstacles and learn to voluntarily engage in the simplified, alternative behaviours/ practices, they might experience more competence (Kasser, 2009). It is thus crucial to assist consumers in overcoming feelings of incompetence in order for them to persevere with newfound behaviour. In the end, competence is based on the sense of confidence in oneself (Deci & Ryan, 2002:7; DeHaan & Ryan, 2014).

Autonomy is described as the need to engage in activities out of own free will – it is important that the origin of behaviour should reside within the consumer (Darner, 2009; Deci & Ryan, 2002:8; Kasser, 2009; Pelletier, 2002; Ryan *et al.*, 2008). Research has indicated that consumers who act

based on autonomous reasons rather than controlled reasons have more persistence and higher levels of well-being because of their need to be self-directed (DeHaan & Ryan, 2014; Kasser, 2009; Pelletier, 2002). Consumers who engage in voluntary simplicity and accompanying sustainable clothing consumption practices out of their own free will, will be more inclined to persist in their pursuits to live such a lifestyle and may experience higher levels of well-being, because the change was made on a voluntary basis and not because of external influences. Mindfulness and awareness are also recognized as important concepts linked to autonomy; so much so that mindful consumers tend to be less materialistic, embrace more intrinsic values and therefore experience less divergence between what they have and what they want (Brown & Ryan, 2003; Ryan *et al.*, 2008).

Lastly, *connectedness or relatedness* emerges when consumers perceive others as being interested or concerned about them (Deci & Ryan, 2002:7; DeHaan & Ryan, 2014; Pelletier, 2002). Connectedness essentially relates to a sense of belonging to a social group (Darner, 2009; Kasser, 2009). If consumers feel part of a group that incorporates voluntary simplistic principles into their clothing consumption, they might feel more connected and thus be more motivated to continue such behaviours because their newfound lifestyles and behaviour are more relatable to others who follow similar lifestyles.

To summarise, the need of autonomy is achieved once the consumer is able to make his or her own decisions (Darner, 2009), such as deciding to embrace a life of voluntary simplicity. Furthermore, autonomy and a feeling of connection with others is present when a person willingly gives to others or acts in the interest of the larger community (Ryan *et al.*, 2008). This act, in turn, is linked to a sense of competence, because consumers are therefore able to help and do their part for the environment and society (Ryan *et al.*, 2008). Competence can be satisfied when consumers are placed in a challenging situation (such as purchasing eco-friendly or locally sourced clothing as part of voluntary simplistic clothing consumption practices) which requires them to enhance their existing skills to solve a problem (Darner, 2009). Lastly, consumers can satisfy the need of connectedness or relatedness by feeling content with their intentional efforts and feeling accepted in their surrounding social groups. When all three needs (competence, autonomy and connectedness/relatedness) are met, consumers' motivation will be enhanced and it will lead to increased self-determination (Darner, 2009; Pelletier, 2002; Rich *et al.*, 2017; Ryan *et al.*, 2008; Vallerand, 2000). Theories linked to the SDT also indicate that the fulfilment of these three needs is crucial for psychological growth, such as intrinsic motivation, integrity such as internalisation, well-being such as life satisfaction, and the experience of vitality and self-congruence (Deci & Ryan, 2000; Ryan & Deci, 2001; Ryan *et al.*, 2008).

2.3.2 Motivations that underscore the SDT

In terms of eudaimonia, as discussed above, the SDT has a number of other assumptions that could enable researchers to better understand phenomena such as voluntary simplistic living. This includes the concept of self-determined motivation that could either obstruct or facilitate a consumer's engagement in sustainable practices. Studies have indicated that the frequency and variety of sustainable behaviour correlates with self-determined motivation. The more behaviour becomes externally regulated, the less frequent consumers will engage in them (Darner, 2009; Green-Demers, Pelletier & Ménard, 1997; Pelletier *et al.*, 1998). However, consumers who possess self-determined motivation towards sustainable behaviours such as sustainable clothing practices, tend to perform those behaviours despite varying difficulties of those behaviours (Darner, 2009; Green-Demers *et al.*, 1997).

Earlier research indicated that consumers who consumed sustainably were motivated by their concern for the environment and related social issues (Stern, Dietz & Guagnano, 1995), but recent studies indicated the relatedness between voluntary simplistic consumption and the formation and/or reinforcement of the self (Black & Cherrier, 2010; Connolly & Prothero, 2008). Furthermore, research on consumer behaviours such as voluntary simplicity and non-materialism, identify a link between concepts of reduced consumption and subjective happiness and well-being (Cherrier, 2009; Hansen, 2015). Bly, Gwozdz and Reisch (2015) found that sustainable fashion is a source of pleasure and well-being and that sustainable consumption provided a sense of personal growth, well-being and experiential pleasure.

Pro-environmental behaviour is generally not intrinsically motivated (Darner, 2009; Osbaldiston & Sheldon, 2003). Consumers tend to perform certain behaviours because it leads to positive social relationships and this socialisation occurs through a process called internalisation (Darner, 2009; Niemiec & Ryan, 2009; Ryan & Deci, 2000a). The more external behaviours are internalised, the more consumers become autonomous and tend to self-regulate their own behaviour (Darner, 2009; Deci & Ryan, 2002:15). From these self-regulated and those that are regulated by outside forces, a continuum occurs which popularised the SDT's classifications of motivation (as seen in Figure 2.4 below), ranging from intrinsic motivation (often also referred to as autonomous motivation), to extrinsic motivation and then amotivation (the former and the latter often also referred to as controlled motivation) (Darner, 2009; Deci & Ryan, 2000; Deci & Ryan, 2002:15; Ryan & Deci, 2000a; Ryan *et al.*, 2008). The five classifications on this continuum, excluding amotivation, are all related to motivated behaviour and each of them describes a distinct type of

regulation (DeHaan & Ryan, 2014). The different types of motivation will be discussed in further detail below.

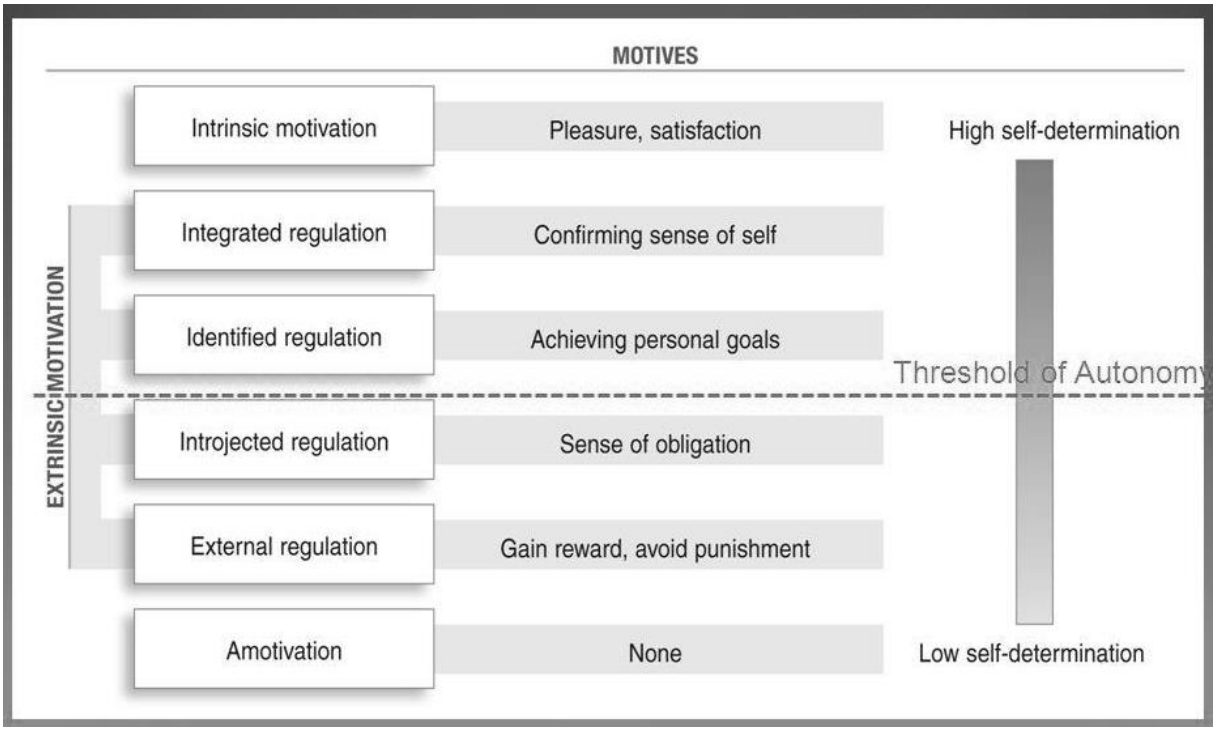


FIGURE 2.4: THE SELF-DETERMINATION CONTINUUM, SHOWING THE REGULATIONS AND MOTIVES IN VARYING DEGREES OF SELF-DETERMINATION (Deci & Ryan, 1985b)

As early as 1975, Deci describes intrinsically motivated behaviours as those that are associated with the human need for competence and self-determination. It can also be explained as behaviours that have been executed in the absence of external stimulus and that are described as being enjoyable and interesting (Deci, 1975b; Deci & Ryan, 2002:17; Niemiec & Ryan, 2009; Ryan & Deci, 2000a). Intrinsically motivated behaviours are experienced as originating from the self rather than from external sources such as pressures or rewards and feelings of curiosity (Deci & Ryan, 1985b; Niemiec & Ryan, 2009; Ryan & Deci, 2000a). When it comes to intrinsic motivation, consumers are not solely concerned with independent outcomes when engaging in an activity or even performing well, but rather engage in activities due to interest and enjoyment (Olafsen *et al.*, 2018). Consumers might be intrinsically motivated to purchase, use and dispose of their clothing in sustainable manners because they enjoy contributing towards a better society that is mindful about the impact they have on the environment and others around them, rather than engaging in these activities because of social pressures or guilt. Kasser and Ryan (1993), Kasser and Ryan (1996) and Kasser (2002) initially explored the differences between intrinsic and extrinsic aspirations and subsequently examined seven life goals of which four of them represent

intrinsic goals, namely personal growth, affiliation and intimacy, community engagement and physical health. The three remaining goals were classified as extrinsic and included wealth and material possessions, social recognition and fame, and image (Kasser & Ryan, 1996). In general, intrinsic goal fulfilment is beneficial for well-being and extrinsic goal fulfilment is mostly unrelated to psychological health (Ryan *et al.*, 2008).

The remaining types of regulation fall along the self-determination continuum between intrinsic motivation and amotivation, and can be classified as extrinsic motivation (Deci & Ryan, 2002:17). Extrinsic motivation can be described as behaviours that are performed to gain an outcome that is not necessarily linked to the activity itself (Niemiec & Ryan, 2009; Olafsen *et al.*, 2018; Ryan & Deci, 2000a). The SDT specifies four types of extrinsic motivation based on the degree of autonomy, namely integrated regulation, identified regulation, introjected regulation and external regulation (Deci & Ryan, 2002:17; Pelletier, 2002; Ryan & Deci, 2000a). The most autonomous type of extrinsic motivation is integrated regulation (Deci & Ryan, 2002:18; Ryan *et al.*, 2008). Extrinsically motivated behaviours that are integrated tend to be associated with more positive experiences compared to the less internalised types of extrinsic motivation (Deci & Ryan, 2002:18; DeHaan & Ryan, 2014). This type of regulation is closely related to intrinsic motivation, however it remains extrinsic in the sense that it is executed to accomplish personal outcomes rather than inherent enjoyment (Deci & Ryan, 2002:18). This type of motivation might be evident in consumers who recycle their clothing by donating it to charities; they perceive the action of recycling it as a positive experience and continue doing so to accomplish some sort of personal outcome rather than genuinely enjoying the notion of donating clothing to others in need. Close to the integrated regulation, is the identified regulation that also falls under the self-determined side of extrinsic motivation (Deci & Ryan, 2002:17; Ryan *et al.*, 2008). Identification plays an important part in the transitional process from external regulation into self-regulation in the sense that a person identifies with the behaviour on a conscious level and personally endorses it; thus leading to a high degree of perceived autonomy (Deci & Ryan, 2002:17; DeHaan & Ryan, 2014). These types of behaviours are executed because consumers perceive their behaviours of personal value and importance (Olafsen *et al.*, 2018). Consumers might be motivated to take part in sustainable clothing practices because it is the sensible thing to do to improve their lives, rather than finding it rewarding or pleasurable.

Introjected regulation can be described as an external regulation that has been internalised, but not to such an extent that it is perceived as one's own (Deci & Ryan, 2002:17; McDonough & Crocker, 2007). Thus, it is partially internalised, but not considered as part of the integrated self. These types of behaviours are often executed to evade feelings of guilt or shame or to boost the

ego and is self-esteem-related (DeHaan & Ryan, 2014; Olafsen *et al.*, 2018). In terms of living a more sustainable life, consumers might be motivated to do so, because they feel a sense of obligation as a human being to try and decrease the harmful impact that humans have on the environment. Furthermore, consumers might only be motivated to reduce their clothing consumption, or purchase more sustainable clothing options because they want to avoid any feelings of guilt. External regulation is classified as the least autonomous type of motivation and includes behaviour that is performed to either avoid punishment or receive a controlled reward (DeHaan & Ryan, 2014; McDonough & Crocker, 2007; Olafsen *et al.*, 2018; Ryan *et al.*, 2008). Consumers who are motivated through external regulation would only participate in sustainable clothing practices if they could gain some reward or avoid punishment for not doing, contradicting the notion of a voluntary simplistic lifestyle. Lastly, amotivation can be described as consumers that are not motivated to a specific behaviour at all (Darner, 2009; Deci & Ryan, 2002:17; Ryan & Deci, 2000a). People who are deemed amotivated, either do not act at all or act in a passive manner with no intention of actually doing what they are supposed to do (Deci & Ryan, 2002:17; McDonough & Crocker, 2007). Amotivation is a result of not believing that one can produce the desired outcome or not feeling competent to do so (Deci & Ryan, 2002:17; Ryan & Deci, 2000a).

To simplify the aforementioned classification, motivations have been re-grouped to form a global score of *self-determined or autonomous motivation* (combining intrinsic, integrated and identified regulation), and *non-self-determined motivation* (combining introjected, external regulation and amotivation) (Pelletier, 2002). Of importance is the fact that self-determined motivation leads to behaviours originating from the consumer and not controlled by any external forces (Darner, 2009). In this regard, higher psychological well-being and increased behavioural persistence is often connected to self-determined motivation (Ryan *et al.*, 2008) and is therefore imperative in the promotion of voluntary simplistic clothing consumption lifestyles.

Empirical research has been conducted to relate different types of motivations, as proposed by the SDT, to different types of outcomes (Pelletier, 2002) of which one will be discussed below.

2.3.3 Voluntary simplistic and sustainable outcomes of self-determined motivation

Pelletier (2002) explored how the different types of motivation relates to certain voluntary simplistic and sustainable behaviours such as recycling and purchasing specific products that are eco-friendly. Furthermore, they have investigated how self-determination is related to behaviours with varying levels of difficulty, as well as behaviours where barriers might have been eliminated or made more easily accessible. Lastly research has also been conducted with regards to the

influence of self-determination on consumers' pro-active behaviours such as searching for information relating to negative environmental and social issues, products or alternatives in order to educate themselves about voluntary simplistic practices (Pelletier, 2002).

Research has indicated that high levels of self-determination towards the environment results in higher levels of such behaviour (Green-Demers *et al.*, 1997; Pelletier, 2002; Pelletier *et al.*, 1998). Furthermore, Sheldon and McGregor (2000) indicated that people with intrinsic goals, that form part of self-determined motives, tend to consume less and were more likely to nurture a more simplistic, sustainable environment (Ryan *et al.*, 2008). Therefore, it can be assumed that consumers with high levels of self-determined motivation will act in a voluntary simplistic manner when it comes to clothing consumption. It can also be assumed that eudaimonic consumers, who pursue worthwhile goals and are mindfully self-regulated, tend to be more socially responsible (Ryan *et al.*, 2008). This statement is emphasised by the findings of Brown and Kasser (2005) who indicated that people who embrace the extrinsic goals of materialism tend to consume more and negatively impact the environment (Ryan *et al.*, 2008). In addition to that, it was observed that the frequency of voluntary simplistic behaviours increased as the level of self-determination increased; and the frequency of behaviours decreased as the level of behavioural difficulty increased (Green-Demers *et al.*, 1997; Pelletier, 2002). In conclusion, consumers who act in a sustainable manner for self-determined reasons tend to behave accordingly at more frequent intervals and persevere in maintaining the behaviour. As the voluntary simplistic behaviours become more integrated in a consumer's lifestyle, its perceived difficulty decreases (Pelletier, 2002).

The above-mentioned studies attest to the notion that eudaimonic living might be good for people as they tend to show more concern and take more responsibility for their actions. This type of living would be beneficial to consumers who consume large amounts of clothing without thinking about the consequences and the effect it might have on the environment. Consumers who adopt a eudaimonic lifestyle could minimise the effect they have on the environment by committing to sustainable consumption and voluntary simplistic lifestyles, specifically with regards to their clothing consumption practices. These two concepts are core concepts that form part of the research and warrant a more in-depth discussion. Thus, sustainable consumption, with all its variations, and voluntary simplicity (in terms of motivations, dimensions and categories) will be discussed below.

2.4 SUSTAINABLE CONSUMPTION

Consumption in terms of products such as clothing can be explained as the actions involved in acquiring and using the product until the point where it is destroyed (Norum, 2013). When consumption is viewed from a global perspective, consumers tend to become more concerned with the impact of their consumption patterns on the environment, as well as on future generations (McGregor, 1998). This notion of viewing consumption from a global perspective is related to the term, sustainability, that can be described as a collective term that encompasses everything related to the responsibility consumers have towards the world and includes economic, social and environmental issues, such as consuming efficiently, sharing accordingly and protecting and preserving the environment for future generations (McCann-Erikson, 2007). It can also be seen as efficiently producing products that are consumed by "green and ethical" consumers that are concerned about the environment (Seyfang, 2009). Furthermore, it could be interpreted as making use of materials that can be reused or recycled to produce garments (McDonough & Braungart, 2002). Collectively, sustainable consumption has become a familiar concept that encompasses all the descriptions mentioned above and provides consumers with a deeper understanding of well-being. The two main issues relating to concepts such as sustainable consumption include consuming differently (i.e. purchase eco-friendly clothing or ethically produced clothing) or consuming less (Balderjahn, Buerke, Kirchgeorg, Peyer, Seegebarth & Wiedmann, 2013; Peyer, Balderjahn, Seegebarth & Klemm, 2017). Furthermore, adopting a global perspective of sustainable consumption is a necessary step towards living a more sustainable lifestyle where the consequences of one's actions are re-considered for the benefit of the environment, the society as well as future generations (McGregor, 1998).

Together with concepts such as sustainable consumption, terms relating to sustainability and pro-environmental behaviour are abundant in research literature (Fashion Revolution, 2018). It includes, but is not limited to concepts such as sustainable consumer behaviour, pro-environmental consumer behaviour, green consumerism, green purchase behaviour and more specific to this study, pro-environmental clothing consumption and voluntary simplicity. The reason for the inclusion of this section into the literature review is to comprehend the complexity of the field of interest and to take note of the various manners in which this topic can be described or explained. Bearing in mind that all these varying concepts, as mentioned above and discussed below, form part of the overarching concept relating to sustainable consumption, these concepts might be used throughout the thesis to explain the phenomena of voluntary simplistic clothing

consumption practices (VSCCP) that has not been fully explored to date. Of these, a few will be mentioned to gain a broad overview of the field of sustainability and put the topic and concepts relating to this study into perspective in terms existing literature.

Concepts related to Sustainable consumption

Sustainable consumer behaviour can be seen as the capability to continue behaving and living in a manner which does not damage natural resources or the environmental quality which all humans and future generations depend on (Bell & Morse, 2008:9-12). In the context of the clothing and textiles industry, sustainable consumer behaviour is a concept that is closely related to terms such as “pro-environmental” and “eco-friendly”; and is recognised in the production, as well as consumption of clothing (Business for Social Responsibility, 2012). Similar to the aforementioned concept, *pro-environmental consumer behaviour* can be defined as consumers’ behaviour that improves social and environmental performances, in addition to meeting their needs (Wang *et al.*, 2014). It is closely related to the concept of *green consumerism*, which can be described as a multi-faceted concept that includes the preservation of the environment, reducing the effects of pollution, responsible use of non-renewable resources, and overall preservation (Mostafa, 2007a). Furthermore, it contradicts the general consumption patterns where hedonic outcomes tend to flourish (Chitra, 2007; Luck & Ginanti, 2009). *Green purchase behaviour* on the other hand can be described as consuming products such as clothing that are beneficial to the environment, that are recyclable or that are consumed bearing in mind the environmental and ethical concerns related with the product (Luck & Ginanti, 2009; Mostafa, 2007b).

Leaning more towards the topic of interest, namely clothing and the consumption of it by consumers, *pro-environmental clothing consumption* can be defined as clothing acquisition, storage, use, maintenance and disposal that is environmentally preferable, because of the intent to reduce and consume fewer resources (Hiller Connell, 2010; Joung & Park-Poaps, 2013; Wang *et al.*, 2014). Textile production, product distribution, use and maintenance, and, lastly, disposal, all contribute to polluting the earth and causing catastrophic consequences for the environment (Bianchi & Birtwistle, 2012). Therefore, it is critical that other options, such as sustainable consumption or voluntary simplistic clothing consumption practices are explored to present consumers with alternative options that could reduce apparel waste and lead to more environmentally friendly and responsible behaviour (Nordlund & Garvill, 2002).

Voluntary simplicity also falls within the sphere of sustainable consumption. More specifically voluntary simplistic clothing consumption practices is very closely linked to the concept of pro-

environmental clothing consumption. Due to voluntary simplicity, and more specifically voluntary simplistic clothing consumption practices forming an integral part of this study, a detailed discussion of this concept together with all its motivations, dimensions and categories will be presented below to fully comprehend the topic at hand.

2.5 VOLUNTARY SIMPLICITY

Simplicity can be described as having a conscientious attitude towards material consumables, which could include decreasing one's consumption, consciously consuming, having a more focused life and having a greater appreciation for other things (Gambrel & Cafaro, 2010). Simplicity involves deliberation, in that consumers should think about the choices they are about to make and act accordingly, rather than following the general consumer or advertising campaigns that promote consumption at the highest levels (Gambrel & Cafaro, 2010).

Simplicity should not be misinterpreted as living primitively (Alexander, 2011); it is not opposed to technology; it encompasses the conscious incorporation of technology in consumers' lives with reference to the real purposes and to the full effects on the world they live in (Alexander, 2011; Gambrel & Cafaro, 2010). Furthermore, simplicity cannot be classified as poverty, since it describes the need for self-actualisation and personal development and does not include the state of deprivation (Alexander, 2011; Elgin & Mitchell, 1978; Gambrel & Cafaro, 2010). Simplicity is a process and should be encouraged by society in order for it to be cultivated by individuals (Gambrel & Cafaro, 2010). Gambrel and Cafaro (2010) identified 6 areas in which simplicity makes important contributions, namely basic individual flourishing, described as simplification of lifestyles and to improve health, basic societal flourishing, which involves communal responsibility, freedom and autonomy, which is classified as a basic psychological need, knowledge, that includes becoming more self-aware and gaining ecological knowledge, meaning, which involves living according to goals deemed as important, and lastly, promoting the flourishing of nonhuman beings, by consuming less and contributing to protecting the environment that is endangered due to human consumption (Gambrel & Cafaro, 2010).

Voluntary simplicity (VS) can be traced back to the work of Richard Gregg in 1936 (Leonard-Barton, 1981) and can be described as a lifestyle that acts in service of both the goals of personal well-being and sustainable consumption (Kasser, 2009). Zamwel *et al.* (2014) explain that

voluntary simplicity is a way of life in which people choose to minimize their consumption to cultivate non-materialistic resources of satisfaction and meaning. Voluntary simplicity is therefore closely related to concepts such as sustainable consumption, which involves acting or behaving in a way that will protect the environment by using fewer resources for personal gain (Balsa-Budai, Kiss, Kovács & Szakály, 2019; Elgin, 1993; Wu, Boyd Thomas, Moore & Carroll, 2013). It can also be defined as removing all the clutter from one's life and choosing to limit the expenditures on consumer goods, rather than being forced by poverty or government programs (Alexander, 2011; Ballantine & Creery, 2010; Etzioni, 1998; Iyer & Muncy, 2009). Various research has suggested that voluntary simplifiers have higher levels of life satisfaction and are often happier (Alexander & Ussher, 2012; Boujbel & d'Astous, 2012; Brown & Kasser, 2005; Rich *et al.*, 2017).

Voluntary simplicity has evolved over time and it still encapsulates the macro goal of simplifying one's life, but different consumers have exhibited a wide range of micro strategies in achieving voluntary simplicity through their own interpretation of simplification (Bekin *et al.*, 2005). In particular, some have proposed the five "R" approach, namely recycle, repair, reuse, reduce and refuse (Zamwel *et al.*, 2014) to live a more sustainable voluntary simplistic lifestyle. In terms of clothing consumption, consumers could for example reduce the amount of clothing they buy, use or throw away (e.g. buying good quality and/ or classic styles that surpasses seasonal trends) and repair or repurpose clothing (e.g. making rags out of worn out clothing). They could also opt for a more sustainable option like recycling or reusing clothing in an eco-friendly manner (e.g. donate it to friends/charities or engage in re-selling/ exchanging activities) (Hiller Connell, 2010). They may also refuse to buy clothing that is detrimental to the environment and instead opt for eco-friendly alternatives such as organic cotton or recycled polyester (Shen *et al.*, 2014). In addition, they could forego unethical or imported goods, and opt for locally produced garments instead. This would not only stimulate the local economy, but it would also contribute to the reduction of greenhouse gasses caused by the transportation of imported clothing from manufacturing countries. Such behavioural changes are crucial to counter the impact of overconsumption (Wahnbaeck & Roloff, 2017) and to ensure a sustainable economy in which consumers live more sustainably and ensure that future generations' needs are met (Gwozdz *et al.*, 2017).

That being said, consumers decide to or are motivated to participate in voluntary simplicity for various reasons. An overview of possible motivations to participate in voluntary simplicity is discussed below to provide a broad perspective of why consumers decide to voluntarily live a simpler life. These motivations may be closely aligned to the underlying assumptions of the Self-determination theory (SDT) and could be grouped on the self-determination continuum (as previously discussed), potentially resulting in self-determined voluntary simplistic clothing

consumption practices (VSCCP) rather than being externally influenced and forming part of non-self-determined motivations.

2.5.1 Motivations to participate in voluntary simplicity

Wu *et al.* (2013), in their study, "Voluntary Simplicity: The Great American Apparel Diet", identified six motivations to participate in voluntary simplicity that relate to clothing, namely *personal, lifestyle, social, economic, financial, and environmental motivations.* Alexander (2011) also elaborated on the reasons for choosing a more simplistic lifestyle, such as *personal, social, humanitarian and ecological reasons*. Armstrong *et al.* (2016) also indicates three drivers of clothing consumption including *individual, social and cultural motivations* (Wilk, 2002; Zukin & Maguire, 2004). Some of the relevant motivations will be discussed more comprehensively below.

Personal motivations include issues such as goals, challenges, weaknesses and problems that are directed toward the self (Craig-Lees & Hill, 2002; Wu *et al.*, 2013). It could entail spending less time occupying one's mind with the idea of consumption, and rather spending more time with friends or family (Alexander, 2011). It includes the differentiation between a want versus a need. In Wu *et al.* (2013) study, the majority of their respondents mentioned the want versus need motivation, and more specifically that some indicated their renunciation from purchasing clothing because they already have sufficient amounts of apparel in their possession. According to Armstrong *et al.* (2016), consumers have innate needs, that relate to physiological needs that are necessary to survive, as well as acquired needs that relate to psychological needs such as the need to express oneself and dress accordingly to display a certain image. In summary, the consumption of clothing subsequently satisfies needs in terms of health as well as happiness (Armstrong *et al.*, 2016). This type of motivation leans more towards intrinsic motivation that forms part of self-determined motivation according to the underlying assumptions of the SDT.

Lifestyle motivations can be described as issues involving living situations, shopping behaviours and consumption behaviours and explains how consumers can adapt their way of living by changing their behaviours (Wu *et al.*, 2013). This involves making a lifestyle change as exemplified in the study of Wu *et al.* (2013), where the respondents refrained from purchasing any clothing based on their realisation that their current lifestyle includes overconsumption. By making this lifestyle change, respondents realised that they can save time, live more simply and cut back on unnecessary apparel products. As mentioned above, this too forms part of self-determined motivation.

Social motivations include issues such as the country of origin, fair trade and fair labour, which captures the notion of social fairness and well-being (Alexander & Ussher, 2012; Wu *et al.*, 2013). The social motivations to engage in voluntary simplicity is based on the realisation that the clothing bought in developed countries is often produced in third world countries where labourers might be unpaid and overworked (Wu *et al.*, 2013). Respondents felt they could make an impact by boycotting companies that make use of cheap labour or even child labour. These consumers made a conscious decision to reduce their clothing consumption to live a simpler life in which others around them are not negatively influenced by their decisions and/ or actions. This type of motivation could be classified as self-determined if the decision was based on personal outcomes or values. Yet, it could also be classified as non-self-determined motivation if consumers decided to live a simpler life based on their resulting feelings of guilt after acquiring goods from companies that engaged in such misconduct.

Environmental motivations include issues such as the impact that consumers have on the environment, their carbon footprint as well as their support of eco-friendly products and recycling (Alexander & Ussher, 2012; Craig-Lees & Hill, 2002; Wu *et al.*, 2013; Zavestoski, 2002). Respondents who participated in the study conducted by Wu *et al.* (2013) explained that they want to live more sustainably in order to contribute to environmental protection. This motivation could also be classified as self-determined as it portrays personal goals and values that consumers aspire to in their daily living.

Economic motivations include concepts such as unemployment, recession and job loss (Wu *et al.*, 2013). Similarly, *financial motivations* include spending habits, debt and savings. Both these types of motivations lean more towards external factors and are often grouped under non-self-determined motivations.

In conclusion, the main motivations to participate in the “Great American Apparel Diet” included personal and lifestyle motivations, which are internal to the respondent, while economic and social motivations, which focus on the external environment, were not as important (Wu *et al.*, 2013). Therefore, it can be assumed that internal motivations, that provide consumers with a sense of control, are the most influential reason for people to participate in voluntary simplicity (Seegebarth *et al.*, 2016; Wu *et al.*, 2013). This conclusion is in accordance with the assumptions of the Self-determination theory (SDT) and strengthens the purpose and content of this research that focuses on the basic psychological needs and self-determined motivation as antecedents of voluntary simplistic clothing consumption practices. Extensive research has been conducted in developed countries with regards to voluntary simplicity, but in order to draw conclusions with regards to

South African consumers, more research needs to be conducted in the local emerging market context. Specific attention must be devoted toward the various dimensions of voluntary simplicity in order to gain a greater understanding of local consumers' voluntary simplistic clothing consumption practices.

2.5.2 Dimensions of Voluntary Simplicity

Elgin and Mitchell (1978) originally identified the five dimensions of voluntary simplicity, which was later on used by Leonard-Barton (1981) to explain her research. The five dimensions that make up voluntary simplicity include material simplicity, self-determination, ecological awareness, human scale and personal growth. As mentioned before, voluntary simplicity has evolved over time and has also been associated with the five "R's" namely recycle, repair, reuse, reduce and refuse (Zamwel *et al.*, 2014). Every dimension together with its associated "R" and its relation to voluntary simplistic clothing consumption practices will be discussed in more detail below.

2.5.2.1 Material simplicity: the "reduce" dimension

Material simplicity refers to non-consumption practices and/ or consuming fewer products (Elgin & Mitchell, 1978). In terms of this study, material simplicity may include the acquisition of clothing on a "need-to-have" basis as well as acquiring classically styled clothing that could last multiple years and does not lose its appeal after one season (Hiller Connell, 2011). One of the easiest ways to act sustainably in terms of clothing consumption, is to limit the number of clothing items acquired on a yearly basis and only purchasing clothing when it is needed, i.e. need-based clothing acquisition (Gwozdz *et al.*, 2017; Hiller Connell, 2011). Consumers could for example limit their clothing purchases by selecting classically styled items that are not subject to seasonal trends (Hiller Connell, 2011; Yang, Song & Tong, 2017). Two examples of such items are the little black dress and the white shirt. A classically styled, good quality, black dress can be classified as a timeless, multifunctional piece, which in turn, eliminates the need for fashion items whenever a new trend appears (Ballantine & Creery, 2010; Young, Jirousek & Ashdown, 2004). This practice could drastically reduce clothing waste by extending the garment's lifespan (i.e. time of use), and preventing premature disposal just because it is no longer trendy (Taljaard, Sonnenberg & Jacobs, 2018b). This, however remains a challenge in the sense that fashion-conscious consumers dispose of their clothing for various reasons, including poor quality, damaged clothing or outdated trends – all of which add to the textile waste deposited into landfills on a yearly basis (Birtwistle & Moore, 2007; Taljaard, 2015). In summary, this dimension relates to voluntarily reducing the amount of clothing that consumers buy, use and throw away.

2.5.2.2 Self-determination: a "repair", "recycle" and/ or "repurpose" dimension

Self-determination involves the desire to have greater control over one's destiny and includes notions of self-sufficiency such as repairing or even constructing one's own clothes (McDonald *et al.*, 2006). In order to achieve less dependency on materialism, consumers could attempt to live a materially independent lifestyle by for example growing their own vegetables, exercising self-discipline and making their own products (Elgin & Mitchell, 1977) in the pursuit of simpler living that is removed from an oppressive materialistic lifestyle (Johnston & Burton, 2003). The main values of this dimension involve the desire for self-fulfilment and a direct experience to explore the inner self (Elgin & Mitchell, 1977). Self-determination or self-sufficiency is based on the choice to have more control over one's life and has promoted the "do-it-yourself (DIY)" trend (Shama, 1985). In terms of this study, self-determination includes either making clothing items or repairing items to make them last longer. It could also include repurposing clothing items by making for example rags or mats out of worn-out clothing. Self-sufficiency was popular before the fast-fashion revolution began, as people would mend their clothes when broken. This has now been revived among modern-day designers, who embellish, cut and rework old garments to create new pieces (Brown, 2010:103). All these concepts form part of self-determination that relates to repairing, recycling and repurposing clothing items.

2.5.2.3 Ecological awareness: a "refuse", "recycle" and/ or "reuse" dimension

Ecological awareness includes the interconnection of people and resources, and evolves around concepts such as resource conservation, pollution reduction, and protecting the environment for future generations (Elgin & Mitchell, 1978; McDonald *et al.*, 2006). Examples of sustainable clothing consumption practices may include buying eco-friendly clothing and disposing of garments in an eco-friendly manner (i.e. recycling/ reusing). Consumers, who choose to adopt a voluntary simplistic lifestyle due to ecological awareness, do this because they believe that overconsumption is a cause of the earth's ecological problems. This can be seen as a step toward addressing the problem and solving it (Johnston & Burton, 2003). The main values of this dimension include recycling, using raw materials sparingly and living as naturally as possible (Elgin & Mitchell, 1977). This could also include choosing to shop close to home to reduce carbon footprints (Blanchard, 2013:48-49). More specifically, consumers have the option of following a voluntary simplistic lifestyle by incorporating ecological awareness into their clothing consumption practices by acquiring eco-friendly clothing options or recycling clothing by acquiring /exchanging/ donating second-hand clothing from/to second-hand stores and/ or family and friends.

Eco-friendly clothing with sustainable attributes

Collectively, eco-friendly clothing can be described as clothing that is produced with consideration of the production processes' environmental impact; it also implies replacing damaging chemicals and products with more sustainable options (Brosdahl & Carpenter, 2010; Joergens, 2006). More specifically, sustainable attributes of eco-friendly clothing could include the use of natural organic fibres and other environmentally friendly raw materials, including recycled materials that is converted into fabrics or garments with minimum water usage and that was stylised with eco-friendly dyeing processes (Taljaard, 2015). These attributes will be discussed in further detail below to gain a better understanding of each of the environmentally preferable options in the clothing industry.

Currently, natural fibres such as cotton, linen, and wool as well as synthetic fibres, including nylon and polyester, dominate the clothing market and have several environmental implications (Saeed, Lodhi, Khan, Khurshid, Dustgeer, Sami & Ahmad, 2013). Alternative options that are deemed more sustainable include eco-friendly products made of fibres such as organic cotton, hemp, bamboo and/ or recycled polyester (Fletcher, 2014; Hiller Connell, 2011; Shen *et al.*, 2014). Organic cotton, as mentioned above, can be classified as one of the more sustainable, eco-friendly options in terms of its production since it does not involve the use of pesticides or chemical fertilisers, and consumes less water than conventional methods of cotton cultivation (Kang & Kim, 2013; Keiser, Vandermar & Garner, 2017:189; Luiz *et al.*, 2011). Another plant-based sustainable natural fibre is hemp, which is fast growing, does not deplete the soil, and requires no irrigation due to its deep root system (Keiser *et al.*, 2017:189). In order to make it soft enough for clothing products, a safe enzyme process removes the lignin from the hemp fibre without compromising its strength. Hemp is widely available, but because of its association with the marijuana plant, and the legalities surrounding it, it has not yet been cultivated in large amounts to produce hemp fibre for clothing purposes (Keiser *et al.*, 2017:189). Other options include soy silk fibre that is made by extracting the protein from the leftover soybean oil or tofu production, and adding a biological enzyme to create a spinning solution; it is more commonly known as "vegetable cashmere" because of its softness, lustre and drape properties (Keiser & Garner, 2008:185). Bamboo fibre is another eco-friendly option and is one of the most sustainable fibres with properties that can significantly minimise negative environmental consequences (Hardin, Wilson, Dhandapani & Dhende, 2009; Yoo, Divita & Kim, 2013).

From a global perspective, international fast-fashion retailer, H&M produce a "Conscious Collection" made from eco-friendly and recycled materials to encourage recycling and also started

an initiative in which they have voucher programs where they offer discount to any consumers who donate their clothing at any H&M store (H&M Sustainability Report, 2016; Yang *et al.*, 2017). They have recently released their Conscious Actions Sustainability Report; in which they discuss how they are altering their supply chain in order to lessen their impact on the environment. They have been actively involved with the Better Cotton Initiative, UNICEF and Textile Exchange, so that 21.2% of their total cotton usage now consists of recycled, organic and eco-friendly cotton.

From a South African point of view, various businesses have joined forces to combat the harmful effect of plastic bottles on the environment by transforming them into clothing products. One such business is Extrupet who currently recycles more than 2.5 million bottles a day (50/50 Human Nature, 2017). The plastic bottles are separated according to colours and turned into plastic flakes, after which it is heated at 285 degrees and poured into filters through fine holes which ultimately produce a fine plastic fibre. These plastic fibres are put through chemical treatments as well as heating and stretching resulting in soft fibres that could be used for industrial fabrics or geotextiles (50/50 Human Nature, 2017; Taljaard *et al.*, 2018b). A South African retailer that is recognised for its support of eco-friendly natural fibres (e.g. recycled polyester and organic cotton), is Woolworths. They have been experimenting with technology to replace virgin polyester with recycled plastic fibres and together with Extrupet they are finally able to do so. Woolworths mixes a combination of recycled polyester and raw cotton, which is spun into a single thread and knitted together to create a new, recycled fabric. Currently Woolworths boasts with recycled polyester products throughout their outerwear range, including t-shirts, jeans, children's wear, polar fleece products, as well as duvet fillers, pillow cases and reusable shopper bags. In the last year, over 9 million bottles were recycled into Woolworths products (50/50 Human Nature, 2017). In the past few years, Woolworths has also collaborated with ComMark, Cotton SA, the Organic Exchange, and the Agricultural Research Council Institute for Industrial Crops as part of a pilot project to learn more about organic cotton farming (Luiz *et al.*, 2011). They now offer an organic clothing range to consumers and continuously promotes the use of local, natural fibres as part of their new image and slogan, "Woolworths – The Difference" (Woolworths, 2015; World Wild Fund, 2016). In addition to that, various departments within Woolworths are being supplied by Socota in Madagascar, who makes use of hydroelectricity to manufacture textiles and produce garments. The water's PH, colour and oxygen levels are controlled ensuring that the water flowing back to the local river is uncontaminated. Chemicals are sourced from European suppliers that are Oeko-tex certified. On a broader scale, South Africa has in fact been using organic cotton since 2004, and earned the position of the third-largest consumer of organic cotton in the world (Luiz *et al.*, 2011).

Lastly, dyeing and finishing processes that are used in the production of clothing are also known to have a detrimental impact on the environment (Mastamet-Mason, 2013). These processes require vast amounts of water and contaminate water resources with the harmful chemicals that result from the dyeing processes (Fu, Zhang & Wang, 2011; Grönwall & Jonsson, 2017; Keiser *et al.*, 2017). In an effort to combat the devastating environmental impact of the fashion industry, increasingly more brands are investing in sustainable clothing manufacturing, in an effort to save what is left of the planet. Environmental groups, such as the Natural Resources Defence Council and others, are collaborating with international brands including Levi's and Gap, to make their supply chains more sustainable (Glausiusz, 2008). Levi Strauss for example launched its "Water<Less" jeans in January 2011, that makes use of up to 96% less water depending on the style, by using ozone to imitate the effect of water washes and by removing water from the stonewash process completely (Chau, 2010; Keiser *et al.*, 2017:191). These companies have employed sustainable, eco-friendly business operations due to increased pressure by heightened consumer awareness, concerns about ethical practices and the media exposing global environmental problems. Large international companies, such as H&M and Gap, were seen as contributing to the environmental issues and are now assisting in solving the problem. South African retailer, Woolworths, has also addressed this problem by making use of laser and ozone technology in order to save resources such as water, and reduce the use of chemicals (50/50 Human Nature, 2014).

Recycling and repurposing clothing

One of the major environmental concerns regarding the textile and clothing industry, is that the majority of clothing still ends up in landfills or is incinerated, releasing methane (a harmful greenhouse gas), into the atmosphere (Fashion Revolution, 2018; Gwozdz *et al.*, 2017; Keiser *et al.*, 2017:192-193). One way of combatting this issue, is to acquire clothing from second-hand stores or family and friends instead of buying new clothing from retailers (Ballantine & Creery, 2010; Bekin, Carrigan & Szmigin, 2007; Huneke, 2005) This notion enables consumers to reuse clothing and thus extend the lifespan of garments rather than acquiring additional items that are deemed unnecessary (Hiller Connell, 2011; Yang *et al.*, 2017). The concept, "reuse" can therefore be described as already-purchased products that are sold to others, exchanged for other things or simply donated (Joung & Park-Poaps, 2013; Solomon & Rabolt, 2004:457-458). If consumers engage in such practises it reduces the need for new clothing and consequently conserves resources and decreases waste (Hiller Connell, 2010).

The donation or exchanging of clothing items for recycling purposes is just as important. Instead of disposing of clothing to landfill, consumers could donate or give away their clothing to others that could reuse it until its lifespan has ended. The general approach of recycling clothing involves finding another user or use for the item by re-entering it into a new phase of its life (Kellock, 2016; Seegebarth *et al.*, 2016). The clothing items can therefore re-enter the market many times through collection points and charities (Earth911, 2017; Gwozdz *et al.*, 2017). In terms of the clothing industry, various retailers and manufactures have also come up with creative ways to reuse textiles such as the Swedish clothing brand, “Nudie Jeans” that has invested in recycling by offering a free repair service on all jeans as well as recycling old jeans into camper seats and rugs. This initiative ultimately reduces the end-consumer’s waste disposal (Nudie Jeans Co, 2017). Patagonia has also joined the recycling notion and sponsored the world’s first polyester garment recycling program in 2005, saving up to 76% of the energy output when making use of recycled fibres compared to new raw materials (Keiser *et al.*, 2017:193; Patagonia, 2015).

Upcycling can also be regarded as a form of recycling, in which material from used clothing items are reused without damaging its composition to create newly constructed creations (Fletcher & Grose, 2012:69; Taljaard, 2015), i.e. giving the old clothing item a new life (Intercongreen, 2010). Another initiative that forms part of upcycling, collectively known as “eco-innovation”, includes second-hand garments that are reconstructed and reinvented into creations of higher quality and status than the original object.

2.5.2.4 Human Scale: a “refuse” dimension

Human scale refers to the support of smaller scale institutions, such as living in decentralised, less complex environments (Elgin & Mitchell, 1978). This also includes the improvement of peoples’ overall working and living environment as well as patronizing small, personal businesses as opposed to large cooperations (Shama, 1985). A consumer may for example acquire ethical/ local clothing brands to achieve such goals. In the context of this study, human scale also includes the acquisition of clothing brands that have a reputation of being ethical and socially responsible. Another aspect of the human scale includes acquiring clothing that has been locally produced. In full support of the human scale dimension, a consumer may refuse to purchase any unethical or imported clothing (boycotting any retailers who sell imported or unethical clothing) and rather support brands that are classified as “Proudly SA” and “Made in SA” (Seegebarth *et al.*, 2016). The sections to follow will highlight various aspects surrounding the human scale dimension to offer greater clarity of the concept in question.

Ethically sound clothing and the treatment of garment workers

Due to globalisation of the textile and clothing industry, many developing countries have been taken advantage of in terms of cheap workforce opportunities, which lead to various issues such as violations of workers' rights (Cao, Scudder & Dickson, 2017; Dickson, Eckman & Loker, 2009; Fashion Revolution, 2018; Grönwall & Jonsson, 2017). That being said, various clothing sweatshops are based in poor, developing countries in order to keep production costs to a minimum. In reality, less than 5% of the garment's retail price is allocated to the factory workers, leaving them very little to make a living from and forces them to take on jobs and work overtime in order to get better wages (Ethical Fashion Forum, n.d.). "The True Cost" was released in 2015 and gained a lot of media coverage, providing consumers with an in-depth look into the textile and clothing industry in terms of the workforce and pollution (Morgan, 2015). Familiar fashion brands, such as H&M, Gap and Zara, have been singled out as companies who make use of manufacturers in countries such as India and Bangladesh, where the harsh working and dangerous living conditions in the factories are unacceptable and workers are exploited by the manufacturers (Keiser *et al.*, 2017:412-413; Khan, Rodrigues & Balasubramanian, 2017; Morgan, 2015). Bangladesh is classified as one of the largest garment exporters in the world; this is due to the large population of low-wage workers, however due to poor infrastructure, little enforcement of labour rights, and barely any safety measures for the workers who work for the garment industry, more than 2000 workers have died in the past few years, leaving a terrible path of destruction caused essentially by the textile and clothing industry (Bradsher, 2013; Cao *et al.*, 2017; Khan *et al.*, 2017; Taplin, 2014).

Another aspect of the unethical side of the textile and clothing industry is the use of child labour (Khan *et al.*, 2017). Eight year old children can be found working in factories and tanneries in Dhaka, Bangladesh, where working conditions are detrimental to their health, because these factories make use of harmful chemicals and acids to produce the desired fashion products (Human Rights Watch, 2012). In response to such infringements on human rights, numerous organisations and brands are making an effort to establish more transparent supply chains that inform consumers about the origin of their clothing and to promote more "ethical" fashion items. However, despite such efforts, consumers often remain ignorant of where their clothing items actually come from, who laboured away to produce it and at what cost the clothing item was made.

Locally made, unique handcrafted clothing

In terms of voluntary simplistic clothing consumption options (that focus on minimising this negative association of clothing relating to the dimension of human scale), the acquisition of traditional handcrafted clothing items or local items, that are produced by local workers who are self-sustaining, seem to fit the criteria quite well (Black, 2008). The origins of these clothing items are known and the ethical issues surrounding the supply chain are transparent to consumers who purchase these locally made, handcrafted items. In addition to that, smaller scale institutions are supported and profits go the local artisans who make clothing items conscientiously.

Local versus imported clothing

Another notion of supporting small scale, local institutions as part of the human scale dimension of voluntary simplicity is based on the negative impacts that globalisation and importing have on the environment and society alike. In fact, approximately 90% of the apparel that is available in the local South African market is imported (Flanders Investment & Trade, 2016; PwC and Economist Intelligence Unit, 2012) resulting in the reduction of local garment manufacturing, mass factory closures, and significant job losses over the past few years (Hoskins, 2015; Taljaard *et al.*, 2018b). Apart from the social impact, imports have severe environmental repercussions linked to the transportation and distribution of the products with associated carbon emissions (Luiz *et al.*, 2011; Mont & Bleischwitz, 2007; Taljaard, 2015). To counteract this occurrence, the South African government has started providing production incentives under the Clothing & Textile Competitiveness Improvement Programme to revitalise the clothing and textile industry in South Africa, as well as create jobs to assist in reducing the high volumes of unemployment (Cao *et al.*, 2017; YarnsandFibers News Bureau, 2014). South African retailers such as the Foschini Group and Edcon have also adapted their supply chains to gain a competitive advantage, by working closely with local suppliers to shorten the lead times and produce more clothing items that are produced locally (Roelf, 2015; YarnsandFibers News Bureau, 2014). This is directly related to the Proudly South African Campaign which aims to encourage businesses to procure locally and educate consumers to purchase local products (Proudly South African, 2015). With more specific reference to the clothing industry, the South African Clothing and Textiles Workers Union (Sactwu) also promotes local production and consumption through its Wear South African (Wear SA) movement. This initiative strives to push South African retailers and designers to source their materials and products locally so that South African consumers can easily acquire locally made clothing items from retailers and designers across South Africa (Wear South African, 2015).

2.5.2.5 Personal Growth

Personal growth involves the discovering and development of inner life (McDonald *et al.*, 2006). This involves freeing oneself from any external aspects in life in order to grow psychologically (Elgin & Mitchell, 1978; Leonard-Barton, 1981). In effect, the dimensions of material simplicity, self-determination, ecological awareness and a more human scale to living and working are components that could be utilised to eliminate any obstacles that prevent one of developing inner life and becoming inwardly rich. Personal growth often contains a spiritual aspect, but is not necessary linked to any particular philosophy or religion; it has become very intricate and has been reflected in many trends and lifestyles in the past few years, making this dimension very broad and extensive (Elgin & Mitchell, 1977). Elgin and Mitchell (1978) stated in their research that they had not delved deeper into the connection between personal growth and voluntary simplicity as such and that a more intricate vision needed to be investigated to make sense of this connection. This vision, that was summarised by the historian, Arnold Toynbee, mentions religious founders debating issues surrounding the nature of spiritual life and spiritual reality as well as ethical precepts. In conclusion to this debate, it was agreed upon that the main aim of life should be spiritual and speak of unselfishness and love for others as the key to happiness, rather than aiming for material wealth, because such a life would lead to disaster (Elgin & Mitchell, 1978).

Without personal growth and development of inner life, the chance of living a voluntary simplistic life seems very unlikely. If human beings do not become inwardly rich and live a more simplistic life, coping with environmental and social issues will be unsuccessful (Elgin & Mitchell, 1977). Additionally, inner development is needed to learn more about mindfulness and how humans could be influencers and activists in the pursuit of leaving behind a prosperous home or life for future generations who will follow. All five dimensions of voluntary simplicity are closely related in the sense that the one influences the other, like for example, someone who has a sense of inner life and personal growth could have an ecological awareness towards the environment and society at large, that might cause him/ her to live more simplistically in terms of material possessions, that could bring upon opportunities surrounding smaller scale living and working, which may induce self-determination (Elgin & Mitchell, 1977). Although personal growth forms an intricate part of voluntary simplicity and is included as a key dimension of voluntary simplicity, it remains a challenging concept to measure. Unlike the other four dimensions, personal growth cannot per se be measured as a behavioural component, as it is more related to motivational and attitudinal concepts as opposed to behavioural concepts. Because of the complexity involving this dimension as well as its intricacy and tendency to overlap with elements from the other dimensions, personal growth has been excluded from this study (Elgin & Mitchell, 1978).

In essence, voluntary simplicity involves choosing a lifestyle that is less focused on consumption and more focused on personal growth, family, community and connectedness with nature (Kasser, 2009). Based on consumers' lifestyles, they can be classified into various categories based on the degree to which they embrace voluntary simplicity.

2.5.3 Categories of Voluntary Simplicity

Various research has indicated that simplifiers are categorised as ecologically and socially motivated and tend to consume products in an eco-friendly manner (Craig-Lees & Hill, 2002; Iwata, 2006; Peyer *et al.*, 2017). Elgin and Mitchell (1978) for example established four categories of voluntary simplicity, namely full voluntary simplicity, partial voluntary simplicity, sympathizers and indifferent, unaware, or opposed. Later on, Etzioni (1998) explained voluntary simplicity in terms of degrees of intensity, and classified voluntary simplistic consumers according to three categories, namely "holistic simplifiers", "strong simplifiers" and "downshifters" (Balsa-Budai *et al.*, 2019; Seegebarth *et al.*, 2016). In similar vein, McDonald *et al.* (2006), discuss the different levels of intensity and classify consumers as voluntary simplifiers, beginner simplifiers and non-voluntary simplifiers. In general, these categories all fall within a continuum of voluntary simplicity and can be grouped together as full, partial and non-voluntary simplifiers. These three categories will be discussed in further detail below.

2.5.3.1 Full voluntary simplifiers

Full voluntary simplifiers are individuals who live simply and participate in behaviours such as gardening organically grown food, recycling, making use of simple clothing, riding their bikes to work etc. (Elgin & Mitchell, 1978). They tend to reject the norms of a capitalist society and live a simple life avoiding any forms of consumption (McDonald *et al.*, 2006). In general, Iyer and Muncy (2009) describe a voluntary simplifier as a person who buys organic food, eco-friendly clothing, or products made from recycled materials as well as practices the concept of recycling, while (Huneke, 2005) define voluntary simplifiers as people who recycle, eliminate clutter and avoid impulse buying. According to Etzioni (1998), those who embrace full voluntary simplicity can be further sub-divided into "holistic simplifiers" who have adjusted their whole lives in order to live simply and "strong simplifiers" who have given up successful, yet stressful lifestyles to live a simpler life while restricting their consumption (Ballantine & Creery, 2010; Bekin *et al.*, 2005).

2.5.3.2 Partial voluntary simplifiers

Partial voluntary simplifiers (as the name suggests) partially adhere to voluntary simplistic principles (Elgin & Mitchell, 1978). Partial simplifiers can be described as adopting some forms of voluntary simplicity, but not to the extent of full voluntary simplifiers (McDonald *et al.*, 2006; McGouran & Prothero, 2016). Etzioni (1998) referred to this group as "downshifters", because they choose to make minor changes in their lives in order to live a more simplistic lifestyle, but their changes are often deemed inconsistent and limited in scope (Bekin *et al.*, 2005).

In addition to above, "apprentice simplifiers" could also possibly fall under the partial voluntary simplifiers, as they are not necessarily always aware of all the benefits relating to eco-friendly products, but rely on product information to inform and guide them, thus gaining knowledge of more sustainable options and then deciding where to make use of these options (McDonald *et al.*, 2006).

It is also worth taking note of the "accidental simplifiers", who may have been forced to become voluntary simplifiers because of factors such as poverty (McDonald *et al.*, 2006; McGouran & Prothero, 2016). These individuals do not necessarily share the same ethical or environmental motivations as other voluntary simplifiers and take part in voluntary simplistic practices because of external factors that force them to live a simpler lifestyle, rather than voluntarily doing so (McDonald *et al.*, 2006).

2.5.3.3 Non-voluntary simplifiers

The third overarching group, namely *non-voluntary simplifiers* are described as people who have not adopted any sustainable consumption practices (McDonald *et al.*, 2006). They are often indifferent, unaware or opposed to voluntary simplicity, because they either do not care, are unwilling to change their lifestyles or are unaware of the concept and consequences of living a simplistic lifestyle (Elgin & Mitchell, 1978). Additionally, "sympathizers" are consumers who sympathise with values that are associated with voluntary simplicity, but do not act on it, thus they do not participate in voluntary simplicity despite being aware of it (Elgin & Mitchell, 1978).

In summary, numerous studies conducted abroad have focused on either defining voluntary simplicity (Etzioni, 1998; Iyer & Muncy, 2009; Leonard-Barton, 1981), exploring the motivations behind the lifestyle (Alexander & Ussher, 2012; Wu *et al.*, 2013; Zavestoski, 2002), or exploring the experiences of voluntary simplicity (Bekin *et al.*, 2005). Therefore, this study is significant as

it explores the basic psychological needs and self-determined motivation of female consumers' voluntary simplistic clothing consumption practices in the emerging market context of South Africa. As mentioned above, this study specifically focuses on female consumers and the justification surrounding this decision will be discussed below as part of the gender differences surrounding sustainable behaviour and environmental as well as social responsibility.

2.6 GENDER DIFFERENCES

Demographic information is often used to determine marketing segmentation and could sometimes have an effect on issues such as consumers' buying and consumption behaviour. More specifically, gender, as a demographic variable, is known to influence the way in which consumers pursue goals (Costa Pinto, Herter, Rossi & Borges, 2014). Female consumers are generally more willing to take part in socially responsible initiatives and could possibly act as early adopters of voluntary simplistic clothing consumption practices. They could also be prominent role players in households' overall clothing consumption practices and may encourage fellow household members to adopt more sustainable behaviour in their daily lives. Research has also revealed that the attitude and behaviour of women regarding the environment tend to be stronger than that of men; they are significantly more concerned about the environment than males (Costa Pinto *et al.*, 2014; Fukukawa, Shafer & Lee, 2007; Mostafa, 2007a; Schwartz & Rubel, 2005). These differences are ascribed to consumers' attentiveness to knowledge, especially when considering the extent of concern for others around them, other species, as well as the environment and are ultimately, the result of socialisation and life experience (Dietz, Kalof & Stern, 2002; Mobley & Kilbourne, 2013; Zelezny *et al.*, 2000). That being said, women are more willing to change the way they live to act more sustainably, even though they might have less knowledge regarding the issues than males (Mitchell & Walsh, 2004; Mostafa, 2007a).

Females tend to follow social or communal goals such as affiliation and the development of harmonious relations (Costa Pinto *et al.*, 2014; Solomon & Rabolt, 2004:151). Males, on the other hand, tend to have more ego-centred goals and are less concerned with social affiliations (Costa Pinto *et al.*, 2014; Noble, Griffith & Adjei, 2006). This correlates with the notion that females are more expressive in terms of their emotions, the social standards they set, as well as having a stronger "ethic of care" (Lee, 2009:88). They would for example dedicate more time and money towards charities (Leslie, Snyder & Glomb, 2013; Simmons & Emanuele, 2007). In contrast to

males who tend to be tough, competitive and dominant, females are inclined to adopt unselfish, communal behaviour, such as supporting government enforcement of social and environmental standards (Eagly, 2009; Fukukawa *et al.*, 2007; Luchs & Mooradian, 2012).

Even so, female consumers are more likely to participate in sustainable and voluntary simplistic clothing consumption practices, are more socially responsible with greater concern for the environment and, lastly consider the consequences that their consumption might have on people around them (Lee, 2009; Mostafa, 2007a; Noble *et al.*, 2006).

2.7 PROPOSED CONCEPTUAL FRAMEWORK

By integrating the aforementioned literature as well as the underlying assumptions of the SDT, a proposed conceptual framework was developed for this study (see **Figure 2.5**). The overarching aim of this study was focused on understanding the influence of basic psychological needs and self-determined motivation on female consumers' voluntary simplistic clothing consumption practices (VSCCP) in the South African emerging market context. The SDT was used as a reference to develop the conceptual framework.

The SDT suggests that the fulfilment of basic psychological needs (i.e. competence, autonomy, connectedness/ relatedness) enhances local consumer's motivation and cultivates the development of more self-determined regulations (i.e. identified regulation, integrated regulation, intrinsic motivation) (Darner, 2009; Pelletier, 2002; Rich *et al.*, 2017; Ryan *et al.*, 2008; Vallerand, 2000). Based on this, the first objective (Obj. 1) was therefore focused on investigating and analysing female consumers' basic psychological needs to engage in VSCCP, specifically regarding their competence, autonomy, and connectedness/ relatedness. In addition to that, the second objective (Obj. 2) was focused on investigating and analysing female consumers' self-determined motivation to engage in VSCCP, specifically regarding their identified regulation, integrated regulation, intrinsic motivation.

In turn, self-determined motivation leads to behaviours such as voluntary simplistic clothing consumption practices (i.e. material simplicity, self-determination, ecological awareness and a regard for human scale) which originates from the consumer and is not always purely controlled by external forces (Darner, 2009). Therefore, the third objective (Obj. 3) was focused on

determining and describing female consumers' engagement in VSCCP that reflect dimensions of material simplicity, self-determination, ecological awareness and a regard for human scale.

Lastly, consumers, who take part in VSCCP, can be classified as either full, partial or non-voluntary simplifiers based on the degree of engagement in these VSCCP. Based on this, the fourth objective (Obj. 4) was focused on clustering female consumers based on their level of engagement in VSCCP as either full, partial or non-voluntary simplifiers.

In essence, the fulfilment of the three basic psychological needs is crucial for psychological growth such as intrinsic motivation, integrity such as internalisation, well-being such as life satisfaction, and the experience of vitality and self-congruence (Deci & Ryan, 2000; Ryan & Deci, 2001; Ryan *et al.*, 2008). Intrinsic or self-determined motivation powers the decision-making process and facilitates the management of motives which often leads to the selection and engagement of many chosen behaviours such as VSCCP, which will produce the desired satisfaction of these conscious motives (Deci, 1975a; Deci & Ryan, 1980). Thereafter, the chosen behaviours (VSCCP) and communications provide feedback in the form of experience which makes the person feel more competent when performing future motivated behaviours (Deci & Ryan, 2002:12).

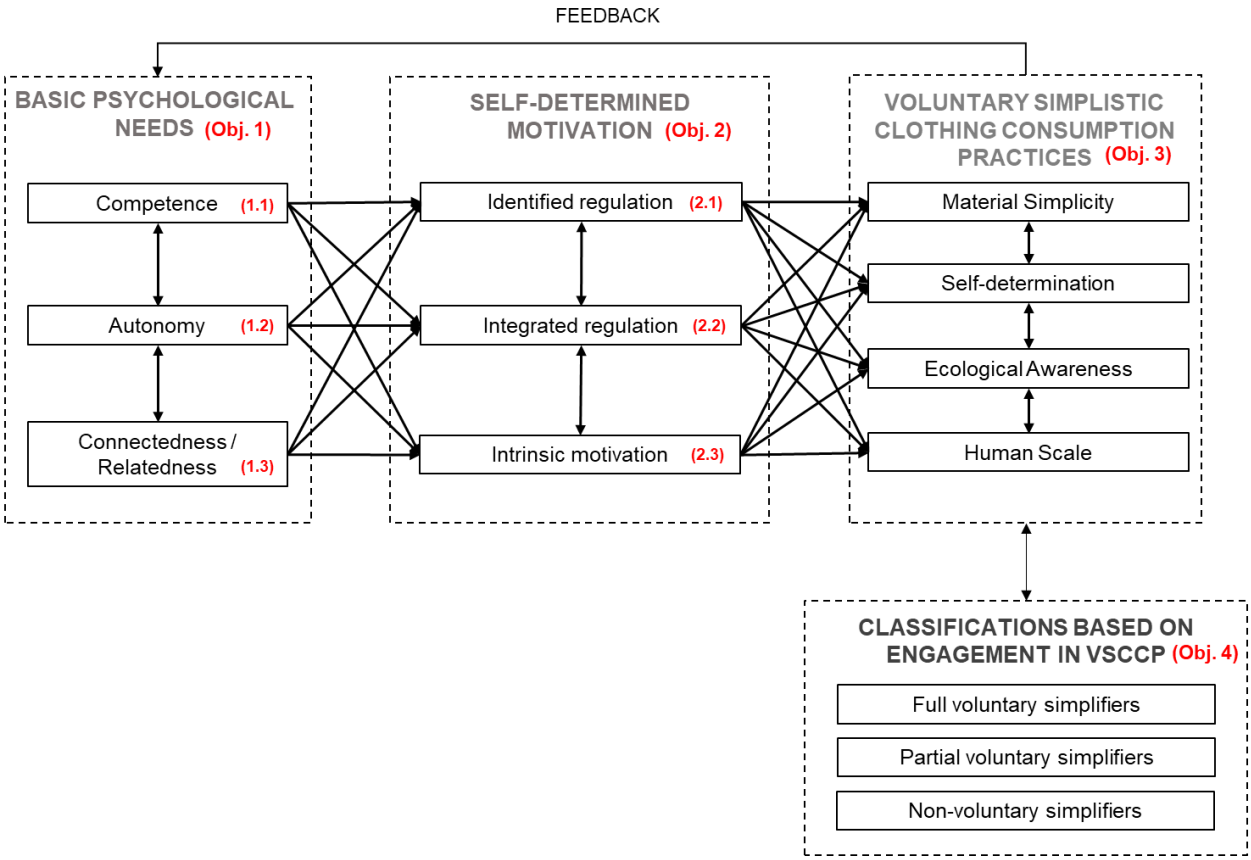


FIGURE 2.5: PROPOSED CONCEPTUAL FRAMEWORK (Deci & Ryan, 1985a; Deci & Ryan, 1985b; Deci & Ryan, 2002; McDonald *et al.*, 2006; Zamwel *et al.*, 2014)

2.8 CONCLUSION

Based on the aforementioned review of literature, the SDT was deemed an appropriate theoretical basis for exploring the influence of basic psychological needs, and particularly self-determined motivation, on consumers' voluntary simplistic clothing consumption practices in the local emerging market context. To summarise, this section differentiated well-being, hedonia and eudaimonia, after which the Self-Determination Theory (SDT), with all its underlying assumptions, was introduced and explained. More specifically, the components that form part of the SDT, namely the three basic psychological needs (i.e. competence, autonomy, connectedness/ relatedness) as well as the self-determined motivation (in the form of either intrinsic motivation, integrated regulation or identified regulation) were discussed in detail. This was followed by a review of literature surrounding voluntary simplistic and sustainable outcomes of self-determined motivation. Sustainable consumption was discussed and how it relates to voluntary simplicity in terms of various underlying motivations and dimensions. The degree to which consumers engage in voluntary simplistic practices may differ and was therefore also highlighted in addition to potential gender differences. Lastly, the proposed conceptual framework and overall objectives of this study were presented, which then also serves as the background for the chosen research design that will be discussed in the chapter to follow.

CHAPTER 3: RESEARCH METHODOLOGY

Chapter three mainly elaborates on the research design, sample and sampling techniques, instrument development, data collection and analysis. It also describes the overall quality pertaining to the study as well as the ethical considerations that were taken into account.

3.1 INTRODUCTION

Research relating to social sciences is conducted to study consumers' mannerisms and behaviours to ultimately obtain and analyse data that could clarify situations and human interactions (De Vos & Strydom, 2011:42). This section of the study comprises of various components that form part of the research methodology. Firstly, the research design, the sample and sampling technique are discussed. Secondly the instrument development is explained, followed by the data collection process as well as a brief summary of the data analysis that will be performed on the gathered dataset of 469 respondents. The inclusion of an operationalisation table at this point in time is crucial to summarise the objectives, constructs relating to the literature and theoretical framework, measuring instruments, items and analysis and showcase the study in the form of a summative table before commencing to the results section of the thesis. In addition to that, a section pertaining to the overall quality of data is presented to confirm that validity and reliability was ensured throughout the research procedures. Lastly, emphasis is placed on the importance of ethical soundness throughout this study.

3.2 RESEARCH DESIGN

The overall purpose for this study is to investigate the influence of basic psychological needs and self-determined motivation on South African female consumers' voluntary simplistic clothing consumption practices. Therefore, this study focuses on explaining the relationships that exist among the various constructs identified in the review of literature including basic psychological needs, self-determined motivation and voluntary simplistic clothing consumption practices. Following initial analysis of the various constructs, associations were hypothesised as set out in

chapter one. Thus, this research is explanatory in nature and is implemented to expand on the existing theories and literature by envisaging relationships or enhancing already existing information. A quantitative survey approach was followed to gain information and address the purpose of this study at a specific point in time (Fouche, Delport & De Vos, 2011). Various researchers have used a qualitative approach to explore sustainable/ reduced consumption to gain a more holistic understanding of the topic of interest (Armstrong *et al.*, 2016; Grauerholz & Bubriski-McKenzie, 2012; Wu *et al.*, 2013), yet very few have explored this topic in a quantitative manner.

Therefore, this study intentionally made use of a quantitative approach to gain a more comprehensive understanding of the research problem and objectives (Blaxter, Hughes & Tight, 2006:85; Creswell, 2015:2). The underlying basis of a quantitative approach is positivism or post-positivism, also called the scientific method or empirical science (Creswell, 2014). Post-positivism represents the thought process after positivism, in which a researcher starts out with a theory, after which data is collected and analysed that either supports or rejects the theory, followed by recommendations and/ or revisions to further explore the research in the future (Creswell, 2014). The key assumptions of this view include the following: knowledge is hypothetical especially when studying the behaviour of human beings; research is based on claims that can be revised and adapted by testing theories; data is collected via measuring instruments to shape knowledge; research of this nature is conducted to explain behaviours and describe relationships among concepts; and lastly, validity and reliability of data is crucial in terms of quantitative research (Creswell, 2014; Phillips & Burbules, 2000).

3.3 SAMPLE

A few attributes that positively correlate with the frequent acquisition and disposal of clothes, include being female, a frequent shopper as well as fashion-oriented (Lang, Armstrong & Brannon, 2013; Ruppert-Stroescu *et al.*, 2015). Furthermore, it is reported that female voluntary simplifiers tend to outnumber males by a ratio of 2:1 (McGouran & Prothero, 2016). To date there has been various research conducted on female clothing consumers and their clothing consumption behaviours in the South African context (Jacobs & De Klerk, 2010; Momberg, Jacobs & Sonnenberg, 2012; Sonnenberg *et al.*, 2014). However, very little research has been conducted on female consumers' sustainable clothing consumption and voluntary simplicity in an emerging

market context such as South Africa. Female consumers are more likely to participate in voluntary simplistic clothing consumption practices as they tend to be more socially responsible, concerned about the environment and conscious of how their consumption affect others (Lee, 2009; Mostafa, 2007a; Noble *et al.*, 2006). A number of studies have in fact revealed that women are more concerned about environmental and social justice issues, and have stronger attitudes and behaviour regarding the environment than that of men (Costa Pinto *et al.*, 2014; Fukukawa *et al.*, 2007; Mostafa, 2007a; Schwartz & Rubel, 2005). Women are also more willing to change the way they live to act more sustainably (Mitchell & Walsh, 2004; Mostafa, 2007a). Overall, female consumers tend to adopt unselfish, communal behaviour, such as supporting government enforcement of social and environmental standards, in contrast to males who tend to be tough, competitive and dominant (Eagly, 2009; Fukukawa *et al.*, 2007; Luchs & Mooradian, 2012). Together with this, females also tend to dedicate more time and money towards charities (Leslie *et al.*, 2013; Simmons & Emanuele, 2007).

In addition to the aforementioned focus on females, South Africa's demographic profile for 2018 indicates that 17.61% of the country's population range between the ages of 15 and 24, and can be categorised as the "early working age". That said, it should be mentioned that the "early working age" group does not only include working class people, but also includes learners who might be enrolled in secondary or tertiary institutions. It can be assumed that this part of the population group might not be full-time workers yet, but might only be working on a part-time basis (ages generally ranging between 15 and 21 years old) and might only be partially responsible for household expenditures. The remaining part of the population that makes up the "early working age" group, range between the ages of 21 and 24 years old and are generally seen as the group of people who transition from the learning environment into the working world as entry-level employees who receive a monthly starting salary every month.

In addition to that, 41.78% of the country's population, who are between the ages of 25 and 54 years old, form part of the "prime working age" (Indexmundi, 2018). As the category suggests, this group is in the prime of their working life and have presumably evolved into senior employees with a substantial and steady income. This group also contributes significantly to the economic state of the country and is able to spend, consume, and acquire various products that are available to them. Lastly, another 6.66% of the country's population are between the ages of 55 and 64 years old and are categorised as the "mature working age" (Indexmundi, 2018). This group includes the part of the population who have been part of the workforce for many years, as well as retirees generally ranging between the ages of 60 and 65 years old in this group. The majority of individuals that fall within the last two groups, are classified as the Generation X and Y cohorts. Individuals

that form part of Generation X were born between 1965 and 1979, and are described as mature, career- and family-oriented with a tendency to spend their money on housing, home goods and education (Frings, 2008:43; Schiffman, Kanuk & Brewer, 2014:343). They are also susceptible to voluntary simplistic lifestyles that focus on eliminating clutter and limiting expenditure on consumer goods (Alexander, 2011; Ballantine & Creery, 2010; Etzioni, 1998; Iyer & Muncy, 2009). Generation Y (i.e. "Millennials") were born between 1977 and 1994/5 (Frings, 2008:43; Noble, Haytko & Phillips, 2009) and tend to be more fashion-oriented (Frings, 2008:43; Lang *et al.*, 2013; Ruppert-Stroescu *et al.*, 2015). They are described as self-assured, optimistic and achievement driven (Donnison, 2007). Both Generation X and Y groups are described as socially and environmentally conscious.

Essentially, it can be deducted from the above mentioned statistics that more than half of South Africa's population forms part of the "working age", regardless of the phases (i.e. early, prime or mature) they find themselves in and that majority of these people receive monthly incomes to support and/ or contribute towards their households' expenditure (ages generally ranging between 21 and 65 years old).

Based on the comprehensive breakdown of gender and age above, female consumers (who are more inclined to be socially responsible, concerned about the environment and conscious of how their consumption affect others), between the ages of 21 and 65 years old (the general age range that makes up majority of the working class), were specifically chosen as respondents for this study to gain insight regarding their voluntary simplistic clothing consumption practices. In addition to that, the subjects of interest were required to fit specified criteria to comply with the purposes of the study. Potential subjects were required to have an education level of Grade 12 or higher and they need to be economically active in the sense of contributing to the goods and services of the country. This was necessary to ensure that the participants had some sort of recognition of the topic of sustainable/ voluntary simplistic clothing consumption and could make rational responses when participating in the data collection.

3.4 SAMPLING TECHNIQUE

Sampling in an emerging market context such as South Africa is often complex and challenging due to the lack of sampling frames (Burgess & Steenkamp, 2006), which could be problematic

when representative data is required. Representative data regarding South African consumers is further complicated by the diverse composition of the population. For this study, a non-probability purposive sampling technique was implemented to recruit individuals (who comply with the preconditions for participation and are able to engage in voluntary simplistic clothing consumption practices) that reside in major cities of South Africa such as Pretoria, Johannesburg, Cape Town and Durban. Non-probability sampling explains that the odds of selecting a particular individual are not known and does not have an equal chance of being selected, because the population size and members of the population are unknown (Strydom, 2011b:231; Zikmund & Babin, 2010:311). Purposive sampling is a form of non-probability sampling and can be described as a technique in which a sample is chosen by an experienced researcher based on his/her own judgement regarding some characteristics of the possible participant (Zikmund & Babin, 2010:312). In addition to purposive sampling, convenience as well as snowball sampling, was also implemented to gather an adequate sample size.

An intentional effort was made to ensure a diverse quota within the sample in terms of age, ethnicity, level of education and individual income per month. Subject to the recommendation of the post graduate committee, the sample size was set at 400 in order to increase reliability and eliminate any biased generalisations (Creswell, 2015:76). An eventual sample size of 469 was achieved.

3.5 INSTRUMENT DEVELOPMENT, DATA COLLECTION AND ANALYSIS

A structured, self-administered questionnaire was developed for this study and was administered and distributed via Qualtrics as an online survey (included in **Addendum A**). In an attempt to simplify the questionnaire and to make it understandable for a variety of people, voluntary simplistic clothing consumption practices was referred to as “sustainable” clothing practices as more individuals are familiar with the concept of sustainability. Thus, all sections of the questionnaire and some parts of the analyses will refer to sustainable clothing practices that is synonymous to the more theoretically based voluntary simplistic clothing consumption practices.

A comprehensive consent form preceded the questionnaire, in which the participants were clearly informed about the research and the research procedure, privacy and confidentiality, withdrawal clauses and rights to access data as well as contact details of the researcher should they require

any other information. The participants were then given the option to either agree or disagree to the terms and conditions of the survey. If the participants agreed to the conditions as stated in the consent form, they were redirected to the questionnaire that comprised of various sections relating to specific constructs that are relevant in this study. Most of the sections that formed part of the questionnaire were compiled by making use of existing scales used in previous studies, and were adapted accordingly to address the concepts and objectives related to this study to ensure some sort of construct validity (Delport & Roestenburg, 2011:175). A breakdown of the various sections (sections A - J) can be seen below:

- **Section A:** Screening questions relating to gender and age were included at the beginning of the questionnaire to ensure that the participants comply with preconditions for participation. If they did not comply with all of the questions in this section, they were sent to the end of the questionnaire where an accompanying message stated that they can unfortunately not continue with the questionnaire, but that their efforts were greatly appreciated.

- **Section B:** A section pertaining to *objective knowledge* was incorporated early on in the questionnaire, in which the participants were asked to indicate to what degree the questions regarding sustainable clothing practices were false or true. The section included 10 questions relating to the objective knowledge regarding voluntary simplistic clothing consumption practices and was specifically placed at the beginning of the survey in order to objectively test their knowledge regarding the subject at hand before they are exposed to any information that might subjectively alter their answers regarding their objective knowledge of sustainable clothing practices. The 10 scale items that were formulated and adapted extensively for objective knowledge were derived from a scale developed by Kim and Damhorst (1998). The Cronbach alpha (α) for selected items relating to objective knowledge was 0.74, which indicates acceptable internal reliability (Delport & Roestenburg, 2011:177). The rating scale, namely a seven-point Likert-scale, had response options ranging from 1, which is “Definitely false”, to 7 which is “Definitely true” with 4 representing “Don’t know” (Vagias, 2006). All questions were scaled that 1 equals a negative view and 7 equals a positive view.

- **Section C:** Once the participants completed the section regarding objective knowledge, they were redirected to the next page, on which an all-inclusive summary of sustainable clothing practices was stipulated. This acted as an information guide to assist

the participants in completing the remainder of the questionnaire with ease regarding the questions relating back to sustainable clothing practices and concepts such as reduce, repair, recycle, reuse and refuse. The section was stated as follows:

The previous questions may have had you wondering what it means to engage in sustainable clothing practices. In order to complete the rest of the questionnaire we would like to summarise SUSTAINABLE CLOTHING PRACTICES as follows:

- *REDUCE the amount of clothing you buy, use or throw away (E.g. buy good quality clothing or buy clothing that is not linked to a trend (i.e. classic styles)).*
- *REPAIR your clothes or recycle it (E.g. make rags out of worn out clothing).*
- *RECYCLE OR REUSE clothing in an eco-friendly manner (E.g. donate it to friends/charities, re-sell/exchange it)*
- *REFUSE to buy clothing that is bad for the environment and rather buy 100% organic cotton or recycled polyester.*
- *REFUSE to buy unethical/imported clothing brands and rather support "Proudly SA" or "Made in SA".*

FIGURE 3.1: VISUAL REPRESENTATION OF SUSTAINABLE CLOTHING PRACTICES

- **Section D**: Before respondents could move on to section D, they provided with a summary (seen above in section C), of what sustainable clothing practices entails, with images relating to every option. Thereafter section D followed and included one question regarding the participants' current engagement in sustainable clothing practices. The purpose of this question was to gain a general view of which sustainable clothing practices were most common to the participants at that point in time. Respondents could tick which of the following (if any) they already implement in their daily lives. They also had the choice of choosing more than one option.

The options were as follows:

- REDUCE the amount of clothing you buy, use or throw away
- REPAIR your clothes or recycle it (E.g. make rags out of worn out clothing)
- RECYCLE OR REUSE clothing in an eco-friendly manner (E.g. donate it to friends/charities, re-sell/exchange it)
- REFUSE to buy clothing that is bad for the environment and rather buy 100% organic cotton or recycled polyester
- REFUSE to buy unethical/imported clothing brands and rather support "Proudly SA" or “Made in SA"
- None

Thereafter, the questionnaire took on a more systematic format in which seven-point Likert rating scales with response options were incorporated as the measuring instruments, because they are simple to administer and understand, as well as increases the reliability of the study (Zikmund & Babin, 2010:255).

- **Section E**: This section included 22 questions regarding consumers’ engagement in the various *dimensions (i.e. material simplicity, self-determination, ecological awareness, and human scale)* of voluntary simplistic clothing consumption practices (Objective 3). Scale items were derived from a scale validation study by Reis (2019). This scale specifically relates to clothing behaviour and was patterned after a behavioural index developed by Leonard-Barton (1981). The Cronbach alpha (α) for the dimensions relating to the voluntary simplistic clothing consumption practices scale ranged from 0.603 to 0.881, with reduced consumption scoring 0.603, unique handcraft scoring 0.711 and local ethical brands scoring 0.803 (Taljaard *et al.*, 2018a), indicating reasonable internal reliability of the various constructs, except for reduced consumption that was below the 0.7 threshold (Delport & Roestenburg, 2011:177). For this study the items were further developed and adapted to the purposes of this research topic and improve overall clarity of items in an emerging market context. In terms of section E the rating scale, namely a seven-point Likert-scale, had response options ranging from 1, which is “Strongly disagree”, to 7 which is “Strongly agree” (Vagias, 2006). All questions were scaled that 1 equals a negative view and 7 equals a positive view. The options were as follows: Strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree and strongly agree.

- **Section F**: This section included 15 questions regarding the *basic psychological needs (i.e. competence, autonomy and connectedness/ relatedness)* to engage in voluntary simplistic clothing consumption practices (Objective 1). These items were derived from previous studies that incorporated the Basic Psychological Needs Scale (BPNS) (Deci & Ryan, 2000; Deci, Ryan, Gagné, Leone, Usunov & Kornazheva, 2001) as well as the Psychological Need Satisfaction in Exercise (PNSE) scale (Wilson *et al.*, 2006), and were adapted and rephrased for the purposes of this study. The Cronbach alpha (α) for the items relating to perceived competence and autonomy in the PNSE scale was 0.91, while perceived relatedness scored 0.9, indicating good internal reliability of the various constructs (Delport & Roestenburg, 2011:177). For the purpose of this study, the respondents were encouraged to respond to every item in terms of how they feel when taking part in sustainable clothing practices ("Explain how you feel when taking part in sustainable clothing practices (i.e. reduce, repair, recycle, reuse, refuse)."). In terms of section F the rating scale, namely a seven-point Likert-scale, had response options ranging from 1, which is "Definitely false", to 7 which is "Definitely true" (Vagias, 2006). All questions were scaled that 1 equals a negative view and 7 equals a positive view. The options were as follows: Definitely false, most likely false, probably false, neutral, probably true, most likely true and definitely true.

- **Section G**: This section included 12 questions regarding the *self-determined motivations (i.e. intrinsic motivation, integrated regulation, identified regulation)* to engage in voluntary simplistic clothing consumption practices (Objective 2). These items were derived from a previous study relating to the Motivation Toward the Environment Scale (MTES) (Pelletier *et al.*, 1998) and were adapted and rephrased to relate to sustainable clothing practices in an emerging market context. The Cronbach alpha (α) for the items relating to intrinsic motivation in the MTES was 0.89, while integrated regulation scored 0.92, and identified regulation was 0.89, all indicative of internal reliability (Delport & Roestenburg, 2011:177). For the purpose of this study, the respondents were asked to indicate their level of agreement for taking part in sustainable clothing practices. The rating scale used for section G was a seven-point Likert-scale, with response options ranging from 1, which is "Strongly disagree", to 7 which is "Strongly agree" (Vagias, 2006). All questions were scaled that 1 equals a negative view and 7 equals a positive view. The options were as follows: Strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree and strongly agree.

- **Section H**: This section included 5 questions relating to the *knowledge (i.e. subjective knowledge)* regarding the participants' voluntary simplistic clothing consumption practices. The five scale items relating to *subjective knowledge* were formulated and adapted from a previous study by Flynn and Goldsmith (1999). After eliminating some items, the Cronbach alpha (α) for remaining items relating to subjective knowledge was 0.93, which indicates a very good internal reliability (Delport & Roestenburg, 2011:177). The rating scale used for section H was a seven-point Likert-scale, and had response options ranging from 1, which is "Strongly disagree", to 7 which is "Strongly agree" (Vagias, 2006). All questions were scaled that 1 equals a negative view and 7 equals a positive view. The options were as follows: Strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree and strongly agree.

  Lastly, one scale item was formulated and adapted for *experience* and was derived from previous studies (Bruner, 2009:233; Gleim, Smith, Andrews & Cronin, 2013; Kang *et al.*, 2013; Sharma & Patterson, 2000). The consumers were asked how often they take part in sustainable clothing practices and the 5-response options ranged from "Never" to "Always".

- **Section I**: This section included five questions regarding demographic information (e.g. age, level of education, area of residence, approximate individual income per month and population group or ethnicity). The questions were formulated in such a way that the demographic profiles of the respondents could be described and documented accurately.

- **Section J:** Lastly, the participants were asked whether they would be willing to participate in a 10-week follow-up blog regarding the same topic in order for the researcher to gain a deeper understanding of the phenomenon. If they responded yes, they were asked to provide their cell phone number and e-mail address for a possible follow-up session. If their response to the initial question regarding the follow-up study was no, they were sent to the end of the survey.

Although the questionnaire consisted of 10 sections, only sections A (screening questions), C (general information pertaining to voluntary simplistic clothing consumption practices (VSCCP)), D (current VSCCP), E (VSCCP), F (basic psychological needs), G (self-determined motivation) and I (demographic information) were used during this study for analyses and structural equation modelling purposes.

It is however important to note that the other sections of the questionnaire (sections B (objective knowledge), H (subjective knowledge and experience) and J (follow-up blog inquiry)) form part of ongoing research and are excluded from this thesis. These sections will be used for future interpretation and expansion on the topic of interest.

A pre-test was conducted on a sample of 60 respondents before commencing actual data collection to finalise the questionnaire and to clarify whether the questions were clear, understandable and not leading (Delport & Roestenburg, 2011:177). The demographic make-up of the respondents was synonymous to the larger sample and they were recruited through convenience sampling techniques (i.e. female, aged 21-65, grade 12 or higher education, living in South Africa). The pre-test was distributed via the exact same electronic platform as the larger group (making use of Qualtrics to distribute the online questionnaire) and respondents received either a link or a QR code via messaging such as Whatsapp or social media (i.e. Facebook and Instagram) to access the questionnaire and complete it online. More detail regarding the data collection can be seen in the section below. Furthermore measurement validity as well as content validity was ensured during this process of the study (Delport & Roestenburg, 2011:173). Data analysis was performed on the pre-test sample in the form of Cronbach's alphas and an exploratory factor analysis (EFA) to ensure reliability and face validity; i.e. actually measuring what was intended to be measured (Delport & Roestenburg, 2011:173). Based on the sample size, the Cronbach's alphas were deemed acceptable, falling within the range between 0.7 and 0.9 (Delport & Roestenburg, 2011:177). The EFA's that were conducted also presented acceptable outcomes and thus the questionnaire was deemed acceptable to researchers and experts in the field of Clothing and Textiles. Before initiating data collection, the confirmation of the Ethics Committee of the Faculty of Natural and Agricultural Sciences at the University of Pretoria was sought, and ethics approval was subsequently granted in January 2018 (reference code: EC1711128-165).

Thereafter, the data collection process commenced by making use of Qualtrics to distribute the structured, self-administered questionnaire in an online electronic format via a link or a QR code that the respondents used to access the questionnaire and complete it online. Firstly, the link was sent out to all the prospective respondents who fit the criteria (i.e. friends, alumni of the University of Pretoria, family and acquaintances), by means of e-mails, messages and Whatsapp. The link was either copied into an e-mail addressed to the prospective respondents, which they could simply click on to access the questionnaire, or the link was copied into a text message or Whatsapp (also addressed to the prospective respondent) to access via their cell phones. This message could then easily be copied and sent on to any other person who fit the criteria. Secondly, the link was also distributed on social network platforms such as Facebook, Instagram and

LinkedIn to gain greater exposure in the sense that friends could share the link and expose a wider audience to the link in hopes of possibly becoming a respondent. The link was posted on the researcher's Facebook wall and included as part of the researcher's biography on Instagram, from which respondents could access the link to complete the questionnaire. Ultimately, the notion snowballed and was either shared or posted by fellow respondents who encouraged participation and broadened the opportunity for the extensive distribution of the questionnaire. Ultimately the online questionnaires were solicited to the participants throughout the months of March to August 2018. Data collection yielded 482 responses of which 469 (97.3%) responses were useable and 13 (2.7%) were deemed incomplete and thus discarded. Obtaining representative data in emerging market contexts such as South Africa is often challenging due to the lack of sampling frames and the diverse composition of the population. For these reasons, a non-probable purposive sampling approach was used that exclusively focused on younger to middle-aged, female consumers because they are generally more willing to take part in socially responsible initiatives and may possibly act as early adopters of voluntary simplistic clothing consumption behaviour. They could also be prominent role players in households' overall clothing consumption practices and may encourage fellow household members to adopt more sustainable lifestyles (Strydom, 2011b:231).

Once the data collection process was concluded, the data was converted into a manageable format via the Qualtrics software and transferred to an Excel spreadsheet so that it could be used in SPSS statistical software for analyses. The **data analysis** included basic descriptive statistics, which included measures such as frequencies, percentages, means and standard deviations, presented in table and graph format to gain more insight into the basic body of the data (Fouche & Bartley, 2011:249). Responses pertaining to basic psychological needs, self-determined motivation and dimensions of VSCCP were subjected to exploratory factor analysis (EFA), confirmatory factor analysis (CFA) as well as structural equation modelling (SEM). EFA is most often used as a method to reduce data (Mazzocchi, 2008:219) and enables the researcher to generate theory by exploring the dimensions of the constructs within the variables and to interpret the factor loadings to develop a meaningful label for every factor that occurs (Jackson, 2005:221). SPSS software was used to perform the EFA, utilising Varimax rotation with Kaiser Normalization as the extraction method. The underlying items and variables retained from the EFA were composed as a measurement model and was evaluated by means of a CFA to formulate a SEM model. Thereafter, responses pertaining to the VSCCP were subjected to cluster analysis, which are algorithms that group observations into homogeneous categories according to similarity rules (Mazzocchi, 2008:265). This included an initial exploratory phase in which two-step algorithm was applied to identify the number of clusters. Thereafter, a confirmatory phase took place, in the form

of non-hierarchical K-means clustering approach (StatSoft Inc., 2017) to establish the various cluster groups based on female consumers' engagement in VSCCP.

Table 3.1 provides an overview of the operationalisation of the objectives, constructs, measurements and scales, as well as the various methods of data analysis associated with the corresponding objectives.

TABLE 3.1: OPERATIONALISATION TABLE

OBJECTIVE	CONSTRUCT	DIMENSION	INDICATORS	MEASUREMENT AND SCALES	DATA ANALYSIS
OBJECTIVE 1: To investigate and analyse female consumers' basic psychological needs to engage in voluntary simplistic clothing consumption practices, specifically regarding their:	Basic psychological needs	Competence	A sense of control	The Self-determination Theory (SDT) Basic Psychological Needs Scales were consulted (Deci & Ryan, 2001). Johnson and Finney (2010) were also consulted to adapt the questions according to the topic of interest.	**Descriptive statistics:** * Means * Standard deviations
		Autonomy	Decisions originating within the self		**Inferential statistics:** * EFA & CFA * SEM
		Connectedness / Relatedness	A sense of belonging		
OBJECTIVE 2: To investigate and analyse female consumers' self-determined motivation to engage in voluntary simplistic clothing consumption practices, specifically regarding their:	Self-determined motivations	Identified regulation	Behaviours are executed for personal value	Scale items were derived from a previous study relating to the Motivation Toward the Environment Scale (MTES) (Pelletier et al., 1998) and were adapted and rephrased to relate to sustainable clothing practices.	**Descriptive statistics:** * Means * Standard deviations
		Integrated regulation	Executed to accomplish personal outcomes		**Inferential statistics:** * EFA & CFA * SEM
		Intrinsic motivation	Behaviours related to enjoyment / interest		
OBJECTIVE 3: To determine and describe female consumers' engagement in voluntary simplistic clothing consumption practices that reflect dimensions of material simplicity, self-determination, ecological awareness and a regard for human scale.	Voluntary simplistic clothing consumption practices	Ethical Clothing	Refuse to buy clothing that is bad for the environment or imported	Scale items were derived and adapted from a scale validation study by Reis (2019). This scale specifically related to clothing behaviour (Taljaard *et al*., 2018) and was patterned after a behavioural index developed by Leonard-Barton (1981).	**Descriptive statistics:** * Means * Standard deviations
		Clothing Longevity	Reuse and/or recycle clothing		**Inferential statistics:** * EFA & CFA * SEM
		Repurposed Clothing Consumption	Repair clothing rather than throwing it away		
		Unique Handcrafted Clothing	Buy handcrafted rather than mass-produced clothing		
		Need-based Clothing Consumption	Reduce clothing by only buying what you need		
OBJECTIVE 4: To cluster female consumers (i.e. full voluntary simplifiers and partial/non-voluntary simplifiers) based on their level of engagement in voluntary simplistic clothing consumption practices.	Classifications of Voluntary Simplicity	Full voluntary simplifiers	Living simply and restricting consumption	Cluster analysis was executed on scale items derived from objective 3. This scale specifically relates to voluntary simplistic clothing consumption practices in South Africa.	**Inferential statistics:** * Cluster Analysis
		Partial voluntary simplifiers	Minor, inconsistent changes to live simply		
		Non-voluntary simplifiers	No adoption of any sustainable consumption practices		

3.6 QUALITY OF DATA

The quality of a well-executed study is most often dependant on **validity and reliability** and therefore it has been incorporated into every aspect of this study where deemed appropriate and necessary (Delport & Roestenburg, 2011:172). The following discussion provides a brief overview of the steps taken to ensure reliability and validity in this study:

Validity can be described as the extent to which research is deemed accurate and consists of two important aspects, namely that concepts relating to the research design are measured accurately and that the instruments used during data analysis measure the correct concepts that are related to the study (Delport & Roestenburg, 2011:173; Hair, Black, Babin & Anderson, 2014:618; Zikmund & Babin, 2010:250). Various types of validity were ensured throughout this study and include the following:

Theoretical validity was enhanced by combining various established theories to define and explain key concepts as well as the association between these concepts (Leedy & Ormrod, 2005:28-29). More specifically, theoretical validity can be warranted by conducting a thorough review of literature relating to the field of interest and identifying an appropriate theoretical framework with clear concepts to explore the basic psychological needs and self-determined motivation of female consumers' voluntary simplistic clothing consumption practices in South Africa (Leedy & Ormrod, 2005:28-29). This study conceptualised all relevant concepts in the preceding discussions and included a conceptual framework to indicate the relationships amongst the various components.

M*easurement validity* is made up of various validity options including *content, and construct validity*. To ensure content and construct validity, the questionnaire design was pre-tested among a group of people who are representative of the sample (Delport & Roestenburg, 2011:173; Salkind, 2012:124-125; Zikmund & Babin, 2010:250-251). Overall, measurement validity was assured by making use of conversational language to avoid complexity or misinterpretations and was implemented and confirmed by means of pre-tested questionnaires (Leedy & Ormrod, 2005:28-29). Furthermore, the questions were structured in such a way to eliminate the possibility of leading questions.

More specifically, *content validity* can be described as the logical flow from one concept to the next one. It can also be explained as the extent to which a test represents the universe of items

from which it is drawn and becomes evident when a scale's content logically reflects what was intended to be measured (Delport & Roestenburg, 2011:173; Salkind, 2012:124; Zikmund & Babin, 2010:250). This approach is evident when the scale logically reflects the concept being measured by the researcher. In terms of the study, the questionnaire was checked by experts in the field of Clothing and Textiles and pre-tested to ensure that the participants have a clear understanding of the questions that were asked and were able to accurately answer them (Delport & Roestenburg, 2011:173).

Construct validity can be described as the extent to which the a set of measured items are related to the constructs that the aforementioned items are designed to measure (Hair *et al.*, 2014:618). To establish construct validity in the study, the test scores should be correlated with the scores measured for the underlying theory of the research (Salkind, 2012:125; Zikmund & Babin, 2010:251). In order to make it applicable to the study, a questionnaire was constructed with questions pertaining to female respondents' basic psychological needs, self-determined motivation and voluntary simplistic clothing consumption practices in South Africa. Construct validity was then accomplished by making use of scales and measurement instruments that have been proven successful in previous research studies as well as conceptualisation and operationalisation of the constructs (Delport & Roestenburg, 2011:175). This eliminated problems related to misinterpretations and response bias.

Furthermore, *convergent validity* was established by ensuring that the items of a specific factor have a high proportion of variance in common; this was ensured through high factor loadings in the confirmatory factor analysis stages of data analysis (Hair *et al.*, 2014:618). Adequate average variance extracted (AVE) was also used to ensure construct validity during the analysis phases.

Discriminant validity indicates that two measures that are unrelated, are in fact not related to one another, and is established when the square root of the AVEs are all higher than the corresponding inter-construct correlations. In terms of this study, all square roots of AVEs were in fact higher than the corresponding inter-construct correlations, ensuring discriminant validity (Fornell & Larcker, 1981). Furthermore, all constructs were sufficiently different from one another, because the correlations between the latent constructs' composite and all the other constructs were less than 0.7 (Urbach & Ahlemann, 2010). Discriminant validity was also established by examining the cross loadings and confirming that all indicator loadings were higher than their respective cross loadings (Hair *et al.*, 2014).

In addition to that, **reliability** is concerned with internal consistency and is enhanced by making use of established measures that have proven their reliability in previous studies (Babbie & Mouton, 2001:122; Malhotra, 2010:320). In terms of the measuring instrument of this study, attention was focused on the wording and order of the items in an effort to minimise social desirability response bias that affects most survey data relating to sustainable consumption (Follows & Jobber, 2000). Experts in the field of Clothing and Textiles also checked the questionnaire before distribution to ensure that all the questions were relevant and easy to complete. Thereafter, a pre-test was conducted before the final questionnaire was finalised and distributed to ensure relativity and professionalism (Delport & Roestenburg, 2011:177). The identities of the respondents were kept confidential in order to ensure truthful responses and the participants were not be forced or intimidated into taking part in the study. In addition to that, the questionnaire included a consent form to clearly state the purpose of the study to the prospective respondents (Salkind, 2012:118).

Reliability is furthermore described as the consistency of a measuring instrument's performance (Salkind, 2012:115; Zikmund & Babin, 2010:249) and takes place when the instrument measures the same concept multiple times and results in a similar outcome (Delport & Roestenburg, 2011:177). That being said, a correlation coefficient, namely the Cronbach's alpha, was utilised to measure the extent to which the various items in the scale were able to correlate with the total measure of the scale (Delport & Roestenburg, 2011:177; Salkind, 2012:115). Lastly, construct reliability is used to evaluate the degree to which different test items that probe the same construct, produce similar results (Phelan & Wren, 2007) and was calculated to once again reconfirm the reliability of the scale and the study as a whole.

3.7 ETHICAL ISSUES

Ethics can be defined as moral ideologies that are accepted by people and provides regulations as well as behavioural expectations regarding the preferable conduct towards experimental subjects as well as participants and researchers (Strydom, 2011a:114). As mentioned before, the confirmation of the Ethics Committee of the Faculty of Natural and Agricultural Sciences at the University of Pretoria was sought prior to data collection, and ethics approval was subsequently granted in January 2018 (reference code: EC1711128-165) (see **Addendum B**). Data collection

commenced soon afterward with all of the relevant ethical considerations taken into account as summarised below.

A comprehensive consent form (see **Addendum A**) preceded the questionnaire, in which the participants were clearly informed about the topic of investigation and the research procedure, their privacy and confidentiality, withdrawal clauses and rights to access data as well as contact details of the researcher should they require any other information (Salkind, 2012:86; Strydom, 2011a:118).

- The participants were then given the option to either agree or disagree to the terms and conditions of the survey.
- If the participants agreed to the conditions as stated in the consent form, they were redirected to the questionnaire that comprised of various sections relating to specific constructs that are relevant in this study.
- Voluntary involvement of all participants were assured and any of the participants had the option to withdraw from the research process at any given time or phase (Salkind, 2012:86; Strydom, 2011a:116).
- Confidentiality and anonymity was ensured by integrating it into the data collection process and the identity and personal information of the participants were not revealed in the research report (Strydom, 2011a:119).

The findings of the research were compiled and released in an objective manner in the form of a written thesis (Strydom, 2011a:126) and comply with the necessary requirements of the University of Pretoria and the Department of Consumer and Food Sciences.

3.8 CONCLUSION

This chapter provided an overview of the various components that form part of the research design and methodology of this study. The research design was firstly introduced, followed by the sample and sampling technique, as well as an extensive explication of the measuring instrument. Thereafter the data collection process was explained, followed by a brief overview of the data analyses that was conducted during the study. In addition to that, the operationalisation table summarised the objectives, key constructs as identified in the literature review and theoretical framework with accompanying measuring instruments, items and relevant analyses. Lastly, the measures employed to enhance the overall quality of the data, as well as the ethical soundness of the study concluded the chapter. These aspects are pivotal in ensuring appropriate data from which valid and reliable results can be drawn.

CHAPTER 4: DISCUSSION AND INTERPRETATION OF RESULTS

Chapter four provides an overview of the results pertaining to this study. This includes the demographic characteristics of the sample, additional descriptive statistics relating to involvement and experience surrounding voluntary simplistic clothing consumption practices, and various other methods of analysis such as Exploratory Factor Analyses (EFA), Confirmatory Factor Analyses (CFA), Structural Equation modelling (SEM) and cluster analyses.

4.1 INTRODUCTION

This chapter includes a synopsis of the results of this study. It is worth mentioning that for the purposes of data collection the term deemed “voluntary simplistic clothing consumption practices” was simplified to “sustainable clothing practices” in order to make it more understandable for a variety of people and easier to complete the questionnaire. Thus, some parts of the analyses will refer to sustainable clothing practices, which is synonymous to the more theoretically based voluntary simplistic clothing consumption practices (VSCCP) while other parts will refer to VSCCP. Furthermore, the demographic information pertaining to this study is made up of a sample size of 469 female consumers between the ages of 21 and 65 who live in South Africa. A summary of the remaining demographic characteristics is presented in the succeeding paragraphs of this chapter together with a table indicating the numerical data such as frequencies and percentages to present the results using descriptive statistics. Thereafter the results pertaining to the respondents’ current involvement and experience with regards to sustainable clothing practices will be discussed and presented in the form of graphs. In addition to that, Exploratory Factor Analyses (EFA), Confirmatory Factor Analyses (CFA), Cronbach’s Alphas, Average Variance Extracted (AVE), correlations and a Structural Equation model (SEM) are used to interpret the results and indicate which basic psychological needs and self-determined motivations lead to the female respondents’ VSCCP. Lastly, the items pertaining to VSCCP are subjected to cluster analysis to establish full-, partial-/ non-voluntary simplifier cluster groups (Mazzocchi, 2008:265). All results are structured and presented according to the main objectives and hypotheses of this study and are discussed in relation to the problem statement with reference to existing literature.

4.2 DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

Demographics, on its own, cannot sufficiently explain consumers' behaviours; however it could provide some useful information regarding certain market segments (D'Souza, Taghian, Lamb & Peretiatko, 2007). Panzone, Hilton, Sale and Cohen (2016) stated that socio-demographic information plays a critical role in determining sustainable consumption behaviours. It could ultimately indicate consumer clusters that differ in terms of concerns, attitudes and behaviour when it comes to concepts such as voluntary simplistic clothing consumption practices (Starr, 2009). For this study, the sample complied with certain demographic requirements to record the basic psychological needs and self-determined motivations pertaining to voluntary simplistic clothing consumption practices of a very specific group of consumers in the context specific setting of South Africa. The section to follow will provide an overview of the demographic characteristics (i.e. gender, age, population group, level of education, area of residence and individual income per month) of the sample from which data was derived for the results that are presented in the remainder of the chapter.

Responses were obtained from 482 respondents, with 469 (97.3%) completed questionnaires and 13 (2.7%) questionnaires with missing information. In terms of demographic characteristics, 469 complete responses were obtained and was included the compilation of the following demographic profile:

4.2.1 Gender

As mentioned before, this study exclusively focused on female consumers and their particular engagement in voluntary simplistic clothing consumption practices within the context specific setting of South Africa. Gender, as a demographic variable, is known to influence the way in which consumers pursue goals (Costa Pinto *et al.*, 2014). It was also found that gender has a significant influence on pro-environmental concerns and attitudes in the sense that women were more inclined to express their pro-environmental concerns and act in a socially responsible manner (D'Souza *et al.*, 2007; Panzone *et al.*, 2016). Even though women seem to be more willing to change the way they live to act in a pro-environmental manner, some studies have revealed that they have less knowledge regarding environmental issues than males (Mitchell & Walsh, 2004; Mostafa, 2007a). Moreover, females tend to follow social or communal goals such as affiliation and the development of harmonious relations (Costa Pinto *et al.*, 2014; Solomon & Rabolt,

2004:151), while males tend to have more ego-centred goals and are less concerned with social affiliations (Costa Pinto *et al.*, 2014; Noble *et al.*, 2006). Together with that, females are more expressive in terms of their emotions, the social standards they set as well as having a stronger "ethic of care" (Bray, Johns & Kilburn, 2011; Lee, 2009). They would for example dedicate more time and money towards charities (Leslie *et al.*, 2013; Simmons & Emanuele, 2007). Furthermore, females are inclined to adopt unselfish, communal behaviour, such as supporting government enforcement of social and environmental standards (Eagly, 2009; Fukukawa *et al.*, 2007; Luchs & Mooradian, 2012). Therefore, female consumers were selected for this study as they are generally more willing to take part in socially responsible initiatives such as voluntary simplistic clothing consumption practices and could possibly act as early adopters of this lifestyle. They may also become opinion leaders who promote sustainable lifestyles in terms of clothing consumption thereby encouraging more consumers to become involved and implementing sustainable clothing consumption practices in their daily lives.

Another reason for exclusively focusing on females was the fact that they could also be prominent role players in households' overall clothing consumption practices and may encourage fellow household members to adopt more sustainable behaviour in their daily lives. Various research has been conducted on female clothing consumers and their clothing consumption behaviours in the South African context (Jacobs & De Klerk, 2010; Momberg *et al.*, 2012; Sonnenberg *et al.*, 2014). However, limited research has been conducted on female consumers' sustainable consumption and voluntary simplicity in an emerging market context such as South Africa and even less concerning voluntary simplistic clothing consumption practices with regards to basic psychological needs and self-determined motivation as referred to in the Self-Determination Theory (SDT).

4.2.2 Age

Age also plays a role in sustainable consumption in the sense that younger consumers tend to be more concerned about the environment, while older consumers are more involved in acting more sustainable (D'Souza *et al.*, 2007; Jung & Ha-Brookshire, 2017; Panzone *et al.*, 2016; Starr, 2009; Straughan & Roberts, 1999). All respondents who participated in this study were between the ages of 21 and 65 years old. Age was used as a prerequisite for taking part in this study to ensure that the respondents are possibly economically independent and are able to make independent decisions regarding their sustainable clothing practices.

A summary of the age categories is presented in **Table 4.1** below. The majority of the respondents were aged between 21 and 39 (78.7% / n = 369), which approximates the Generation Y cohort (Frings, 2008:43; Noble *et al.*, 2009). They tend to be more fashion-oriented (Frings, 2008:43; Keiser *et al.*, 2017; Lang *et al.*, 2013; Ruppert-Stroescu *et al.*, 2015) and can be described as self-assured, optimistic and achievement driven (Donnison, 2007). The remaining age groups (i.e. 40-59 and 60 and older) made up 21.3% (n = 100) of the respondents and belong to the Generation X group (Frings, 2008:43; Keiser *et al.*, 2017; Schiffman *et al.*, 2014:343). These respondents can be described as mature, career- and family-oriented with a tendency to spend their money on housing, home goods and education (Frings, 2008:43; Schiffman *et al.*, 2014:343). They are also susceptible to voluntary simplistic lifestyles that focus on eliminating clutter and limiting expenditure on consumer goods (Alexander, 2011; Ballantine & Creery, 2010; Etzioni, 1998; Iyer & Muncy, 2009). As pointed out previously, South Africa's demographic profile for 2018 indicates that 41.8% of the country's population is between the ages of 25 and 54 years old (Indexmundi, 2018). Furthermore, another 6.66% of the country's population is between the ages of 55 and 64 years old (Indexmundi, 2018). Together, the population that currently falls between the ages of 25 and 64 years constitute almost half (48.5%) of South Africa's entire population, and this age interval is generally considered as the working-class individuals who receive monthly incomes and are often the bread winners of the household. Considering the large portion of the population that fall within the specified age category 21 to 65, and the characteristics of this age group regarding the environment and being eco-conscious, it is rather vital to understand this age group and explore the needs and motivations of these consumers to gain an understanding of their voluntary simplistic clothing consumption practices to serve as a basis for future research as well as inform marketing campaigns.

TABLE 4.1: DEMOGRAPHIC PROFILE OF THE SAMPLE

Variables	Frequency (N = 469)	Percentage (%)
Age (*n* = 469)		
21 – 39	369	78.7
40 – 59	91	19.4
60 – 65	9	1.9
Population group (*n* = 469)		
Black and other	106	22.6
White	363	77.4
Level of education (*n* = 469)		
Grade 12 / Matric	101	21.5
Tertiary degree / diploma	204	43.5
Postgraduate	164	35.0
Area of residence (*n* = 469)		
Gauteng	323	68.8
Western Cape	74	15.8
Rest of South Africa	72	15.4
Income per month (*n* = 469)		
Less than R 5 000 ($345)	141	30.1
R 5 001 - R 25 000 ($345 - $1,720)	220	46.9
R 25 001 - R 45 000 ($1,720 - $3,090)	85	18.1
More than R 45 000 ($3,090)	23	4.9

4.2.3 Population group

Representative data remains challenging in countries such as South Africa where sampling frames are absent and the population is very diverse (Burgess & Steenkamp, 2006). Despite that, an effort was made to recruit suitable individuals (as mentioned in chapter 3) in South African urban areas by means of non-probability purposive, convenience as well as snowball sampling techniques to gather an adequate sample size. Due to these sampling techniques, the population groups might have been skewed and cannot, as mentioned before, be generalised to the larger South African population (Mazzocchi, 2008:123; Strydom, 2011b:233). That said, the intention of this study was not to generalise, but rather to discover specific areas of interest that warrant further investigation and to create future research agendas.

According to the South African Employment Equity Act, respondents were asked to complete a question regarding the population group they belong to. Majority of the respondents were White (77.4% / n = 363), while the remaining 22.6% (n = 106) were made up of other groups classified as Black, Asian, Coloured or Indian. The outcome of this section could be due to various factors

that either relate to sampling techniques or the current lifestyle of various population groups in South Africa and how it has evolved in the last two decades. The argument brought forward is that the concept of voluntary simplistic clothing consumption practices or sustainable clothing practices does not always carry the same weight throughout the various population groups due to factors such as evolving lifestyles, historical events and cultural differences in terms of behaviour in the modern society. The lifestyles of some South Africans may have changed drastically in the last 20 years due to political changes and empowerment (Bevan-Dye *et al.*, 2012). The younger Black population groups in South Africa, in particular, have evolved significantly due to historical events, which have shaped their behaviour and distinguish them from various other groups (Bevan-Dye *et al.*, 2012; Kaus, 2013). This population group grew up in the post-apartheid era and is generally made up of generation Y individuals, living in urban areas, earning an above average income that enables them to consume conspicuously (Bevan-Dye *et al.*, 2012). This generational group has embraced materialism and are driven by status, partially due to influences such as technology and public figures that act as references in terms of their lifestyles (Bevan-Dye *et al.*, 2012). With that being said, research indicates that a gap exists in the visible consumption spending (i.e. the consumption of products that are readily observable during social interactions) in South Africa, where Black population groups spend 50% more on visible consumption than the White population, and the differences are most distinct for clothing and footwear (Kaus, 2013). Based on the above-mentioned research, it can be deducted that generally the Black population is inclined to seek status in terms of consumption and are as of yet less prone to notions such as voluntary simplistic clothing consumption practices.

4.2.4 Level of education

Level of education was also included as a demographic variable as it could influence consumers' behaviours in terms of the environment and as well as other social issues. Research indicates that education goes hand in hand with environmental concern, knowledge and actual behaviour; an increase in the one leads to an increase in the other (D'Souza *et al.*, 2007; Diamantopoulos, Schlegelmilch, Sinkovics & Bohlen, 2003; Panzone *et al.*, 2016). Therefore, as a prerequisite for this study, respondents were required to have a minimum education level of Grade 12 / Matric or higher and they were required to be economically active (i.e. applying their incomes toward the acquisition of goods and services). This was necessary to ensure that the participants had some sort of recognition of the topic of sustainable / voluntary simplistic clothing consumption practices and could make informed responses when participating in the data collection.

As indicated in **Table 4.1**, almost a quarter of the respondents (21.5% / n = 101) had a minimum education level of Grade 12 / Matric. In addition to that, 43.5% (n = 204) of the respondents indicated that they have obtained either a tertiary degree / diploma, while the remaining 35.0% (n = 164) of the respondents had some sort of postgraduate degree (Honours, Masters or PhD). The intention of this study was not to generalise the findings, but rather purposefully reflect on the insight gained from the sample with quite a high level of education in terms of their basic psychological needs and self-determined motivations regarding voluntary simplistic clothing consumption practices (Mazzocchi, 2008:123; Strydom, 2011b:233).

4.2.5 Area of residence

In terms of geographic boundaries, the respondents who participated in this study were recruited from across South Africa, but mainly from areas such as Gauteng and the Western Cape, which are considered economic hubs of South Africa. Johannesburg, Pretoria and Cape Town are some of the major cities in these provinces and in South Africa, and are at the forefront in terms of innovation and technology. Respondents who live in these areas are exposed to technology on a daily basis, have multiple options in terms of products and services, and can very easily access any clothing outlet or clothing association that could be linked to the concept of voluntary simplistic clothing consumption practices.

Table 4.1 indicates that the majority of the respondents were situated in the Gauteng region (68.8% / n = 323), while 15.8% (n = 74) were located in the Western Cape and the remaining 15.4% (n = 72) were spread all across South Africa, in towns and cities such as Bloemfontein, Durban, Potchefstroom, Polokwane and Nelspruit. That said, Gauteng is South Africa's main economic hub, with 14 million people living in the province; accounting for more or less 25% of the total population (De Kadt, Parker & Culwick, 2018). In addition to that, Gauteng contributes approximately 35% to South Africa's Gross Domestic Product (GDP) and is classified as one of the largest economies in Africa (Check, 2018). Based on the aforementioned information it might be logical that majority of the respondents reside in Gauteng, as they form part of the higher income, working class who seek innovation and technology at their fingertips, are exposed to social media almost every second of the day and are continuously introduced to new and innovative products and services such as the newest technology or notions such as sustainable living or voluntary simplicity. These outcomes could have also been caused by the sampling techniques that were implemented. Convenience and snowball sampling techniques were applied in addition to purposive sampling, in order to increase the total amount of respondents by means of distributing the electronic link to potential respondents who then distributed it to potential

respondents in their circle of acquaintances. Nevertheless, all respondents were South African and complied with the sample requirements.

4.2.6 Income per month

Numerous studies have indicated that income could influence consumers' socially and environmentally responsible behaviour (D'Souza *et al.*, 2007; Hiller Connell, 2010). More specifically, research stipulates that consumers with higher income brackets tend to take part in ethical consumption more often than the lower income bracket (Carrigan & Attalla, 2001; Jung & Ha-Brookshire, 2017; Starr, 2009). The reason for this might be due to the fact that sustainable products are usually deemed more expensive. Therefore, even though the lower income bracket might support the notion of sustainable consumption practices, they might not be able to execute the intention to be more sustainable due to the lack of funds or accessibility (Jung & Ha-Brookshire, 2017). This conclusion could be specifically true for the consumers of South Africa, who are currently caught up in an unstable, unpredictable economic climate (BusinessTech, 2018a). On the other hand, sustainable clothing practices such as recycling or reusing clothing are often linked to consumers who do not necessarily share the same ethical or environmental concerns, but take part in voluntary simplistic clothing consumption practices because they do not always have the means to purchase new items and rather make use of recycled clothing, or donate it instead of disposing of it in an unsustainable manner (McDonald *et al.*, 2006; McGouran & Prothero, 2016). These consumers are often referred to as "accidental simplifiers". This assumption has certainly evolved over time as repurposing and recycling becomes trendier and is not always influenced by external factors, but is becoming a voluntary notion to become more sustainable. It was therefore decided to include a question regarding the approximate individual income per month (after deductions) into the questionnaire to see whether the assumptions presented anticipated results or whether it presented new findings regarding the income of female consumers taking part in sustainable clothing practices.

As seen in **Table 4.1**, 30.1% (n = 141) of the respondents indicated that their individual income per month (after deductions) is "less than R 5 000" (less than $ 345). Almost half of the respondents (46.9% / n = 220) indicated that they earn an approximate individual income of between R 5 001 ($345) and R 25 000 ($ 1720) per month. Furthermore, 18.1% of the respondents (n = 85) indicated that they earn between R 25 001 (& 1720) and R 45 000 ($ 3090) per month, while only 4.9% of the respondents (n = 23) earn more than R 45 001 (more than $ 3090). According to Businesstech (2018b), the average individual income per month for South Africa's workforce is R 20 860 ($ 1440) a month; this is approximately R 250 320 ($ 17 263) a

year. Thus, almost half of the respondents earn more or less an average salary, which is in accordance with the statistics surrounding South Africa's general income levels.

In conclusion, the eventual sample only included female consumers of whom the majority were between 21 and 39 (78.7%), White (77.4%) and had some sort of tertiary degree or diploma (78.5%). Most of the respondents were situated in the Gauteng province and almost half of the respondents (46.9%) indicated that they earn an approximate income of between R 5 001 ($ 345) and R 25 000 ($ 1720) per month and may therefore have more disposable income to spend on clothing compared to those in lower income groups (1 USD = 14.50 ZAR). Due to non-probability sampling techniques such as purposive, convenience and snowball sampling, the results of this study cannot be generalised (Strydom, 2011b:231). In this regard it should be noted that the concept of voluntary simplicity with accompanying sustainable clothing consumption practices does not always carry the same weight throughout the various income and population groups due to factors such as evolving lifestyles, historical events, empowerment and cultural differences (Bevan-Dye *et al.*, 2012; Kaus, 2013). Yet, it must be emphasized that the intention of this study was not to generalise the findings but rather to discover specific areas of interest that warrant further investigation and to create future research agendas. Future studies in the phenomenon of sustainable clothing practices that include males, specified ethnic groups, age groups and geographic locations should enable further insight and provide the opportunity to establish demographic differences in consumers' engagement in sustainable and voluntary simplistic clothing practices. Having summarised the demographic profile of the sample, the following section will elaborate on respondents' past and current involvement in sustainable clothing practices.

4.3 RESPONDENTS' CURRENT INVOLVEMENT AND EXPERIENCE WITH REGARDS TO SUSTAINABLE CLOTHING PRACTICES

To provide further insight into the profile of the sample, questions were included in the questionnaire to determine respondents' current involvement and the frequency with which they engage in sustainable clothing consumption practices.

4.3.1 Current involvement in sustainable clothing practices

In order to determine the respondents' current sustainable clothing practices, a question was included into the questionnaire (section D), where they could tick which of the following (if any) they already implement in their daily lives. They also had the choice of choosing more than one option. The options were as follows:

- REDUCE the amount of clothing you buy, use or throw away
- REPAIR your clothes or repurpose it (E.g. make rags out of worn out clothing)
- RECYCLE OR REUSE clothing in an eco-friendly manner (E.g. donate it to friends/charities, re-sell/exchange it)
- REFUSE to buy clothing that is bad for the environment (i.e. rather buy 100% organic cotton or recycled polyester)
- REFUSE to buy unethical/imported clothing brands (i.e. rather support "Proudly SA" or "Made in SA")
- None

Preceding this question, respondents were provided with a summary, similar to the options seen above, of what sustainable clothing practices entails, accompanied by images relating to every option (section C), as seen in **Figure 4.1**.

FIGURE 4.1: THE 5 "R'S" OF VOLUNTARY SIMPLISTIC CLOTHING CONSUMPTION PRACTICES

As mentioned before, the total amount respondents that participated in this study was 482. In response to this particular question, 480 (99.6%) respondents indicated their current involvement pertaining to various sustainable clothing practices. Results, shown in **Figure 4.2**, indicated that the majority of the respondents (85.2% / n = 409) stated that they already recycle or reuse clothing in an eco-friendly manner by for example, donating it to friends / charities, or re-selling / exchanging it. Together with that, a large percentage of the respondents (69.4% / n = 333) also

indicated that they reduce the amount of clothing they buy, use or throw away in order to live more sustainably. Furthermore, over a half of the respondents (61.9% / n = 297) repair their clothes or recycle it by, for example, making rags out of their worn-out clothing. Barely a fifth of all respondents (18.1% / n = 87) who participated in this phase of the study refuse to buy unethical or imported clothing brands. Furthermore, they also do not focus on buying from retailers who sell "Proudly SA" or "Made in SA" clothing. In addition to that, a fraction of the respondents (12.7% / n = 61) indicated that they refuse to buy clothing that is bad for the environment. Furthermore, the respondents also do not seem to buy 100% organic cotton or recycled polyester clothing products to be more sustainable. Lastly, only 2.7% (n = 13) of the respondents indicated that they do not implement any sustainable clothing practices in their current lifestyles.

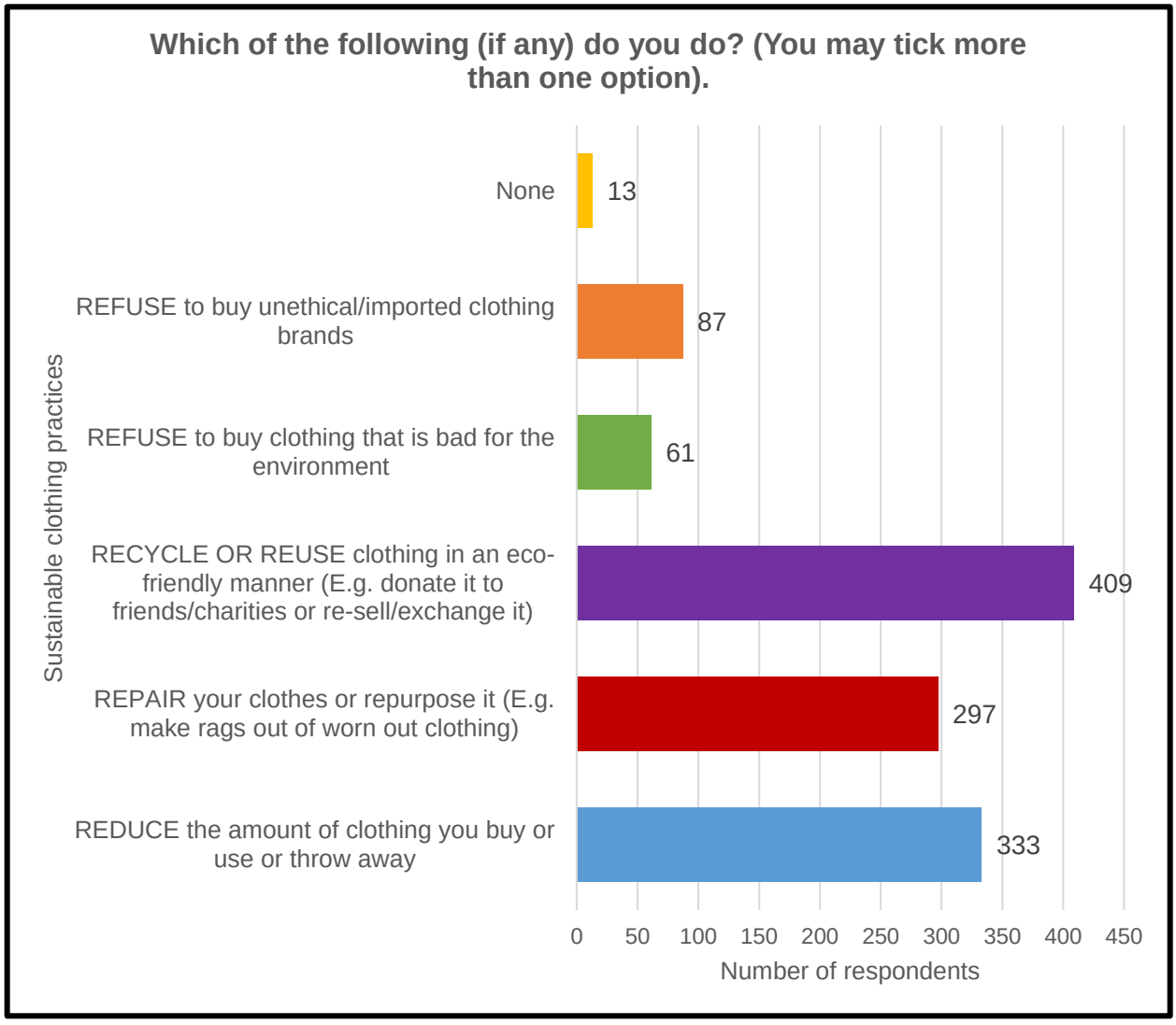


FIGURE 4.2: RESPONDENTS' CURRENT INVOLVEMENT IN SUSTAINABLE CLOTHING PRACTICES

Based on the results presented in **Figure 4.2**, it can be assumed that most South African females, between the ages of 21 and 65, who participated in completing the questionnaire for this study, are already quite involved in some of the sustainable clothing practices such as recycling and reusing, repairing and reducing to live a more sustainable lifestyle in terms of clothing consumption. This could be due to various reasons, such as pro-actively saving the environment for future generations by contributing to improving the current state of the environment or even providing fellow citizens, who do not have the means to acquire basic needs such as clothing, with garments rather than disposing of it prematurely. On the other hand, people might have been forced to opt for more sustainable options and to live sparingly with their possessions and resources due to external events such as South Africa's current economic state as well as the ongoing water crisis which forced many South Africans to re-think their current way of living and implement plans to live simply in order to preserve resources (BusinessTech, 2018a; Donnenfeld, Crookes & Hedden, 2018). Whether the reasons for taking part in sustainable clothing consumption were personal and self-determined or because of external factors remains debatable but considering the few who would refuse to acquire clothing that is detrimental for the environment, a combination of factors might be at play that does not allow for environmental attributes to receive prioritisation in consumption decisions. Additionally, the volume of the female consumers' commitment to recycling, repairing, or reducing is not clear and should be explored in future research relating to voluntary simplistic clothing consumption practices.

One of the prominent notions that are emphasised in this section, includes the notion to prolong clothing items' lifecycles by donating it to friends or charities, re-selling it or even exchanging it. Furthermore, it also includes the initiative to repair clothing or transform old clothing pieces for other purposes such as creating rags to clean with. All of these practices are related to prolonging the lifecycle of a clothing piece to create less waste. As mentioned before, this notion could be due to personal, self-determined reasons or external factors that have left consumers with no other choice but to prolong the lifecycle of their clothing to get by. That said, initiatives such as donating, re-selling and/ or exchanging clothing would not only benefit the consumers taking part in these practices, but would also benefit multiple consumers at the receiving end, who do not have the financial means to acquire a basic need such as clothing, resulting in an overall win-win situation for all parties involved. Initiatives such as this one mentioned above, in which many female consumers already participate, could assist in relieving some of the current issues South Africa faces; such as high unemployment rates and large portions of the population living in poverty (The World Bank, 2018).

Another prominent notion includes reducing the amount of clothing that is bought, used and thrown away. This relates to the voluntary simplification of lifestyles, by choosing only to buy, use or throw away clothing when it is needed. It can therefore be assumed that these consumers tend to resist the trend of fast-fashion, where new fashion items are readily available to consumers whenever they want it, and rather focus their attention on slow fashion, where good quality, classically styled items are consumed by consumers to reduce the amount of clothing waste they produce. In summary it comes down to the notion of being mindful about clothing consumption and attempting to be a generation that wastes less in terms of clothing. It can once again be speculated whether these practices are implemented for altruistic reasons or whether it has been implemented because of external constraints.

The two areas relating to the refusal of buying clothing for sustainable reasons (i.e. Refusing to buy unethical/imported clothing as well as clothing that is bad for the environment) seemed to not yet be prominent practices amongst the female consumers. It can therefore be assumed that the female consumers, between the ages of 21 and 65 in South Africa, have not reached the point of purchasing local/ ethical clothing brands that are “Proudly SA” or “Made in SA” or buying clothing that is made out of eco-friendly fibres (e.g. 100% organic cotton or recycled polyester), to specifically take part in voluntary simplistic clothing consumption practices. This could be due to various reasons such as a lack of knowledge, clothing brand preferences, a lack of availability etc. In addition, the price tags attached to these products might also be a concern to female consumers. More often than not, these products are perceived as being more expensive than the cheaper, imported retail options. This is partially true and can be attributed to factors such as resource scarcity, fair labour wages, craftsmanship and quality that are considered when producing eco-friendly or locally made clothing options. However, knowledge is key in the instance, and assuming consumers are more knowledgeable about the products (what they are made of, where, how and by who they were made, benefits of these products etc.), they will be able to objectively decide on their clothing choices. It remains uncertain whether this is a viable solution and future studies sprouting from this research will delve deeper into the topic by means of qualitative data capturing over a 10-week period in which willing female consumers will document their “VSCCP challenge” in a blog to determine whether inputs, information dissemination and a sense of competence and community will create a mind shift in consumers thoughts surrounding VSCCP and eco-friendly/ locally made clothing. In short, very few female consumers, who participated in this study, are doing nothing in terms of their current sustainable clothing practices. To some degree, most female consumers take part in voluntary simplistic clothing consumption practices, but whether they can be classified as “voluntary simplifiers” per se is still unclear. Further analysis is needed in this regard.

4.3.2 Past experience and frequency of sustainable clothing practices

The questionnaire also included a question regarding the respondents' past behaviour with regards to sustainable clothing practices (part of section H relating to subjective knowledge and experience). Of the 482 respondents that started the questionnaire, 469 (97.3%) completed the questionnaire, including the question surrounding their experience with sustainable clothing practices.

As indicated in **Figure 4.3**, only 8.5% (n = 40) of the respondents never engage in sustainable clothing practices. Slightly more than a third of the respondents (35.2% / n = 165) indicated that they sometimes engage in sustainable clothing practices, while 29.6% (n = 139) of them participate in sustainable clothing practices about half of the time. Just under a quarter of the respondents (23.2% / n = 109) indicated that they take part in sustainable clothing initiatives most of the time and only 3.4% (n = 16) of them indicated that they always engage in sustainable clothing practices.

FIGURE 4.3: RESPONDENTS' EXPERIENCE AND FAMILIARITY OF SUSTAINABLE CLOTHING PRACTICES

Based on the results presented in **Figure 4.3**, it can be surmised that the female respondents are engaged in some forms of sustainable clothing practices within the context specific setting of South Africa, but that the frequency of these practices vary and could be improved. That said, the overall experience and familiarity collectively paints a positive picture in terms of female consumers' sustainable clothing practices. More frequent engagement in such practices can make a significant impact on the utilisation of natural resources and should therefore be encouraged. The assumption is that the presence of knowledge and greater awareness of these practices as well as the satisfaction of basic psychological needs (i.e. autonomy, competence, relatedness) might encourage female consumers to more frequently participate in such practices and motivate them (internally) to persist in altering their lifestyles to become more sustainable in terms of their clothing practices.

In conclusion, all aspects regarding the demographic characteristics of the sample, the current involvement and frequency of the respondents' engagement in sustainable clothing practices were described. In addition to the afore mentioned sections, all respondents were asked to answer a question at the end of the questionnaire regarding their willingness to participate in a 10-week follow-up blog regarding sustainable clothing practices. Although these results will not be discussed in detail in this study, the purpose of this question was to create a pool of willing respondents for future research studies that will flow from this study. The results specified that just less than half of them (44.8%) were in fact willing, which indicates quite an enthusiasm surrounding the possibility of transitioning towards a voluntary simplistic lifestyle in terms of clothing consumption as well as increasing the current involvement and experience female consumers in South Africa who might act as early adopters and ambassadors for a renewed way of living.

The following section of this chapter covers more advanced statistical analysis of data relating to the basic psychological needs, self-determined motivation and the voluntary simplistic clothing consumption practices of the respondents. Furthermore, these concepts as well as the underlying relationships between them, as suggested in the self-determination theory and the proposed conceptual framework of the study, are analysed and interpreted to draw final conclusions about the associations between basic psychological needs, self-determined motivation and female consumers' voluntary simplistic clothing consumption practices. Lastly, a cluster analysis is presented that categorises respondents as full, partial or non-voluntary simplifiers.

4.4 BASIC PSYCHOLOGICAL NEEDS, SELF-DETERMINED MOTIVATION AND VOLUNTARY SIMPLISTIC CLOTHING CONSUMPTION PRACTICES

Results of the study are presented and discussed according to the objectives, hypotheses and conceptual framework as stipulated and illustrated in chapter one, two and three. The concepts depicted in the conceptual framework include basic psychological needs (competence, autonomy and connectedness/relatedness), self-determined motivation (identified regulation, integrated regulation and intrinsic motivation), voluntary simplistic clothing consumption practices (VSCCP), and lastly, the extent to which respondents engage in voluntary simplicity (VS) (full, partial or non-voluntary simplifiers). All of these concepts have been adapted for the purposes of this study to specifically investigate the influence of needs and motivations on female consumers' voluntary simplistic clothing consumption practices (VSCCP) in an emerging market context. A structured, self-administered online questionnaire with a seven-point Likert-scale was used. All questions were scaled so that 1 equals a negative view and 7 equals a positive view. All items in the questionnaire were phrased in such a way that none of them had to be reverse coded during data analysis in order to correctly interpret the results and present accurate findings. An exploratory analysis was performed on all the adapted items (originally derived from previous studies) to isolate the relevant constructs according to the dataset.

4.4.1 Basic Psychological Needs (BPN)

Based on the assumptions of the Self-Determination Theory (SDT), self-determined motivation is supported by three psychological needs including competence (i.e. allowing consumers to have a sense of control and proficiency), autonomy (i.e. the ability to act independently) and connectedness or relatedness (i.e. a sense of belonging to a social group) (Darner, 2009; Pelletier, 2002). These concepts were hence included as part of the objectives and hypotheses of this study. The section of the questionnaire relating to basic psychological needs included 15 items (Objective 3), which were originally derived from previous studies relating to the Basic Psychological Needs Scale (BPNS) in general (Deci & Ryan, 2000; Deci *et al.*, 2001) as well as the Psychological Need Satisfaction in Exercise (PNSE) scale (Wilson *et al.*, 2006), and were adapted and rephrased for the purposes of this study. The seven-point rating-scale included response options ranging from 1 (“Definitely false”) to 7 (“Definitely true”) (Vagias, 2006).

4.4.1.1 Exploratory Factor Analysis (EFA) of the BPN data

Data derived from the 469 completed questionnaires were used to perform an EFA to explore the BPN constructs and factors that stemmed from the dataset. In order to do so, IBM SPSS Statistics 25 software was used to perform the EFA, utilising Principal Axis Factoring as the extraction method and Varimax with Kaiser Normalization as the rotation method. This step of analysis was included to purify the dataset. Factors were extracted in accordance with various criteria including scrutiny of the factor loadings, and once a satisfactory solution was obtained, the resulting factors were labelled in terms of BPN (Jackson, 2005:221; Salkind, 2012:191; Williams, Onsman & Brown, 2010).

Based on the eigenvalue rule (i.e. only factors with a value of at least 1 are retained), the unrestricted EFA produced two factors (Pallant, 2011). The factor loadings describe the relationship between the original variable and the extracted factor as well as the statistical relevance of a factor loading which is dependent on the absolute value and sample size (i.e. a bigger sample size requires a smaller value to remain statistically relevant) (Hair *et al.*, 2014:110; Jackson, 2005:227-228). According to Jackson (2005:228) a sample size of 200 or more requires a minimum of 0.40 to be relevant. In terms of Hair *et al.* (2014:115), a sample of 350 or greater only requires a factor loading of at least 0.3 to be significant. This study included a sample of 469 female respondents and the lowest factor loading was 0.510; therefore, the minimum threshold of 0.3 and 0.4 was exceeded and the factor loadings were considered acceptable and relevant in terms of the various factor loadings. Due to high cross loadings, three items (BPN1, BPN7 and BPN14) were systematically eliminated. Interestingly, these items were all originally intended to measure the “competence” construct, which encapsulates the need for control and proficiency. These cross loadings could be attributed to the fact that all the basic psychological needs are very closely related to one another and could thus in reality, be interpreted as the same concept rather than different needs as specified in literature. Socio-psychological factors, such as BPN, are often not clearly differentiated in a consumer’s mind (Yong & Pearce, 2013). The remaining items that were intended to measure “competence” in fact grouped together with items that tapped into the need for autonomy i.e. the ability to act independently. A two-factor solution was thus retained and labelled accordingly:

Factor 1: Autonomy and competence (AUT)
Factor 2: Connectedness or relatedness (CON)

TABLE 4.2: EXPLORATORY FACTOR ANALYSIS OF BPN DATA (N = 469)

V	ITEM	FACTOR	
		1	2
	Explain how you feel when taking part in sustainable clothing practices:	AUT	CON
BPN_2	I am free to choose what I take part in.	**0.699**	0.143
BPN_4	I am capable of doing it.	**0.582**	0.325
BPN_5	I have a say in choosing what I do.	**0.758**	0.146
BPN_9	I decide what practices I take part in.	**0.772**	0.164
BPN_11	I am sure that I can consume clothing in a sustainable manner.	**0.510**	0.378
BPN_12	I feel free to make my own decisions on how I do it.	**0.819**	0.198
BPN_15	I feel free to take part in it in my own unique way.	**0.671**	0.290
BPN_3	I feel connected to the other people who do it.	0.213	**0.833**
BPN_6	I share a common bond with others who do it.	0.215	**0.805**
BPN_8	I feel close to people who support sustainable clothing.	0.240	**0.849**
BPN_10	I feel a sense of belonging to others who live sustainable.	0.185	**0.897**
BPN_13	I get along with people who also take part in it.	0.310	**0.697**
	Mean	**6.025**	**4.900**
	Standard deviation	**0.785**	**1.225**
	% variance explained	**0.617**	**1.501**
	Cronbach's alpha	**0.886**	**0.928**

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

As can be gathered from results reported in **Table 4.2**, the means for these two factors were 4.900 and 6.025 respectively, with the standard deviations ranging from 0.785 to 1.225 indicating a relatively positive response in terms of female consumers' basic psychological needs when it comes to sustainable clothing practices. The cumulative % variance explained totalled to 62.103%, indicating acceptable results in terms of the social sciences domain that generally suggests a total variance of at least 60% (Hair *et al.*, 2014:107). The results and interpretation surrounding the two factors (AUT and CON) will be discussed in further detail below.

Factor 1: Autonomy and competence (AUT)

The items that originally portrayed autonomy in the questionnaire included BPN2, BPN5, BPN9, BPN12 and BPN15, while competence was measured with BPN1, BPN4, BPN7, BPN11 and BPN14. During the EFA process three items (BPN1, BPN7 and BPN14) were eliminated due to high cross loadings and the two aforementioned concepts merged into one factor (i.e. AUT). AUT covers the basic psychological needs relating to female consumers' ability to do things out of own free will as well as having the capabilities of doing so. Therefore it encapsulates the concepts of

autonomy (i.e. the need to engage in activities out of own free will) (Darner, 2009; Deci & Ryan, 2002:8; Kasser, 2009; Pelletier, 2002; Ryan *et al.*, 2008), and competence (i.e. the need to challenge oneself and enhance skills through new activities to become capable and competent) (Deci & Ryan, 2002:7). AUT achieved a high mean ($M_{Factor1}$ = 6.025), indicating consumers' strong sense of acting independently and making choices out of their own free will when it comes to sustainable clothing practices. Furthermore, female consumers also indicated that they are quite capable or competent to live sustainably in terms of their clothing consumption practices. In terms of reliability, the Cronbach's alpha (α) was 0.886, exceeding the acceptable threshold of 0.7 or more (Delport & Roestenburg, 2011:177; Tavakol & Dennick, 2011).

Factor 2: Connectedness or relatedness (CON)

All items that originally measured connectedness or relatedness (BPN3, BPN6, BPN8, BPN10 and BPN13) were all retained after the EFA was performed and grouped into one factor, namely CON. This basic psychological need emerges when consumers perceive others as being interested or concerned about them (Deci & Ryan, 2002:7; DeHaan & Ryan, 2014; Pelletier, 2002). Connectedness essentially relates to a sense of belonging to a social group (Darner, 2009; Kasser, 2009). Therefore, CON relates to the female consumers' need to feel connected to others who also live a simplistic lifestyle in terms of their clothing practices. Connectedness or relatedness (CON) achieved a mean leaning towards the positive side ($M_{Factor2}$ = 4.900), but consumers are definitely less convinced about their connectedness to others who share their voluntary simplistic lifestyle (that is manifested in their clothing consumption), than their capability and competence to do so. One possible reason for this could be that consumers have made the decision to live a more voluntary simplistic lifestyle in terms of their clothing consumption and that they are gradually adopting new ways of life to shift towards a more simplistic way of life. That being said, one could assume that they have not yet fulfilled the need for connectedness or relatedness, in the sense that they might not know about other consumers who share the same thoughts in terms of sustainable clothing practices yet. Another reason for the lower mean could be explained by the difficulty to engage with consumers who follow a similar lifestyle, especially in South Africa, where the majority of the working-class consumers might be more inclined to consume conspicuously. Overall, it would seem that consumers are willing and able to engage in voluntary simplistic clothing consumption, but are yet to feel connected or relate to others who share a similar approach. In terms of reliability, the Cronbach's alpha (α) for CON (α = 0.928) was deemed acceptable as it exceeded the acceptable threshold of 0.7 (Delport & Roestenburg, 2011:177; Tavakol & Dennick, 2011).

4.4.1.2 Confirmatory Factor Analysis (CFA) of the BPN data

Confirmatory factor analysis is used to determine how well the measured variables represent the extracted factors as determined in the EFA (Hair *et al.*, 2014:602). CFA is associated to Structural Equation Modelling (SEM) and specifically deals with measurement models that enable researchers to evaluate whether the measurement of latent variables by means of certain manifest indicators, is satisfactory. The underlying items and variables that were retained from the EFA (as reported in the previous section) were used to construct a two-factor confirmatory factor model by making use of IBM SPSS Amos 25. Factor loadings, modification indices as well as the Average Variance Extracted (AVE) measures were all examined to ensure that the best possible model fit was obtained.

For the purpose of the CFA, the items relating to autonomy and competence (AUT) were labelled as: AUT 1 – 7, and the items relating to connectedness or relatedness (CON) were labelled as: CON 1 – 5. **Table 4.3** below indicates the standardised factor loadings, as determined in the CFA, ranging from 0.572 – 0.921. The factor loadings are often used to assess construct validity. Hair *et al.* (2014:617) suggests that loadings should be at least 0.5 or preferably higher than 0.7, indicating that the items are strongly related to the associated constructs. Jackson (2005:228), on the other hand, suggests that a sample size of at least 200 only requires a minimum threshold of 0.40 to be relevant. The total sample size for this study was 469 with only two out of the twelve loadings below 0.7, indicating good regression weights.

TABLE 4.3: STANDERDIZED FACTOR LOADINGS/ REGRESSION WEIGHTS OF BPN ITEMS

Original item label	Latent variable label	Factor loadings
BPN 2	AUT 1	0.715
BPN 4	AUT 2	0.627
BPN 5	AUT 3	0.774
BPN 9	AUT 4	0.795
BPN 11	AUT 5	0.572
BPN 12	AUT 6	0.837
BPN 15	AUT 7	0.723
BPN 3	CON 1	0.828
BPN 6	CON 2	0.808
BPN 8	CON 3	0.901
BPN 10	CON 4	0.921
BPN 13	CON 5	0.760

In addition to factor loadings, modification indices were also considered. Subsequently covariances between BPN4 (AUT2) and BPN11 (AUT5) as well as BPN3 (CON1) and BPN 6 (CON2) were established, which improved the overall model fit (Hair *et al.*, 2014:621). In addition to that, the Average Variance Extracted (AVE), as seen below in **Table 4.4**, indicates satisfactory convergence on both factors, with AUT and CON exceeding the minimum threshold of AVE ≥ 0.5.

TABLE 4.4: AVERAGE VARIANCE EXTRACTED OF BPN DATA

Items		Factors	Estimate (> 0.5)	Sum of estimate	Estimate Squared	Sum of est. sq.	AVE (≥ 0.5)	Sq. root of AVE	Error variance (€)	Sum of €	Composite reliability	Construct Reliability (> 0.7)
BPN_2	<---	Autonomy and competence (AUT1)	0.715		0.511				0.489			
BPN_4	<---	Autonomy and competence (AUT2)	0.627		0.393				0.607			
BPN_5	<---	Autonomy and competence (AUT3)	0.774		0.599				0.401			
BPN_9	<---	Autonomy and competence (AUT4)	0.795	5.043	0.632	3.686	0.527	0.726	0.368	3.314	0.885	0.886
BPN_11	<---	Autonomy and competence (AUT5)	0.572		0.327				0.673			
BPN_12	<---	Autonomy and competence (AUT6)	0.837		0.701				0.299			
BPN_15	<---	Autonomy and competence (AUT7)	0.723		0.523				0.477			
BPN_3	<---	Connectedness or relatedness (CON1)	0.828		0.686				0.314			
BPN_6	<---	Connectedness or relatedness (CON2)	0.808		0.653				0.347			
BPN_8	<---	Connectedness or relatedness (CON3)	0.901	4.218	0.812	3.576	0.715	0.846	0.188	1.424	0.926	0.928
BPN_10	<---	Connectedness or relatedness (CON4)	0.921		0.848				0.152			
BPN_13	<---	Connectedness or relatedness (CON5)	0.760		0.578				0.422			

The fit indices of the CFA model are reported in **Table 4.5** below.

TABLE 4.5: GOODNESS-OF-FIT INDICES FOR THE BPN CONFIRMATORY FACTOR MODEL

Name	Abbreviation	Indices	Thresholds
Chi-square			
Chi-square (X^2)	CMIN	161.368	
Degrees of freedom	DF	51	
Significance	P	0.000	$p < 0.05$ (significant) *
Normed chi-square (X^2)	CMIN (X^2)/DF	3.164	2 < CMIN/DF < 5 (acceptable) */** CMIN/DF < 2 (very good) *
Absolute Fit Measures			
Goodness-of-fit index	GFI	0.942	GFI > 0.9 (acceptable) GFI ≥ 0.95 (excellent) **
Root mean square error of approximation	RMSEA	0.068	RMSEA < 0.08 (acceptable) ** RMSEA ≤ 0.07 (good) ** RMSEA ≤ 0.03 (excellent) **
Incremental Fit Indices			
Normed fit index	NFI	0.957	NFI > 0.9 (acceptable) ** NFI ≥ 0.95 (excellent) **
Comparative fit index	CFI	0.970	CFI > 0.9 (acceptable) */** CFI ≥ 0.95 (excellent) **
Parsimony Fit Indices			
Adjusted goodness-of-fit index	AGFI	0.911	AGFI > 0.9 (acceptable) */** AGFI ≥ 0.95 (excellent) **

* Hair *et al.* (2014)

** Hooper, Coughlan and Mullen (2008)

The Chi-square (X^2), CMIN, had a value of 161.368, with 51 degrees of freedom (DF) and a significant p-value indicating that the model fits the data correctly (Hair *et al.*, 2014:630). Furthermore, CMIN/DF had a value of 3.164, falling in the acceptable range of between 2 and 5 (Hair *et al.*, 2014:630; Hooper *et al.*, 2008; Tabachnick & Fidell, 2007). Numerous additional indices, namely the GFI, RMSEA, NFI, CFI and AGFI, are also necessary to evaluate the model fit properly.

The absolute fit measures, namely the GFI and the RMSEA, indicated very good model fit. The GFI was 0.942, which is just below the 0.95 excellent model fit threshold, while the RMSEA was 0.068, which is below the threshold of 0.07 or less (Hooper *et al.*, 2008) indicating good fit. In terms of incremental fit indices, the NFI as well as the CFI exceeded the 0.95 threshold, which

classifies the model fit as excellent (Hair *et al.*, 2014:631; Hooper *et al.*, 2008). In addition to that, the parsimony index of AGFI had a value of 0.911, which resonates an acceptable model fit (Hair *et al.*, 2014:631).

To summarize, all fit indices (CMIN/DF, GFI, RMSEA, NFI, CFI and AGFI) were deemed acceptable with various indices being classified as excellent. Sample sizes of at least 200 are necessary to present an acceptable model fit, and therefore the sample size (N = 469) for this study exceeded the basic requirements. No further items were eliminated during the CFA; however covariances between BPN4 (AUT2) and BPN11 (AUT5) as well as BPN3 (CON1) and BPN 6 (CON2) were established, which improved the overall model fit (Hair *et al.*, 2014:621). Since no further changes were implemented in the CFA, the means, standard deviations and Cronbach's alphas for the factors reported in the EFA remained unchanged. **Figure 4.4** below presents the CFA output with the standardized factor loadings as well as the items and the associated factors.

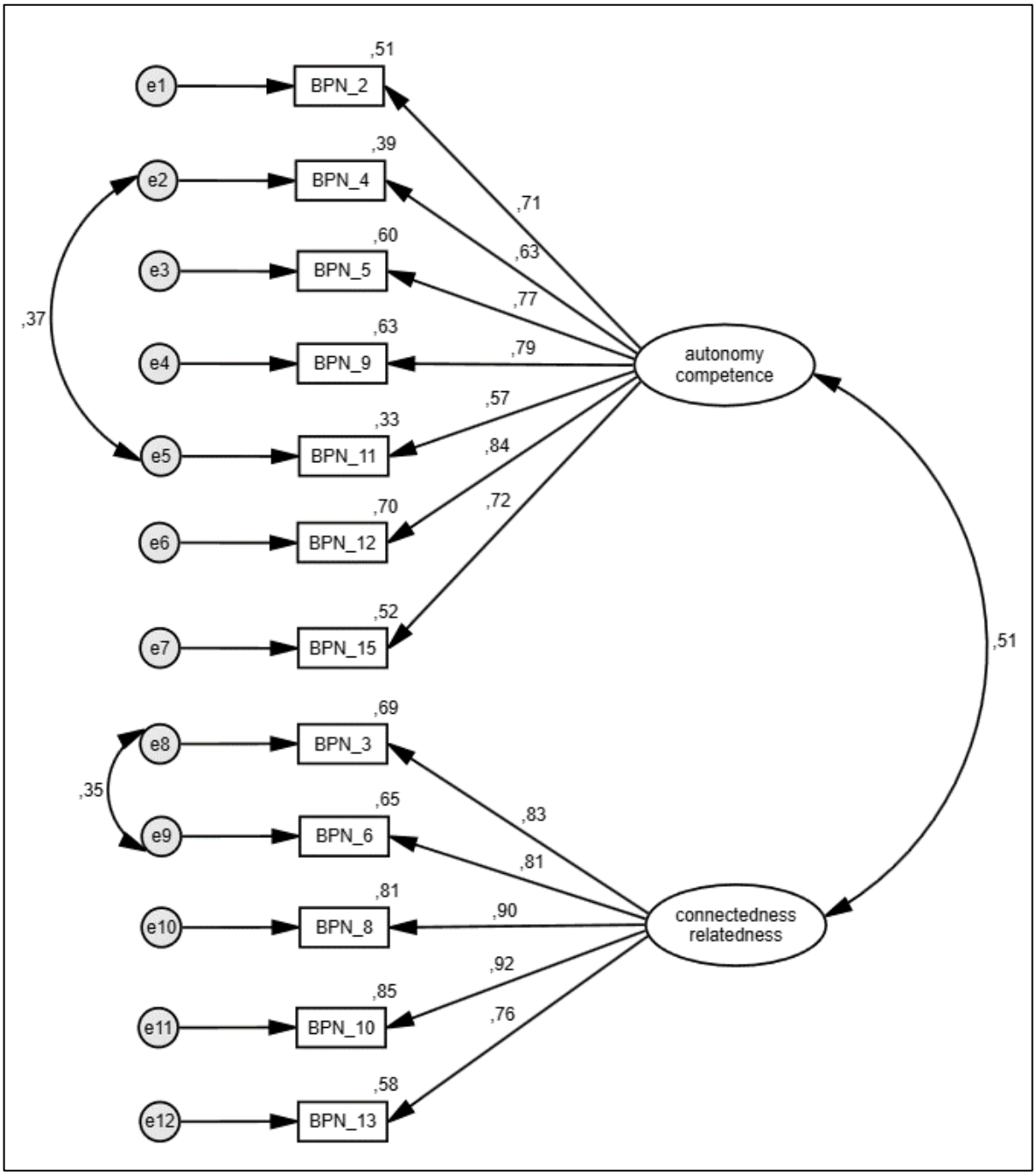


FIGURE 4.4: CONFIRMATORY FACTOR ANALYSIS OF BPN DATA

From a theoretical point-of-view, it is postulated that when all three needs (competence, autonomy and connectedness or relatedness) are met, consumers' motivation will be enhanced and it will lead to increased self-determination (Darner, 2009; Pelletier, 2002; Rich *et al.*, 2017; Ryan *et al.*, 2008; Vallerand, 2000). Self-determined or autonomous motivation leads to behaviours originating from the consumer itself and is not controlled by any external forces (Darner, 2009). Self-determined motivation is often associated with increased interest and emotions that are more

positive (McDonough & Crocker, 2007). Therefore, the concept of self-determined motivation will be discussed and analysed in further details below.

4.4.2 Self-Determined Motivation (SDM)

According to the assumptions of Deci and Ryan's (1985) theory of intrinsic motivation and self-determination (more commonly known as the Self Determination Theory (SDT)), adopting simplistic, non-materialistic lifestyles and practices would require self-determined motivation. This type of motivation includes intrinsic motivation (i.e. motivation associated with the human need for competence and self-determination), integrated regulation (i.e. closely related to intrinsic motivation, although it remains extrinsic in the sense that it is executed to accomplish personal outcomes rather than inherent enjoyment) and lastly identified regulation (i.e. the transitional process from external regulation into self-regulation where a person identifies with the behaviour on a conscious level and personally endorses it thus resulting in a higher degree of perceived autonomy) (Deci & Ryan, 2002:17; DeHaan & Ryan, 2014). The 12 items relating to the self-determined motivations (i.e. intrinsic motivation, integrated regulation and identified regulation) to engage in voluntary simplistic clothing consumption practices were derived from a previous study that used the Motivation Toward the Environment Scale (MTES) (Pelletier *et al.*, 1998) and were adapted and rephrased to relate to sustainable clothing practices (Objective 2). A seven-point Likert-scale, with response options ranging from 1, which is "Strongly disagree", to 7 which is "Strongly agree" was used to measure this concept (Vagias, 2006).

4.4.2.1 Exploratory Factor Analysis (EFA) of the SDM data

The data that was collected from the 469 female respondents across South Africa was subjected to an EFA to determine the SDM constructs and factors that resulted from the dataset. The EFA was performed by means of IBM SPSS Statistics 25 software utilising Principal Axis Factoring as the extraction method and Varimax with Kaiser Normalization as the rotation methods. EFA was conducted to extract the applicable factors relating to SDM and to label them accordingly. In applying the eigenvalue rule (i.e. only retaining factors with a value of 1 or more), two factors were extracted, contrary to existing empirical evidence that specifies three factors, namely intrinsic motivation, integrated regulation and identified regulation (Pallant, 2011). Of the initial 12 measurement items that were included into the EFA, two items, namely SDM1 and SDM7, seemed potentially problematic since they achieved high loadings on both the factors that were extracted. These two items were subsequently removed to eliminate cross loadings and to establish a more distinct factor structure. Both of the aforementioned items were initially intended to measure

"intrinsic motivation" and dealt with consumers' underlying enjoyment of successfully engaging in sustainable clothing practices. The cross loadings could be attributed to the indistinct differentiation amongst the three types of self-determined motivation. As mentioned before, socio-psychological factors such as SDM, are often closely related and therefore distinguishing them as separate concepts may prove to be challenging (Yong & Pearce, 2013). The remaining "intrinsic motivation" items (SDM4 and SDM10) grouped into one factor along with items that were intended to measure identified regulation. Identified regulation is often described as consumers' identification with certain types of behaviour (such as sustainable clothing practices), and their subsequent endorsement of such behaviour. The second factor that emerged from the EFA output related to integrated regulation, which is more closely aligned to personal outcomes rather than enjoyment. Subsequent factor analysis procedures brought to light the necessity of eliminating a further two items (SDM3 and SDM5) due to high covariances that could not be linked to one or the other of the identified factors and hence they were eliminated to improve the outcome. The remaining eight items were subjected to the final EFA procedure, which retained the previous identified factors and hence the labelling of these factors remained as: The results of the final EFA is reported in **Table 4. 6**.

Factor 1: Integrated regulation (INT)

Factor 2: Identified regulation and intrinsic motivation (IDEN)

TABLE 4.6: EXPLORATORY FACTOR ANALYSIS OF SDM DATA (N = 469)

V	ITEM	FACTOR	
	Indicate your level of agreement for taking part in sustainable clothing practices:	1	2
		INT	IDEN
SDM_2	It is an integral part of my life.	**0.771**	0.251
SDM_6	It is the way I have chosen to contribute to the environment.	**0.760**	0.340
SDM_8	It has become a fundamental part of who I am.	**0.842**	0.242
SDM_11	It is part of the way I have chosen to live my life.	**0.814**	0.311
SDM_4	I find it rewarding to improve the quality of the environment.	0.336	**0.696**
SDM_9	It is the reasonable thing to do.	0.203	**0.687**
SDM_10	I enjoy positively contributing towards sustainability.	0.380	**0.808**
SDM_12	It is a good idea to do something to improve our lives.	0.186	**0.717**
	Mean	**4.754**	**6.043**
	Standard deviation	**1.286**	**0.806**
	% variance explained	**1.654**	**0.649**
	Cronbach's alpha	**0.910**	**0.858**

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

As can be gathered from **Table 4.6**, the means of the two factors were 4.754 and 6.043 and the standard deviations ranged between 0.806 and 1.286. This indicates an overall positive response towards self-determined motivation and how it relates to female consumers' voluntary simplistic clothing consumption practices. The cumulative % variance explained was 66.701%, indicating a variance well above the acceptable threshold of 60% as suggested in the social sciences domain (Hair *et al.*, 2014:107). The results and interpretation surrounding the two factors (INT and IDEN) will be discussed in further detail below.

Factor 1: Integrated regulation (INT)

Integrated regulation was originally measured with four items (SDM2, SDM5, SDM8 and SDM11) of which SDM5 was eliminated due to challenges surrounding covariances in the latter factor analysis procedures. One item (SDM6) that originally measured identified regulation, grouped together under one factor along with the remaining (SDM2, SDM8 and SDM11) items that are linked to integrated regulation and was subsequently labelled as INT. Based on the Self-Determination Theory (SDT), integrated regulation and identified regulation fall under extrinsic motivation (Deci & Ryan, 2002:17; Pelletier, 2002; Ryan & Deci, 2000a). The most autonomous type of extrinsic motivation is integrated regulation (Deci & Ryan, 2002:18; Ryan *et al.*, 2008), where extrinsically motivated behaviours are integrated and associated with positive experiences (Deci & Ryan, 2002:18; DeHaan & Ryan, 2014). This type of regulation is closely related to intrinsic motivation, however it remains extrinsic in the sense that it is executed to accomplish personal outcomes rather than inherent enjoyment (Deci & Ryan, 2002:18). Identified regulation is very closely related to integrated regulation (Deci & Ryan, 2002:17; Ryan *et al.*, 2008), and plays an important part in the transitional process from external regulation into self-regulation in the sense that a person identifies with the behaviour on a conscious level and personally endorses it; thus leading to a high degree of perceived autonomy (Deci & Ryan, 2002:17; DeHaan & Ryan, 2014). Both of these types of self-determined motivation are performed because consumers perceive their behaviours to be of great importance and to add personal value to their lives (Olafsen *et al.*, 2018). Thus, INT includes extrinsic motivations that have some degree of autonomy and fall under the umbrella of self-determined motivation. All the items that form part of factor one is related to how consumers have chosen to live and whether or not sustainable clothing practices are a fundamental or integral part of their lives.

This factor (INT) had a positive mean ($M_{Factor1}$ = 4.754), which indicates that the female respondents' motivations are relatively positive in terms of taking part in sustainable clothing practices, and that these practices are performed in order to reach certain personal goals or

outcomes. In terms of internal reliability, INT had a Cronbach's alpha (α) of 0.910, which reliable as it was more than 0.7 threshold (Delport & Roestenburg, 2011:177; Tavakol & Dennick, 2011).

Factor 2: Identified regulation and intrinsic motivation (IDEN)

Identified regulation was originally measured with four items (SDM3, SDM6, SDM 9 and SDM12) of which SDM6 migrated to the factor predominantly relating to integrated regulation and SDM3 was eliminated based on statistical issues relating to covariances in subsequent factor analysis procedures. Two items from this concept (SDM9 and SDM12) were retained and formed part of factor two. Intrinsic motivation was originally measured with four items (SDM1, SDM4, SDM7 and SDM10), but posed quite a challenge during the EFA as some of the items (SDM1 and SDM7) did not solely form part of one factor, but loaded across various factors simultaneously and were subsequently eliminated, grouping the two remaining items (SDM4 and SDM10) together with the retained items relating to identified regulation. All four these items are linked to enjoyment and reasoning and were clearly contrasting to factor one that inherently deals with motivation relating to personal outcomes, not enjoyment (Deci & Ryan, 2002:17; DeHaan & Ryan, 2014). Therefore, two clear factors regarding self-determined motivation were extracted from the EFA and served as the subsequent input for confirmatory factor analysis procedures.

The combination of identified regulation and intrinsic motivation (IDEN) had an even higher mean ($M_{Factor1}$ = 6.043), which substantiates the respondents' strong motivations surrounding their underlying reasoning and enjoyment of engaging in sustainable clothing practices. It is thus evident that the female consumers who took part in this study seem to be more encouraged to take part in voluntary simplistic clothing consumption practices because of its rewards and reasonable practicality. Their motivations are thus seemingly more self-determined, since they feel good when taking part in such initiatives and even enjoy contributing positively to sustainability. Internal reliability indicated that IDEN had an acceptable Cronbach's alpha (α) of 0.858, exceeding the acceptable threshold of 0.7 (Delport & Roestenburg, 2011:177; Tavakol & Dennick, 2011).

4.4.2.2 Confirmatory Factor Analysis (CFA) of the SDM data

After filtering the items relating to SDM and extracting the factors through various phases of analyses by means of EFA, the eight remaining items (as identified in the previous discussion) were used to specify a two-factor confirmatory factor model by making use of IBM SPSS Amos 25 software. Factor loadings, modification indices as well as average variance extracted were used to ensure that the model fit the data (as can be ascertained from **Table 4.9**).

For the purpose of the CFA, the items relating to integrated regulation (INT) were labelled as: INT 1 – 4, and the items relating to identified regulation and intrinsic motivation (IDEN) were labelled as: IDEN 1 – 4. The standardised factor loadings or regression weights of the SDM items ranged between 0.695 and 0.909. All the items were above or equal to 0.695 and virtually all of them (7 out of 8) were higher than the 0.7 threshold, indicating a strong relation between the items and their respective constructs or factors (Hair *et al.*, 2014:617). Results of the factor loadings, as determined by the CFA, is reported in **Table 4.7** below.

TABLE 4.7: STANDERDIZED FACTOR LOADINGS/ REGRESSION WEIGHTS OF SDM ITEMS

Original item label	Latent variable items	Factor loadings
SDM 2	INT 1	0.808
SDM 6	INT 2	0.836
SDM 8	INT 3	0.866
SDM 11	INT 4	0.876
SDM 4	IDEN 1	0.777
SDM 9	IDEN 2	0.695
SDM 10	IDEN 3	0.909
SDM 12	IDEN 4	0.712

The Average Variance Extracted (AVE) was also determined and can be seen in **Table 4.8** below. Satisfactory convergence was obtained on both the factors (INT and IDEN), exceeding the minimum threshold of AVE ≥ 0.5.

TABLE 4.8: AVERAGE VARIANCE EXTRACTED OF SDM DATA

Items		Factors	Estimate (> 0.5)	Sum of estimate	Estimate Squared	Sum of est. sq.	AVE (≥ 0.5)	Sq. root of AVE	Error variance (Ɛ)	Sum of Ɛ	Composite reliability	Construct Reliability (> 0.7)
SDM_2	<---	Integrated regulation (INT1)	0.808	3.386	0.653	2.869	0.717	0.847	0.347	1.131	0.910	0.910
SDM_6	<---	Integrated regulation (INT2)	0.836		0.699				0.301			
SDM_8	<---	Integrated regulation (INT3)	0.866		0.750				0.250			
SDM_11	<---	Integrated regulation (INT4)	0.876		0.767				0.233			
SDM_4	<---	Identified regulation and intrinsic motivation (IDEN1)	0.777	3.093	0.604	2.420	0.605	0.778	0.396	1.580	0.858	0.858
SDM_9	<---	Identified regulation and intrinsic motivation (IDEN2)	0.695		0.483				0.517			
SDM_10	<---	Identified regulation and intrinsic motivation (IDEN3)	0.909		0.826				0.174			
SDM_12	<---	Identified regulation and intrinsic motivation (IDEN4)	0.712		0.507				0.493			

Table 4. 9 provides an overview of the final goodness-of-fit indices for the SDM confirmatory factor model.

TABLE 4.9: GOODNESS-OF-FIT INDICES FOR THE SDM CONFIRMATORY FACTOR MODEL

Name	Abbreviation	Indices	Thresholds
Chi-square			
Chi-square (X^2)	CMIN	54.146	
Degrees of freedom	DF	19	
Significance	P	0.000	$p < 0.05$ (significant) *
Normed chi-square (X^2)	CMIN (X^2)/DF	2.850	2 < CMIN/DF < 5 (acceptable) */**
			CMIN/DF < 2 (very good) *
Absolute Fit Measures			
Goodness-of-fit index	GFI	0.973	GFI > 0.9 (acceptable)
			GFI ≥ 0.95 (excellent) **
Root mean square error of approximation	RMSEA	0.063	RMSEA < 0.08 (acceptable) **
			RMSEA ≤ 0.07 (good) **
			RMSEA ≤ 0.03 (excellent) **
Incremental Fit Indices			
Normed fit index	NFI	0.977	NFI > 0.9 (acceptable) **
			NFI ≥ 0.95 (excellent) **
Comparative fit index	CFI	0.985	CFI > 0.9 (acceptable) */**
			CFI ≥ 0.95 (excellent) **
Parsimony Fit Indices			
Adjusted goodness-of-fit index	AGFI	0.949	AGFI > 0.9 (acceptable) */**
			AGFI ≥ 0.95 (excellent) **

* Hair *et al.* (2014)

** Hooper *et al.* (2008)

In terms of the overall model, the normed chi-square (X^2) had a value of 2.850. This was calculated by dividing chi-square (X^2) (CMIN = 54.146) with 19 degrees of freedom (DF). Furthermore, the model indicated a significant p-value. All the fit indices mentioned above are indicative of a good fit as they all reach the acceptable thresholds (as seen in **Table 4.9** above).

The absolute fit measures (GFI and RMSEA) also indicate a good model fit, with the goodness-of-fit-index (GFI = 0.973) indicating an excellent model fit and the root mean square error of approximation (RMSEA = 0.063) indicating a good fit according to the respective thresholds (Hair *et al.*, 2014:631; Hooper *et al.*, 2008). The model was furthermore classified as excellent due to the normed and comparative fit indexes (NFI and CFI), that form part of the incremental fit indices,

exceeding the threshold of 0.95. Lastly the adjusted goodness-of-fit (AGFI = 0.949) reconfirmed the excellent model fit by basically reaching the threshold of 0.95.

In summary, all fit indices (as seen in **Table 4.9**) were deemed very good and were bordering excellent. **Figure 4.5** below indicates the CFA with the items, associated factors and standardised factor loadings.

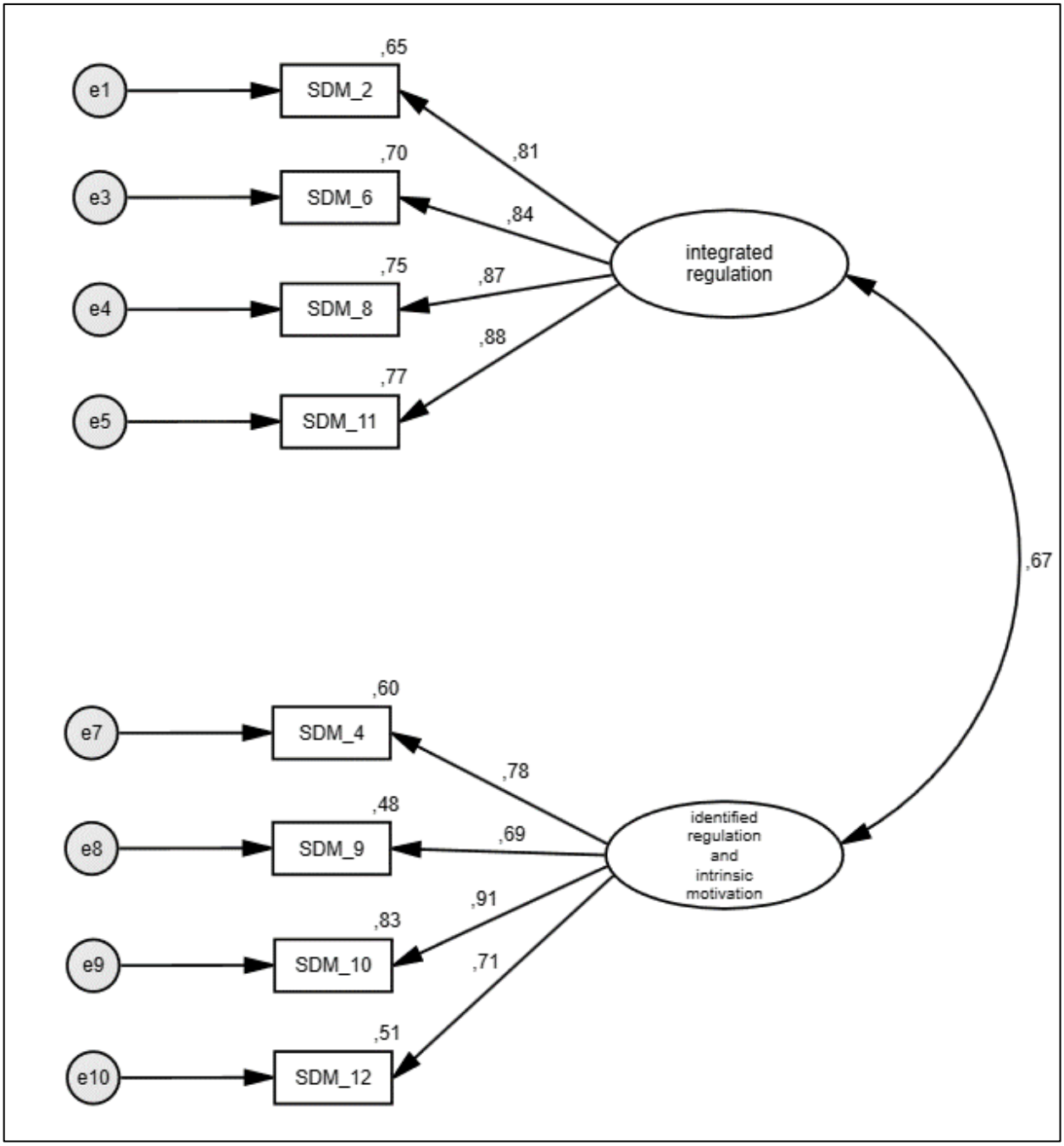


FIGURE 4.5: CONFIRMATORY FACTOR ANALYSIS OF SDM DATA

As mentioned before, adopting simplistic, non-materialistic lifestyles and practices would require self-determined motivation, that is generally made up of intrinsic motivation, integrated regulation and identified regulation (Deci & Ryan, 2002:17; DeHaan & Ryan, 2014). When consumers' motivations become self-determined or autonomous it leads to behaviours originating from the consumer itself and is not controlled by any external forces (Darner, 2009). These behaviours could include sustainable options such as voluntary simplistic clothing consumption practices, which will be discussed and analysed in further detail in the section to follow.

4.4.3 Voluntary simplistic clothing consumption practices (VSCCP)

Voluntary simplicity is viewed as a way of life whereby people choose to minimize their consumption to cultivate non-materialistic ideals (Zamwel *et al.*, 2014) through various dimensions including material simplicity (i.e. consuming less), self-determination (i.e. desire to control one's destiny and striving toward self-sufficiency), ecological awareness (i.e. concern for environmental issues) and human scale (i.e. supporting community and small scale/ local institutions) (Elgin & Mitchell, 1978; Leonard-Barton, 1981). In adopting a voluntary simplistic lifestyle, these dimensions should manifest in consumers' voluntary simplistic clothing consumption practices as well. In terms of the online questionnaire and data collection process, the section regarding consumers' engagement in the various dimensions of voluntary simplistic clothing consumption practices (Objective 3) included 22 scale items that were derived from a scale validation study by Reis (2019). This scale specifically related to clothing behaviour and was patterned after a behavioural index developed by Leonard-Barton (1981). For this study the items were further developed and adapted to accommodate the research topic and improve the overall clarity of items. A seven-point Likert-scale with response options ranging from 1 ("strongly disagree") to 7 ("strongly agree") was used for this section (Vagias, 2006).

4.4.3.1 Exploratory Factor Analysis (EFA) of the VSCCP data

The 22 scale items relating to the voluntary simplistic clothing consumption practices that were previously validated in the local context with sample size of 1002 male and female respondents were used for purposes of this study. Initially the 22 items were intended to measure four factors relating to the underlying dimensions of voluntary simplicity, namely material simplicity, self-determination, ecological awareness and human scale. However, Reis's (2019) analysis produced three factors that were labelled: Local Ethical Brands (LEB), Unique Handcraft (UH) and Reduced Consumption (RC) (Taljaard *et al.*, 2018a). In following Reis's (2019) recommendations, further analysis was performed on the responses to the 22 items that was derived from this particular

study's sample (N = 469). IBM SPSS Statistics 25 software was used to perform the EFA, utilising Principal Axis Factoring as the extraction method and Varimax with Kaiser Normalization as the rotation method. The purpose of the EFA was to filter and reduce the data (i.e. purifying the dataset) by interpreting the factor loadings to extract the most significant factors that were then labelled accordingly, i.e. the variables within every matrix that related to one another were classified as a factor and labelled accordingly (Jackson, 2005:221; Salkind, 2012:191; Williams *et al.*, 2010).

Based on Kaiser's criterion or the eigenvalue rule, i.e. retaining all factors with eigenvalue above 1, the initial unrestricted EFA produced six factors (Pallant, 2011). Items that failed to reach a factor loading of 0.32 or more for any given factor were also investigated and eliminated systematically to improve the EFA (Yong & Pearce, 2013). As mentioned before, the factor loadings describe the relationship between the original variable and the extracted factor as well as the statistical relevance of a factor loading, which is dependent on the absolute value and sample size (i.e. a larger sample size requires a smaller value to remain statistically relevant) (Hair *et al.*, 2014:110; Jackson, 2005:227-228). According to Jackson (2005:228) a sample size of a 100 requires factor loadings of at least 0.55, while a sample size of 200 or more requires a minimum of 0.40 to be relevant. In terms of Hair *et al.* (2014:115), a sample size of 100 requires factor loadings of at least 0.55 to be significant, while a sample of 350 or greater only requires a factor loading of at least 0.3 to be significant. This study included a sample of 469 female respondents and the lowest factor loading was 0.478; therefore, the minimum threshold of 0.3 and 0.4 was exceeded and the factor loadings were considered acceptable and relevant in terms of the aforementioned criteria.

Although the factor loadings exceeded minimum thresholds, the six factor analysis included various incidences of cross-loading (i.e. items loading high across two or more factors), and the most problematic items, namely VSD15, VSD4, VSD16, VSD1, VSD5 and VSD12 were systematically eliminated to define more distinct clusters of interrelated variables (Costello & Osborne, 2005; Hair *et al.*, 2014:117; Yong & Pearce, 2013). After eliminating VSD15, VSD4 and VSD16, the six-factor analysis converged to a five-factor analysis. However, a few items (VSD1, VSD5 and VSD 12) still remained problematic and were systematically eliminated after which the five-factor solution was retained. Careful deliberation went into the elimination of the various items and in so doing, two cross-loaded items (VSD3 & VSD8) were retained based on the justification that these items could effectively represent the different factors based on overarching societal and environmental issues that cannot be effectively compartmentalised. The results pertaining to the

final five-factor solution is reported in **Table 4.10** and an appropriate label was allocated to each of the factors as follows:

Factor 1: Ethical Clothing (EC) - Refuse
Factor 2: Clothing Longevity (CL) – Reuse / recycle
Factor 3: Repurposed Clothing Consumption (RCC) - Repair
Factor 4: Unique handcrafted clothing (UHC) - Refuse
Factor 5: Need-based clothing consumption (NBCC) - Reduce

TABLE 4.10: EXPLORATORY FACTOR ANALYSIS OF VSD DATA (N = 469)

V	ITEM	FACTOR				
		1	2	3	4	5
		EC	CL	RCC	UHC	NBCC
VSD_8	I support clothing manufacturers who create employment and fair working conditions.	**0.487**	0.286	0.120	0.101	0.043
VSD_18	Whenever it is possible, I buy clothes with eco-friendly features (e.g. organic cotton).	**0.641**	0.100	0.104	0.234	0.221
VSD_19	I shop at stores that promote "Proudly South African" clothing.	**0.677**	0.069	0.153	0.166	0.230
VSD_20	I buy clothes that are good for the environment (e.g. recycled polyester or bamboo).	**0.795**	0.051	0.162	0.127	0.155
VSD_21	I support clothing labels that are produced by local South African communities.	**0.727**	0.160	0.155	0.172	0.120
VSD_22	I try to be pro-environmental by rather shopping at places that are known to be eco-friendly.	**0.758**	0.101	0.144	0.122	0.122
VSD_7	I dispose of clothing in an eco-friendly way (e.g. donating it to charities).	0.220	**0.581**	0.126	0.044	0.032
VSD_9	I wear my clothes for more than one season.	0.026	**0.588**	0.060	0.041	0.272
VSD_11	If we do not wear certain clothes anymore, we pass them on to family or friends to be reused.	0.088	**0.604**	0.156	0.109	0.048
VSD_3	I recycle old clothing into something new (e.g. using old T-shirts as cleaning rags or making patchwork cushions from old jeans).	0.262	0.184	**0.478**	0.157	-0.011
VSD_10	I repair my damaged clothes rather than throwing them away to reduce my overall waste.	0.161	0.317	**0.626**	0.052	0.153
VSD_14	I have clothing altered if it no longer fits me so that I can wear it again.	0.142	0.033	**0.709**	0.136	0.230
VSD_2	I have an appreciation for handcrafted garments.	0.215	0,127	0.129	**0.673**	-0.027
VSD_6	I would much rather wear clothes that are handcrafted than clothes that are mass-produced.	0.274	0,066	0.139	**0.755**	0.097
VSD_13	I make a conscious effort to only buy clothes that I really need.	0.228	0,159	0.131	-0.011	**0.633**
VSD_17	When going to a special occasion, I rather wear something I already have than buying a new outfit.	0.216	0,121	0.141	0.060	**0.583**
	Mean	**4.623**	**6.473**	**5.008**	**5.184**	**5.165**
	Standard deviation	**1.050**	**0.704**	**1.333**	**1.275**	**1.331**
	% variance explained	**1.103**	**0.496**	**1.776**	**1.625**	**1.771**
	Mean Inter-Item Correlations	**0.541**	**0.380**	**0.443**	**0.590**	**0.459**
	Cronbach's alpha	**0.876**	**0.648**	**0.704**	**-**	**-**
	Spearman's rho correlation coefficient	**-**	**-**	**-**	**0.605**	**0.474**

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

In terms of the overall statistics of the five factors, the means ranged from 4.623 to 6.473, indicating a generally positive response in terms of female consumers' engagement in voluntary simplistic clothing consumption practices. The standard deviations ranged from 0.704 to 1.333, indicating that the factors are relatively close in value to the means, which makes the data more reliable and thus acceptable in terms of the study and quality control. The cumulative % variance explained was 51.703% (Taljaard & Sonnenberg, 2019c). To date, various thresholds have been deemed acceptable or not, but no final threshold has been agreed upon for all applications (Hair *et al.*, 2014:107). In cases such as in social sciences, where information is often less precise, it has been acknowledged that solutions that account for 60% of the total variance, or in some cases even less than that, are deemed acceptable (Hair *et al.*, 2014:107). Consideration must also be given to the fact that the concepts in question may have overlapping indicators in terms of societal and environmental beliefs (Yong & Pearce, 2013).

As mentioned before, the intended outcome of the proposed scale items was to extract the four dimensions (material simplicity, self-determination, ecological awareness and human scale) of voluntary simplicity as originally identified by Elgin and Mitchell (1978). However, as experienced during Reis's (2019) study on the validation of the voluntary simplistic clothing consumption practices scale, the extracted factors were not labelled as the dimensions but rather as various specific subsections of consumers' voluntary simplistic clothing consumption practices (Taljaard *et al.*, 2018a). These factors still form part of the overall dimensions and can be incorporated into these sections, but did not result in the dimensions as was originally intended. The results and interpretation surrounding the five factors (EC, CL, RCC, UHC and NBCC) will be discussed in further detail below.

Factor 1: Ethical Clothing (EC) - Refuse

"Ethical Clothing" was measured with six items (VSD8, VSD18, VSD19, VSD20, VSD21 and VSD22) and related to female consumers' voluntary simplistic clothing consumption practices in terms of the social and environmental aspects of clothing. The factor was labelled "Ethical Clothing" as it covers a range of issues such as working conditions, exploitation, fair trade, sustainable production, the environment, and animal welfare. This factor includes two of the voluntary simplistic dimensions, namely ecological awareness and human scale, originally identified by Elgin and Mitchell (1978) and later used by Leonard-Barton (1981) to explain her research findings. In terms of voluntary simplistic clothing consumption practices, ecological awareness includes acquiring eco-friendly apparel options such as clothing made of organic cotton, recycled polyester or bamboo. Human scale refers to the support of smaller scale

institutions, such as living in decentralised, less complex environments (Elgin & Mitchell, 1978). In terms of voluntary simplistic clothing consumption practices, human scale includes the acquisition of brands that have a reputation of being ethically and socially responsible. Another aspect of the human scale includes acquiring apparel that has been locally produced.

A Cronbach's alpha of 0.876 was achieved, indicating consistent responses to all items (Pallant, 2011:97). In addition to that, EC also presented a strong, positive mean inter-item correlation of 0.541, exceeding the 0.3 threshold. This indicates that all the items within this factor are measuring the same underlying characteristics (Hair *et al.*, 2014:123). The mean for factor one was 4.623, indicating a neutral to moderate association in terms of female consumers' voluntary simplistic clothing consumption practices regarding the acquisition of environmentally and socially acceptable clothing options. It can be assumed that although the mean leaned more towards respondents' agreement with statements included in measurement scale, they have not yet fully committed themselves to exclusively purchasing eco-friendly clothing or locally produced products. Possibilities surrounding this could relate to their oblivion regarding relevant knowledge of the environmentally and socially sound options available to them, or could be attributed to financial restrictions. These practices represent essential elements in adopting voluntary simplistic lifestyles that is manifested in sustainable clothing consumption.

Factor 2: Clothing Longevity (CL) – Reuse / Recycle

Three items (VSD7, VSD9 and VSD11) measured the "Clothing Longevity" factor and relate to concepts linked to reusing and recycling clothing. The factor essentially deals with issues surrounding the extended life cycle of clothing items and underscore two voluntary simplicity dimensions, namely ecological awareness and material simplicity, as identified by Elgin and Mitchell (1978). The aspects that relate to clothing longevity in terms of the ecological awareness dimension, includes recycling apparel by either acquiring and / or disposing of second-hand apparel at second-hand stores or by donating it to family and friends (Ballantine & Creery, 2010; Bekin *et al.*, 2007; Huneke, 2005). This enables consumers to reuse apparel products that are still usable and prevents them from acquiring additional items that are deemed unnecessary (Hiller Connell, 2011; Yang *et al.*, 2017). In terms of material simplicity, clothing longevity includes consuming fewer products by purchasing classically styled items that could last multiple seasons and supersedes current fashion trends (Hiller Connell, 2011).

EC had a Cronbach's α of 0.648, indicating some internal consistency in responses to the items. According to Delport and Roestenburg (2011:177) the acceptable threshold for Cronbach's alphas

is 0.7 or more, while Hair *et al.* (2014:123) states that the lower limit for Cronbach's alphas may decrease to 0.6 in terms of exploratory research. That said, Cronbach's alphas are particularly sensitive to the amount of items in the scale, and the Cronbach's alphas of short scales (i.e. scales that have less than 10 items) are often as low as 0.5 (Pallant, 2011:97). In terms of these cases, the inter-item correlations of the items are deemed more suitable (Pallant, 2011:97). The mean inter-item correlations for CL is 0.380, indicating a good level on consistency among the items in the factor. Clothing Longevity (CL) had the highest mean ($M_{Factor2}$ = 6.473) of all five factors, indicating the female consumers' strong association with reusing and recycling clothes by donating it to charities and/or friends / family as well as reusing it for more than one season. Clothing longevity includes creating longer lasting clothing and increasing the length of time before a garment is disposed of (Cooper, Claxton, Hill, Holbrook, Hughes, Knox & Oxborrow, 2014). Furthermore, it is closely related to the concept, "reuse", that can be described as already-purchased products that are sold to others, exchanged for other things or just donated (Joung & Park-Poaps, 2013; Solomon & Rabolt, 2004:457-458). A possible reason for these results may be attributed to the fact that many South African consumers already attempt to retrieve extended use from products and as such rather donate items as opposed to simply discarding them to landfill. This trend is more prevalent in third world countries that are often characterised by dire economic circumstances and income inequalities (The World Bank, 2018).

Factor 3: Repurposed clothing consumption (RCC) - Repair

"Repurposed Clothing Consumption" was measured with three items (VSD3, VSD10 and VSD14) and relates to female consumers' voluntary simplistic clothing consumption practices in terms of repurposing old clothing, altering clothing and/ or repairing clothing rather than prematurely disposing of it. This factor underscores self-determination as a dimension of voluntary simplicity based on the original conceptualisation by Elgin and Mitchell (1978). Self-determination includes notions of self-sufficiency such as repairing or even constructing one's own clothes (McDonald *et al.*, 2006). It is based on the choice to exercise more control over one's life and has promoted the "do-it-yourself (DIY)" trend (Shama, 1985). In terms of voluntary simplistic clothing consumption practices, self-determination includes either making clothes or repairing items to extend their lifespan. The three items in this factor had an acceptable Cronbach's alpha of 0.704, confirming consistent responses to the items. The mean inter-item correlation was 0.443, exceeding the 0.3 which is the threshold for inter-item correlations according to Hair *et al.* (2014:123). The mean was calculated as 5.008, leaning towards a relatively strong association with voluntary simplistic clothing consumption practices. Therefore, it can be assumed that female consumers are

relatively involved with repairing, repurposing and altering clothing rather than disposing of it and replacing it with new clothing.

Factor 4: Unique Handcrafted clothing (UHC) - Refuse

The two items (VSD2 and VSD6) that measured "Unique Handcrafted Clothing" included a preference for handcrafted garments as opposed to mass-produced garments. These concepts also fall under the dimension of self-determination as originally postulated by Elgin and Mitchell (1978) in relating to hand-produced items and the production of your own, unique clothing rather than the clothing that is either imported or produced on a large scale. It follows same notion of "DIY" and encourages consumers to seek out unique products that are produced with a conscious effort of creating a distinct item that attests to specialised craftsmanship. The Cronbach's alpha for UHC could not be determined, due to the fact that the factor only had two items. Therefore, the "Spearman's rho" correlation was performed on VSD2 and VSD6, resulting in a significant correlation of 0.605* (*correlation is significant at the 0.01 level). Based on the results obtained in the "Spearman's rho" correlations, these factors were retained and used for further analysis (i.e. confirmatory factor analysis). Additionally, the mean inter-item correlation was also calculated and deemed acceptable as it was 0.590 (Hair *et al.*, 2014:123). The mean was 5.184 indicating a relatively strong association with these voluntary clothing consumption practices. Therefore, it can be assumed that female consumers tend to lean more towards uniquely handcrafted products as opposed to mass-produced garments.

Factor 5: Need-based clothing consumption (NBCC) - Reduce

Factor 5 was labelled as "Need-based clothing consumption" and two items (VSD13 and VSD17) attest to voluntary simplistic clothing consumption practices that incorporate the acquisition of clothes on the basis of need, rather than want, which may involve purchasing new items for every upcoming event and/or as the desire arises. This factor relates strongly to the "material simplicity" dimension as originally identified by Elgin and Mitchell (1978). Material simplicity refers to non-consumption practices and/ or consuming less (Elgin & Mitchell, 1978) and is typified by a conscious effort to limit the amount of clothing purchased in a particular timespan (Gwozdz *et al.*, 2017; Hiller Connell, 2011). The Cronbach's alpha for factor 5 (need-based clothing consumption) could not be determined, due to the fact that the factor only included two items. Thus, VSD13 and VSD17 were subjected to the "Spearman's rho" correlation which delivered a significant correlation of 0.474. Based on the results obtained in the "Spearman's rho" correlations, these factors were retained and used for further analysis (i.e. confirmatory factor analysis). Both the

items within this factor measured the same underlying characteristics, and was presented in the form of a strong, positive mean inter-item correlation (NBCC = 0.459) (Pallant, 2011:100). The mean for this factor was 5.165, indicating that respondents have a relatively strong association with this factor. It can be assumed that female consumers critically question their personal needs or wants and only acquire the apparel pieces when needed (Cho & Workman, 2011).

4.4.3.2 Confirmatory Factor Analysis (CFA) of the VSCCP data

Confirmatory factor analysis is used to determine how well the measured variables represent the extracted factors as previously determined in the EFA (Hair *et al.*, 2014:602). Thus, the CFA is used to either "confirm" or "reject" the measurement model as formulated during the EFA. CFA is associated to Structural Equation Modelling (SEM) and specifically deals with measurement models that enable researchers to evaluate whether the measurement of latent variables (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing and need-based clothing consumption) by means of certain manifest indicators, is satisfactory. For this study, the underlying items and variables retained from the EFA (as seen above) were composed as a five-factor confirmatory factor model using IBM SPSS Amos 25 and evaluated by means of CFA. Numerous CFA solutions were explored in accordance with several criteria (i.e. factor loadings, modification indices and average variance extracted) to ensure good model fit.

For the purpose of CFA, the original items relating to the five factors of VSCCP were relabelled as follows:

Ethical clothing:	EC 1 – 6
Clothing longevity:	CL 1 – 3
Repurposed clothing consumption:	RCC 1 – 3
Unique handcrafted clothing:	UHC 1 – 2
Need-based clothing consumption:	NBCC 1 – 2

Factor loadings can be explained as the link between the variables and the predetermined factors (as specified in the EFA) and is often used to assess the construct validity. In terms of this study, a total sample size of 469 female consumers formed part of the data collection process, and a minimum threshold of 0.40 for the factor loadings was considered relevant (Hair *et al.*, 2014:617). **Table 4.11** below specifies the standardised factor loadings, as determined in the CFA, indicating acceptable factor loadings ranging from 0.545 – 0.825.

TABLE 4.11: STANDERDIZED FACTOR LOADINGS/ REGRESSION WEIGHTS OF VSD ITEMS

Original item label	Latent variable items	Factor loadings
VSD 8	EC 1	0.545
VSD 18	EC 2	0.762
VSD 19	EC 3	0.757
VSD 20	EC 4	0.807
VSD 21	EC 5	0.824
VSD 22	EC 6	0.772
VSD 7	CL 1	0.618
VSD 9	CL 2	0.573
VSD 11	CL 3	0.665
VSD 3	RCC 1	0.583
VSD 10	RCC 2	0.744
VSD 14	RCC 3	0.678
VSD 2	UHC 1	0.715
VSD 6	UHC 2	0.825
VSD 13	NBCC 1	0.685
VSD 17	NBCC 2	0.670

In addition to the factor loadings, modification indices are scrutinised for every possible relationship that is not already estimated in the model and indicates to what extent the model fit would increase if a suggested causal path is added to the existing model (Hair *et al.*, 2014:621). All item pairs above the value of 10 should be investigated to see whether a covariance should be established or whether the items should be considered for deletion. In terms of this study VSD18 (EC2) and VSD21 (EC5) had a value of more than 10, and a covariance was justified as these two items still formed part of the same factor, namely “Ethical Clothing”. Once the covariance was established, the model fit improved (Taljaard & Sonnenberg, 2019c).

Furthermore, the Average Variance Extracted (AVE) of every factor should be 0.5 or higher to indicate adequate convergence. If the AVE is below 0.5 more error remains in the items than the variance explained by the relevant factor structure (Hair *et al.*, 2014:619). **Table 4.12** below reports the relevant AVE values, indicating adequate convergence on the majority of the factors except for the factor relating to clothing longevity (CL), which is just below the acceptable threshold of 0.5.

TABLE 4.12: AVERAGE VARIANCE EXTRACTED OF VSD DATA

Items		Factors	Estimate (≥ 0.5)	Sum of estimate	Estimate Squared	Sum of est. sq.	AVE (≥ 0.5)	Sq. root of AVE	Error variance (Ɛ)	Sum of Ɛ	Composite reliability	Construct Reliability
VSD_8	<---	Ethical Clothing (EC1)	0.545		0.297				0.703			
VSD_18	<---	Ethical Clothing (EC2)	0.762		0.581				0.419			
VSD_19	<---	Ethical Clothing (EC3)	0.757	4.467	0.573	3.377	0.616	0.785	0.427	2.623	0.884	0.876
VSD_20	<---	Ethical Clothing (EC4)	0.807		0.651				0.349			
VSD_21	<---	Ethical Clothing (EC5)	0.824		0.679				0.321			
VSD_22	<---	Ethical Clothing (EC6)	0.772		0.596				0.404			
VSD_7	<---	Clothing Longevity (CL1)	0.618		0.382				0.618			
VSD_9	<---	Clothing Longevity (CL2)	0.573	3.861	0.328	1.152	0.384	0.620	0.672	3.494	0.810	0.648
VSD_11	<---	Clothing Longevity (CL3)	0.665		0.442				0.558			
VSD_3	<---	Repurposed Clothing Consumption (RCC1)	0.583		0.340				0.660			
VSD_10	<---	Repurposed Clothing Consumption (RCC2)	0.744	4.230	0.554	1.353	0.507	0.712	0.446	2.985	0.857	0.704
VSD_14	<---	Repurposed Clothing Consumption (RCC3)	0.678		0.460				0.540			
VSD_2	<---	Unique Handcrafted Clothing (UHC1)	0.715	2.895	0.511	1.192	0.508	0.713	0.489	1.890	0.816	-
VSD_6	<---	Unique Handcrafted Clothing (UHC2)	0.825		0.681				0.319			
VSD_13	<---	Need-based Clothing Consumption (NBCC1)	0.685	1.355	0.469	0.918	0.484	0.696	0.531	1.082	0.629	-
VSD_17	<---	Need-based Clothing Consumption (NBCC2)	0.670		0.449				0.551			

Based on the factor loadings, the resulting measurement model of the CFA had the following fit indices:

TABLE 4.13: GOODNESS-OF-FIT INDICES FOR THE VSD CONFIRMATORY FACTOR MODEL

Name	Abbreviation	Indices	Thresholds
Chi-square			
Chi-square (X^2)	CMIN	235.399	
Degrees of freedom	DF	93	
Significance	P	0.000	$p < 0.05$ (significant) *
Normed chi-square (X^2)	CMIN (X^2)/DF	2.531	2 < CMIN/DF < 5 (acceptable) */** CMIN/DF < 2 (very good) *
Absolute Fit Measures			
Goodness-of-fit index	GFI	0.942	GFI > 0.9 (acceptable) GFI ≥ 0.95 (excellent) **
Root mean square error of approximation	RMSEA	0.057	RMSEA < 0.08 (acceptable) ** RMSEA ≤ 0.07 (good) ** RMSEA ≤ 0.03 (excellent) **
Incremental Fit Indices			
Normed fit index	NFI	0.915	NFI > 0.9 (acceptable) ** NFI ≥ 0.95 (excellent) **
Comparative fit index	CFI	0.946	CFI > 0.9 (acceptable) */** CFI ≥ 0.95 (excellent) **
Parsimony Fit Indices			
Adjusted goodness-of-fit index	AGFI	0.915	AGFI > 0.9 (acceptable) */** AGFI ≥ 0.95 (excellent) **

* Hair *et al.* (2014)

** Hooper *et al.* (2008)

The overall model, CMIN, which is used to test if the model fits the data correctly, was 235.399 with 93 degrees of freedom (DF). The p-value was deemed significant as $p < 0.05$ (Hair *et al.*, 2014:630). The Chi-square test is obtained when CMIN/DF is calculated and in terms of this study, the CMIN/DF was calculated as 2.531, which falls within the acceptable threshold ranging between 2 and 5 (Hair *et al.*, 2014:630; Hooper *et al.*, 2008; Tabachnick & Fidell, 2007). The Chi-square statistic is sensitive to sample size and generally rejects the model when large samples are used (Hooper *et al.*, 2008). Based on the aforementioned, additional indices are necessary to evaluate the model fit.

In terms of the absolute fit measures, the GFI was 0.942 and was deemed acceptable, just below the 0.95 threshold which indicates an excellent model fit. In addition to that, the RMSEA was calculated as 0.057, which also falls within the acceptable threshold (Hooper *et al.*, 2008) as reported in **Table 4.13.**

The general recommendation for a good fit in terms of the incremental fit indices are for the values to be as close as possible to 1 (Mazzocchi, 2008:322). That being said, the NFI exceeded the 0.9 threshold, and was classified as acceptable (Hair *et al.*, 2014:631; Hooper *et al.*, 2008). The NFI is also sensitive to sample size and increases as the sample size becomes larger (Hooper *et al.*, 2008). The CFI, on the other hand, had a value of 0.946, which exceeded the CFI guidelines that suggest CFI > 0.9 and came very close to it being deemed excellent (CFI ≥ 0.95). To summarise, the resulting CFA model has a relatively good fit in terms of the incremental fit indices as it exceeded the minimum, acceptable threshold and came close to the value of 1.

Lastly, although this model was not compared to other models, the parsimony index of AGFI had a value of 0.915, which echoes acceptable model fit (Hair *et al.*, 2014:631).

To conclude, all the fit indices (CMIN/DF, GFI, RMSEA, NFI, CFI and AGFI) reached the acceptable thresholds and came close to being deemed excellent. According to Mazzocchi (2008:322), larger sample sizes present better statistical outcomes and a sample size of at least 200 is necessary to present a good model. Therefore, the sample size of this study (N = 469) presented a good model fit, but further ongoing analysis and modifications could ensure that the model obtains excellent thresholds on all the required fit indices (Taljaard & Sonnenberg, 2019c). In addition to that, no further items were eliminated for the CFA; however, a covariance between VSD18 (EC2) and VSD21 (EC5) was created to improve the overall fit, which remained acceptable since these two items still belonged to the same factor, namely “ethical clothing”. Thus, based on the aforementioned statement, the means, standard deviations, and Cronbach’s α remained the same as discussed during the EFA. Below, **Figure 4.6** illustrates the CFA with the standardised factor loadings as well as the items and the associated factors.

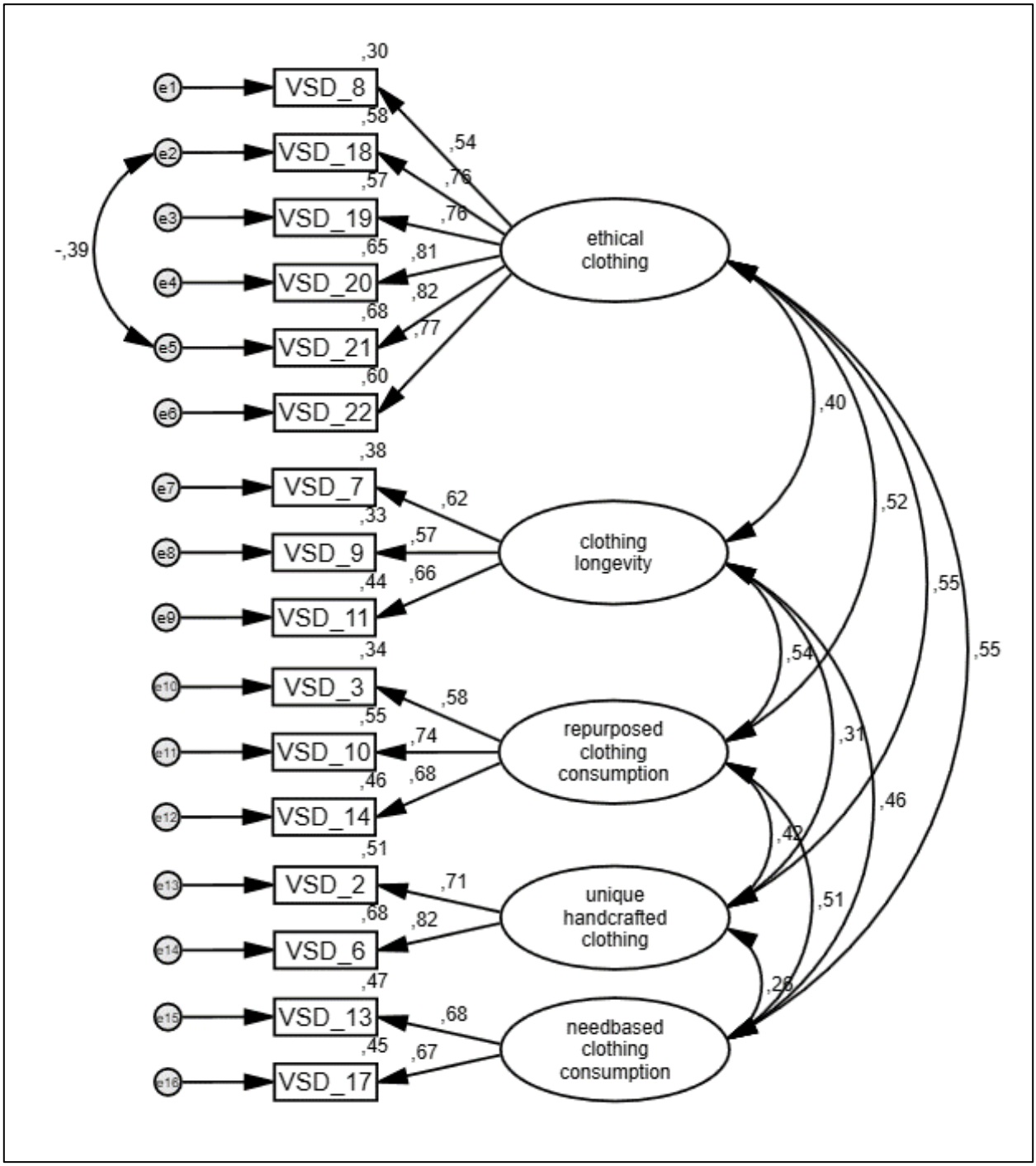


FIGURE 4.6: CONFIRMATORY FACTOR ANALYSIS OF THE VSD DATA

The concepts surrounding the self-determination theory (SDT) (i.e. basic psychological needs and self-determined motivation) and the VSCCP have now been analysed by means of EFA's and CFA's. The next step to determine the influence of these aforementioned concepts on each other would involve structural equation modelling (SEM). However, only two factors were extracted from both the basic psychological needs and the self-determined motivations, contrary to the initial

prediction of three factors, as stated in the literature (Pallant, 2011). Consumers might not compartmentalise socio-psychological concepts that are closely linked, as separate factors, but might rather see them as single concepts. Consequently, the factors that that originally formed part of the basic psychological needs (i.e. competence, autonomy, connectedness/ relatedness) as well as the factors that originally formed part of the self-determined regulations (i.e. identified regulation, integrated regulation, intrinsic motivation) either merged or overlapped during the EFA and CFA resulting in two-factor solutions, as opposed to three, as specified in existing empirical evidence. To ensure that all possible solutions were explored, the decision was made to perform a SEM analysis on all the concepts, as stated in the literature, rather than limiting the outcomes of the SEM to the preliminary results retained from the EFA's and CFA's to resemble as closely the structure of the SDT and offer research recommendations that can be of substantial value in future research endeavours.

In addition to that, the analyses regarding the VSCCP (during the EFA and CFA) resulted in a five-factor solution (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing, and need-based clothing consumption) that in itself presented complex results based on the vast amount of data gathered on this subject of interest. For the purposes of the SEM analysis, a decision was made to group together VSCCP as one concept rather than the five factors that were extracted from the analyses above to simplify and present a more streamline model that resembles the SDT more accurately. Additionally, the number of hypotheses and analysis would be quite challenging if the VSCCP remained five factors instead of one overarching concept. Consequently, all the relevant items that were extracted during the EFA and CFA were included under the VSCCP concept, after which they were narrowed down based on their standardised regression weights. Interestingly enough, the items that remained and ultimately formed part of the VSCCP concept in the SEM analysis were all related to the "Ethical clothing" factor.

In conclusion, a SEM analysis will be done on the three factors that make up the basic psychological needs, the three factors that form part of the self-determined motivations and the VSCCP in general (see **Addendum D** for article relating to this section – as published in "Sustainability"). Details are discussed in the section to follow.

4.4.4 Structural Equation Modelling (SEM) incorporating BPN, SDM and VSCCP

The overarching aim of this section of the study was focused on understanding the influence of basic psychological needs and self-determined motivation on female consumers' voluntary

simplistic clothing consumption practices in the South African emerging market context. The SDT was used as a reference to develop the conceptual framework relating to the SEM analysis. The SDT suggests that the fulfilment of basic psychological needs (i.e. competence, autonomy, connectedness / relatedness) enhances local consumer's motivation and cultivates the development of more self-determined regulations (i.e. identified regulation, integrated regulation, intrinsic motivation). In turn, self-determined motivation leads to behaviours such as voluntary simplistic clothing consumption practices, which originates from the consumer and is not always purely controlled by external forces (Darner, 2009).

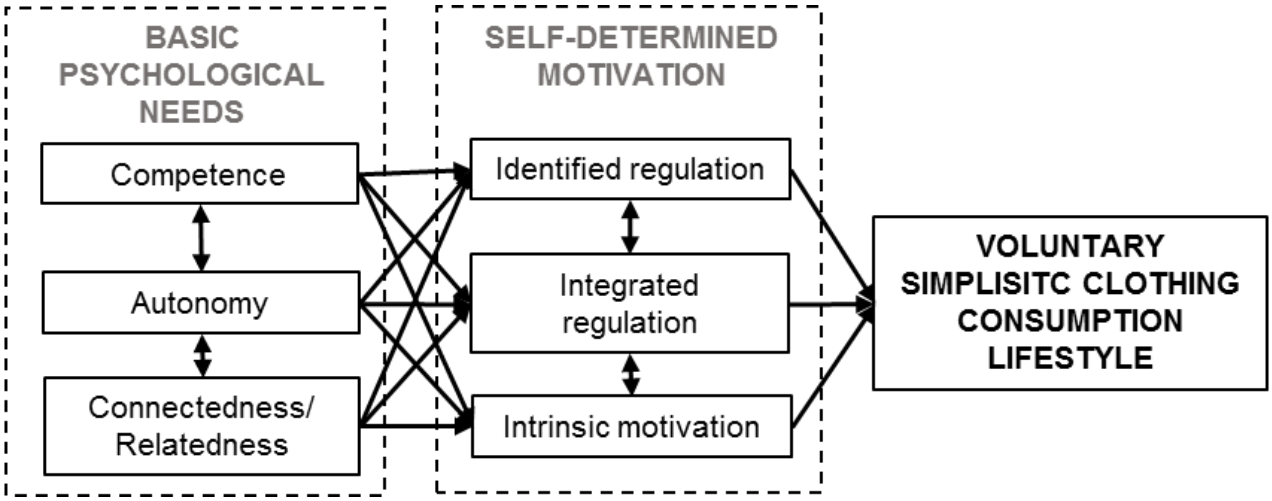


FIGURE 4.7: PROPOSED CONCEPTUAL MODEL FOR SEM

As mentioned in Chapter one, following the initial analyses (exploratory- and confirmatory factor analyses) pertaining to objectives 1, 2 and 3, the most prominent voluntary simplistic clothing consumption practices were identified and retained for further investigation and analysis (i.e. structural equation modelling). Based on the afore-mentioned as well as the conceptual model presented in **Figure 4.7,** the following hypotheses were developed:

H1: There is a significant positive relationship between competence and self-determined motivation, more specifically:

H1a*: There is a significant positive relationship between competence and identified regulation.*

H1b*: There is a significant positive relationship between competence and integrated regulation.*

H1c*: There is a significant positive relationship between competence and intrinsic motivation.*

H2: There is a significant positive relationship between autonomy and self-determined motivation, more specifically:

H2a*: There is a significant positive relationship between autonomy and identified regulation.*

***H2b**: There is a significant positive relationship between autonomy and integrated regulation.*

***H2c**: There is a significant positive relationship between autonomy and intrinsic motivation.*

H3: There is a significant positive relationship between connectedness and self-determined motivation, more specifically:

***H3a**: There is a significant positive relationship between connectedness and identified regulation.*

***H3b**: There is a significant positive relationship between connectedness and integrated regulation.*

***H3c**: There is a significant positive relationship between connectedness and intrinsic motivation.*

H4: There is a significant positive relationship between self-determined motivation and voluntary simplistic clothing consumption, more specifically:

***H4a**: There is a significant positive relationship between identified regulation and voluntary simplistic clothing consumption.*

***H4b**: There is a significant positive relationship between integrated regulation and voluntary simplistic clothing consumption.*

***H4c**: There is a significant positive relationship between intrinsic motivation and voluntary simplistic clothing consumption.*

4.4.4.1 Measurement model

A measurement model was established by means of confirmatory factor analysis using SPSS AMOS software. Factors were specified as postulated in existing theory and the hypotheses formulated for this study. Standardized factor loadings relating to self-determined motivation items ranged between 0.726 and 0.863, whereas basic psychological needs items achieved loadings ranging from 0.735 to 0.913. Voluntary simplistic clothing consumption items loaded between 0.722 and 0.825. All the items were at least more than 0.5 and basically higher than the 0.7 threshold, indicating a strong relation between the items and their respective constructs or factors (Hair *et al.*, 2014:617). Overall, the measurement model was satisfactory and results pertaining to reliability is reported in **Table 4.14** (Taljaard & Sonnenberg, 2019a). The composite reliabilities (CR) varied between 0.784 and 0.916, all exceeding the recommended cut-off value of 0.7 (Nunnally, 1978). The average variance extracted (AVE) for all constructs were more than 0.54, exceeding the minimum threshold of AVE ≥ 0.5, indicating convergent validity (Hair *et al.*, 2014). The Cronbach's alphas (α) varied between 0.784 and 0.914, surpassing the threshold of 0.7, indicating good internal consistency and stability of scales (Delport & Roestenburg, 2011).

TABLE 4.14: DESCRIPTIVE ANALYSIS AND ASSESSMENT OF MEASUREMENT MODEL

Construct	Item code	Item	Mean	Cronbach's α	Convergent validity		
					Factor loadings	AVE [a]	CR [b]
Competence	BPN_1	I feel confident that I can do it.	5.603	0.809	0.738	0.593	0.813
	BPN_7	I am able to live more sustainable.			0.735		
	BPN_14	I feel good about my ability to take part in it.			0.833		
Autonomy	BPN_5	I have a say in choosing what I do.	6.183	0.853	0.795	0.658	0.853
	BPN_9	I decide what practices I take part in.			0.816		
	BPN_12	I feel free to make my own decisions on how I do it.			0.823		
Connectedness	BPN_3	I feel connected to the other people who do it.	4.830	0.914	0.832	0.784	0.916
	BPN_8	I feel close to people who support sustainable clothing initiatives.			0.909		
	BPN_10	I feel a sense of belonging to others who live sustainable.			0.913		
Identified regulation	SDM_3	It is the sensible thing to do.	6.124	0.784	0.726	0.548	0.784
	SDM_9	It is a reasonable thing to do.			0.745		
	SDM_12	It is a good idea to do something to improve our lives.			0.749		
Integrated regulation	SDM_2	It is an integral part of my life.	4.646	0.889	0.839	0.728	0.889
	SDM_8	It has become a fundamental part of who I am.			0.858		
	SDM_11	It is part of the way I have chosen to live my life.			0.863		
Intrinsic motivation	SDM_1	I enjoy succeeding at it.	5.684	0.820	0.769	0.605	0.821
	SDM_4	I find it rewarding to improve the quality of the environment.			0.758		
	SDM_7	I like how I feel when doing it.			0.806		
Voluntary simplistic clothing consumption	VSC_18	Whenever it is possible, I buy clothes with eco-friendly features.	4.455	0.856	0.743	0.602	0.809
	VSC_19	I shop at stores that promote "Proudly South African" clothing.			0.722		
	VSC_20	I buy clothes that are good for the environment.			0.825		
	VSC_22	I try to be more pro-environmental by rather shopping at places that are known to be eco-friendly.			0.809		

BPN: Basic Psychological Needs; SDM: Self-determined Motivation; VSC: Voluntary Simplistic Clothing Consumption

[a] Average variance extracted (AVE) = (summation of the square of the factor loadings)/[(summation of the square of the factor loadings) + (summation of the error variances)].

[b] Composite reliability (CR) = (square of the summation of the factor loadings)/[(square of the summation of the factor loadings) + (square of the summation of the error variances)].

Discriminant validity was reported in **Table 4.15** and achieved through the ratio between the square root of AVE as well as the correlations of the constructs. The diagonal insertions of the

matrix (in bold), representing the square root of AVEs, were all higher than the corresponding inter-construct correlations, indicating discriminant validity (Fornell & Larcker, 1981) and constructs were sufficiently different from one another, because the correlations between the latent constructs' composite and all the other constructs were less than 0.7 (Urbach & Ahlemann, 2010). Additionally, discriminant validity was also established by examining the cross loadings and confirming that all indicator loadings were higher than their respective cross loadings (Hair *et al.*, 2014).

TABLE 4.15: DISCRIMINANT VALIDITY (INTERCORRELATIONS) OF CONSTRUCTS

Latent variables	1	2	3	4	5	6	7
1. Competence	**0.770**						
2. Autonomy	0.567**	**0.812**					
3. Connectedness	0.654**	0.389**	**0.885**				
4. Identified regulation	0.556**	0.489**	0.412**	**0.740**			
5. Integrated regulation	0.605**	0.307**	0.604**	0.433**	**0.854**		
6. Intrinsic motivation	0.691**	0.426**	0.669**	0.676**	0.683**	**0.765**	
7. Voluntary simplistic clothing consumption	0.577**	0.303**	0.483**	0.375**	0.575**	0.505**	**0.775**

Note: Diagonals (in bold) represent square roots of average variance extracted (AVE) while off-diagonal represent correlations. **. Correlation is significant at the 0.01 level (2-tailed). Sig. (2-tailed) = 0.000 for all variables

The resulting measurement model achieved good fit: CMIN (X^2) = 417.633, DF = 188, CMIN/DF = 2.221, $p < 0.001$, GFI = 0.927, NFI = 0.939, TLI = 0.957, CFI = 0.965 and RMSEA = 0.051, and was therefore deemed appropriate for the purposes of further structural equation modelling.

4.4.4.2 First order structural equation model

In specifying the first order structural equation model (SEM) (**Figure 4.8**), covariances were added between the three basic psychological needs (i.e. competence, autonomy and connectedness) as well as the three types of self-determined motivation (i.e. identified regulation, integrated regulation and intrinsic motivation) as they essentially form sub-dimensions of a core construct. The resulting model fit was adequate with fit indices indicating the following: CMIN (X^2) = 439.652, DF = 191, CMIN/DF = 2.302, $p < 0.001$, GFI = 0.924, NFI = 0.935, TLI = 0.954, CFI = 0.962 and RMSEA = 0.053. **Figure 4.9** and **Table 4.16** show the standardized path coefficients as well as the explained variance of the dependent variables (R^2).

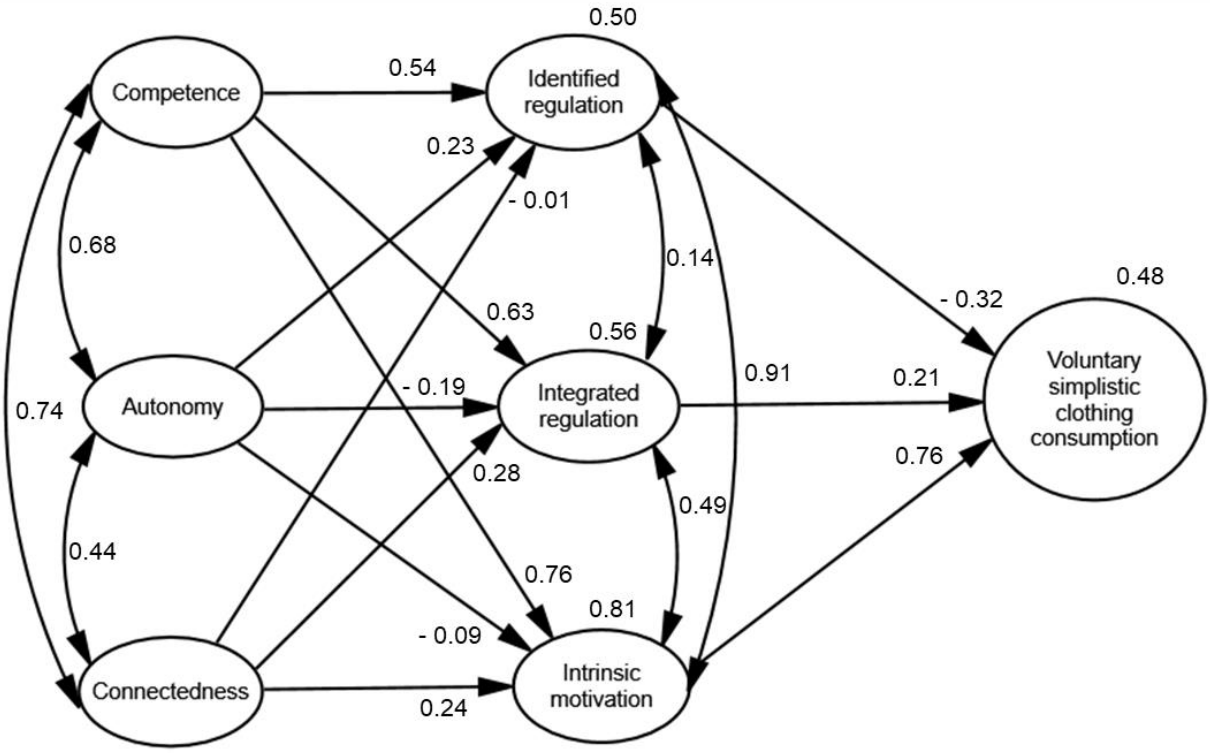


FIGURE 4.8: FIRST ORDER STRUCTURAL EQUATION MODEL (SEM)

In terms of the SEM analysis illustrated in **Figure 4.8**, basic psychological needs (i.e. competence, autonomy, connectedness / relatedness) and self-determined motivation (i.e. identified regulation, integrated regulation, intrinsic motivation) explained 48% of voluntary simplistic clothing consumption. That being said, the variance explained is 50% for identified regulation, 56% for integrated regulation and 81% for intrinsic motivation (Taljaard & Sonnenberg, 2019a). These values are essentially measures of the model's predictive accuracy and are also referred to as R^2 (Hair *et al.*, 2014). The R^2 values measure the construct variance explained by the model and can be categorised as either substantial (0.75), moderate (0.50) and weak (0.25) levels of predictive accuracy (Hair *et al.*, 2014). From the aforementioned categories, the R^2 values associated with voluntary simplistic clothing consumption practices, identified regulation and integrated regulation fall within the moderate category, indicating a moderate predictive capability, while intrinsic motivation's R^2 value can be categorised as a substantial level of predictive accuracy.

TABLE 4.16: SUMMARY OF THE STRUCTURAL MODEL

Hypo-theses	Hypotheses paths			Standardized path coefficients (β)	p	SE	Supported
H1a	Competence	→	Identified regulation	0.544	***	0.087	Yes
H1b	Competence	→	Integrated regulation	0.627	***	0.154	Yes
H1c	Competence	→	Intrinsic motivation	0.762	***	0.108	Yes
H2a	Autonomy	→	Identified regulation	0.228	** (0.002)	0.060	Yes
H2b	Autonomy	→	Integrated regulation	-0.195	** (0.004)	0.105	Yes
H2c	Autonomy	→	Intrinsic motivation	-0.089	0.141	0.069	No
H3a	Connectedness	→	Identified regulation	-0.013	0.874	0.038	No
H3b	Connectedness	→	Integrated regulation	0.283	***	0.067	Yes
H3c	Connectedness	→	Intrinsic motivation	0.245	***	0.044	Yes
H4a	Identified regulation	→	Voluntary simplistic clothing consumption	-0.325	* (0.021)	0.229	Yes
H4b	Integrated regulation	→	Voluntary simplistic clothing consumption	0.209	0.074	0.098	No
H4c	Intrinsic motivation	→	Voluntary simplistic clothing consumption	0.759	***	0.238	Yes

Note: ***p ≤ 0.001; **p ≤ 0.01; *p ≤ 0.05

The standardized path coefficients relating to H1a, H1b and H1c, indicating the relationship between competence and the three types of self-determined motivation, are all positive as well as statistically significant (p ≤ 0.001) thus supporting H1a, H1b and H1c. Competence is the strongest predictor of intrinsic motivation (β = 0.762; p ≤ 0.001), while the relationship between competence and integrated regulation (β = .627; p ≤ 0.001) is also relatively strong. H2a, H2b and H2c, that postulate the relationship between autonomy and the three types of self-determined motivation, are not all positive and only some achieved statistical significance (p ≤ 0.01). More specifically, the relationship between autonomy and identified regulation is positive as well as statistically significant (β = 0.228; p = 0.002). The relationship between autonomy and integrated regulation is negative, yet statistically significant (β = -0.195; p = 0.004). However, the relationship between autonomy and intrinsic motivation is negative, weak and not significant (β = -0.089; p = 0.141). Consequently, H2a and H2b are supported but the same does not hold true for H2c. The standardized path coefficients that relate to H3a, H3b and H3c display varying results. Connectedness and identified regulation indicate a weak negative relationship (β = -0.013) that is not statistically significant (p = 0.874) and thus does not support H3a. The relationship between connectedness and integrated regulation (β = 0.283; p ≤ 0.001) as well as connectedness and

intrinsic motivation (β = 0.245; p ≤ 0.001) are however both positive and statistically significant, which supports H3b and H3c. Lastly, H4a, H4b and H4c postulate the relationship between the three types of self-determined motivation and voluntary simplistic clothing consumption. Of these, the relationship between intrinsic motivation and voluntary simplistic clothing consumption is the only positive and statistically significant relationship (β = 0.759; p ≤ 0.001), supporting H4c. H4a, indicating the relationship between identified regulation and voluntary simplistic clothing consumption, is negative, yet statistically significant (β = -0.325; p = 0.021), while H4b, indicating the relationship between integrated regulation and voluntary simplistic clothing consumption is not statistically significant (β = 0.209; p = 0.074).

4.4.4.3 Second order structural equation model

Stemming from the argument that socio-psychological factors and their sub-dimensions are often theoretically driven, yet prove to be less distinct in the mind of the consumer (Yong & Pearce, 2013), in addition to the high inter-correlations among the sub-dimensions of the key theoretical constructs (i.e. basic psychological needs and the self-determined motivation), a second order SEM was performed. The purpose of this SEM was to determine whether (1) the first order constructs, namely competence, autonomy and connectedness could be compounded into the higher order construct namely basic psychological needs and similarly whether (2) identified regulation, integrated regulation, and intrinsic motivation could be consolidated as self-determined motivation. The overall model fit proved to be very good with fit indices as follows: CMIN (X^2) = 39.895, DF = 25, CMIN/DF = 1.596, *p* = 0.030, GFI = 0.982, NFI = 0.985, TLI = 0.992, CFI = 0.994 and RMSEA = 0.036. The standardized regression weights were all above 0.63 and the AVEs ranged from 0.728 to 0.784, exceeding the minimum threshold of AVE ≥ 0.5, thereby also indicating convergent validity (Hair *et al.*, 2014). Discriminant validity was also achieved as all inter-construct correlations were lower than the square root of AVEs. In terms of the SEM analysis illustrated in **Figure 4.9**, basic psychological needs and self-determined motivation explained 40% of voluntary simplistic clothing consumption behaviour, and the variance explained is 45% for self-determined motivation, indicating a moderate predictive capability (Hair *et al.*, 2014).

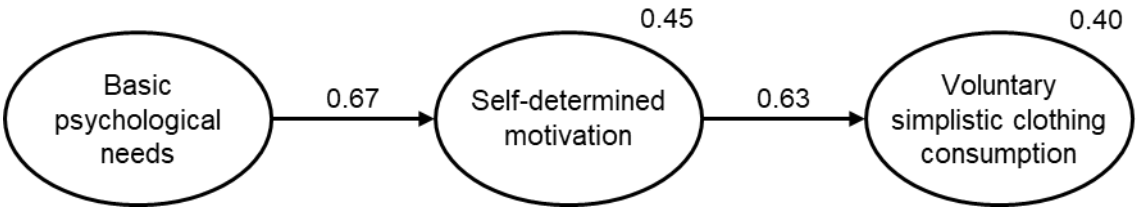


FIGURE 4.9: SECOND ORDER STRUCTURAL EQUATION MODEL (SEM)

From the second order SEM model, it is evident that first order constructs, such as competence, autonomy and connectedness could indeed be compounded into the higher order construct namely basic psychological needs (Taljaard & Sonnenberg, 2019a). Similarly, the first order constructs, namely identified regulation, integrated regulation, and intrinsic motivation could also be consolidated as self-determined motivation. This strengthens the assumption that consumers often group sub-dimensions of socio-psychological factors together as a general term rather than being able to differentiate between the theoretical subcomponents. Furthermore, this model supports the literature surrounding the SDT, which suggests that the fulfilment of basic psychological needs leads to enhanced motivation with more self-determined regulations (Darner, 2009; Pelletier, 2002; Rich *et al.*, 2017; Ryan *et al.*, 2008; Vallerand, 2000). In turn, self-determined motivation leads to behaviours such as voluntary simplistic clothing consumption practices (Darner, 2009).

Once the dimensions of voluntary simplistic clothing consumption practices were clarified and validated, cluster analysis was implemented to classify the female consumers as varying degrees of voluntary simplifiers based on their engagement in voluntary simplistic clothing consumption practices. The analysis surrounding this process will be discussed in further detail below.

4.4.5 Clustering of female consumers based on their level of engagement in VSCCP

According to previous research, consumers can be classified as either full, partial or non-voluntary simplifiers based on the scope of their behaviour and practices (Etzioni, 1998; McDonald *et al.*, 2006). Full voluntary simplifiers reject the norms of a capitalist society and live a simple life avoiding consumption to the greatest degree possible (McDonald *et al.*, 2006), while partial voluntary simplifiers adopt some nuances of voluntary simplicity, but not to the extent of full voluntary simplifiers (McDonald *et al.*, 2006; McGouran & Prothero, 2016). Contrary to aforementioned, the non-voluntary simplifiers who have not adopted any sustainable consumption practices (McDonald *et al.*, 2006) and are often indifferent, unaware or opposed to voluntary simplicity, because they either do not care, are unwilling to change their lifestyles or are unaware of the concept and consequences of living a simplistic lifestyle (Elgin & Mitchell, 1978).

Although research provides valuable knowledge regarding the dimensions and categories of voluntary simplicity, little is known regarding specific classifications of consumers who engage in varying levels of voluntary simplistic clothing consumption practices. This research could therefore make a valuable theoretical contribution and expand knowledge surrounding sustainable lifestyles

in terms of clothing consumption in emerging markets such as South Africa. Practically, marketers, influencers and strategists may benefit from this research to create focused strategies that will promote voluntary simplistic clothing consumption practices (VSCCP) amongst the consumers who are not as involved in these practices. That said, cluster analysis was therefore considered as an appropriate part of this study to address the abovementioned need.

In terms of conceptualisation and context, clustering is often used when researchers anticipate the data to group together naturally into certain categories (Şchiopu, 2010). These categories or clusters are objects such as consumers that are similar in terms of certain features (Hair *et al.*, 2014:418). Cluster analysis is often compared to factor analysis in terms of assessing structures; however, the techniques differ because factor analysis primarily groups together variables based on patterns whereas cluster analysis groups objects together based on distance (i.e. proximity) (Hair *et al.*, 2014:418). For this study, the aim was to group the female consumers into homogeneous groups with heterogeneity between the various groups based on their varying levels of engagement in VSCCP, and therefore cluster analysis was deemed most appropriate in this instance. In order to conduct the cluster analysis, the five VSCCP factors (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing and need-based clothing consumption) that were extracted from the exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), were subjected to various types of cluster analyses.

The different types of cluster analyses depend on the algorithms (e.g. two-step, hierarchical or k-means) that is used to cluster the data. Hierarchical and k-means clustering are classical approaches and have some restrictions in terms of being limited to small datasets and being restricted to continuous values, while two-step cluster analysis accommodates larger datasets and is able to create clusters from continuous and categorical variables (Şchiopu, 2010). Based on the aforementioned, two-step cluster analysis was implemented during the first stage of cluster analysis, after which k-means cluster analysis was performed as an additional stage to further explore and confirm the data regarding the grouping of female consumers' based on their level of engagement in VSCCP (Mazzocchi, 2008:266-267). More detail pertaining to each of these methods are presented in the sections to follow.

4.4.5.1 Two-step cluster analysis

Two-step cluster analysis was chosen for this study as it is suitable for large datasets (N > 200) and provides a predetermined number of clusters (Hair *et al.*, 2014:429; Şchiopu, 2010; Trpkova & Tevdovski, 2009). The two-step clustering procedure was performed in SPSS whereby the

observations were combined into clusters by making use of a hybrid hierarchical procedure known as a cluster feature tree (Mazzocchi, 2008:270-271; Şchiopu, 2010). Firstly, pre-clusters were determined, after which the final number of clusters were finalised. Algorithms determined the most appropriate number of clusters based on the information criteria. Additionally, fixed cluster numbers can also be used in this procedure to explore other options and outcomes (this option will be investigated later on in the chapter). The distance measure used for this study included the log-likelihood, which allocates probability distributions to all the types of variables (continuous variables are normally distributed, while categorical variables are multinomial). That said, all the variables are assumed to be independent (SPSS, 2001). Furthermore, research has indicated the specific distance measure has little to no effect on the final output of the cluster analysis, provided all variables are measured in similar units. Therefore all variables need to be standardised by for example making use of means to cluster the variables into groups (Mazzocchi, 2008:266). Based on the aforementioned, the means of the five VSCCP factors were used during the two-step clustering to analyse the results and interpret the outcomes.

For this study, the number of clusters were recommended and later on determined by making use of the Bayes or Akaike information criteria (Şchiopu, 2010) that can be seen in **Table 4.17** - an output of two-step clustering in which Schwartz's Bayesian Criterion (BIC), BIC Change, Ratio of BIC changes and Ratio of Distance Measures are presented. The number of clusters were then determined by evaluating the lower values of the Schwartz's Bayesian Criterion (BIC). Furthermore, the SPSS software automatically selects the number of clusters based on the highest values as seen in the BIC Change, Ratio of BIC Changes and the Ratio of Distance Measures (Trpkova & Tevdovski, 2009). Below are the results of the two-step clustering that was performed on the five VSCCP factors as identified in previous sections of the chapter. With no predetermined number of clusters specified beforehand, the SPSS software extracted two clusters from the data as reported in the table below.

TABLE 4.17: TWO-STEP CLUSTER ANALYSIS SUMMARY

Auto-Clustering				
Number of Clusters	Schwarz's Bayesian Criterion (BIC)	BIC Change[a]	Ratio of BIC Changes[b]	Ratio of Distance Measures[c]
1	1684.435			
2	1361.795	-322.640	1.000	3.197
3	1303.138	-58.657	0.182	1.464
4	1282.548	-20.590	0.064	1.322
5	1281.952	-0.597	0.002	1.014
6	1282.205	0.253	-0.001	1.224
7	1293.664	11.459	-0.036	1.007
8	1305.460	11.796	-0.037	1.530
9	1334.475	29.015	-0.090	1.008
10	1363.752	29.277	-0.091	1.122
11	1396.542	32.789	-0.102	1.037
12	1430.347	33.805	-0.105	1.158
13	1467.928	37.580	-0.116	1.177
14	1509.111	41.184	-0.128	1.004
15	1550.366	41.255	-0.128	1.101

a. The changes are from the previous number of clusters in the table.

b. The ratios of changes are relative to the change for the two-cluster solution.

c. The ratios of distance measures are based on the current number of clusters against the previous number of clusters.

The two-step cluster analysis also presents the results in the form of a model summary, indicating the algorithm used (two-step), the number of inputs (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing and need-based clothing consumption) and the number of clusters that were extracted, which was two in this case. Furthermore, an analysis of the cluster quality is presented in **Figure 4.10**, which according to the software is classified as fair, deeming the outcome acceptable, but with the potential of being further improved in future research studies.

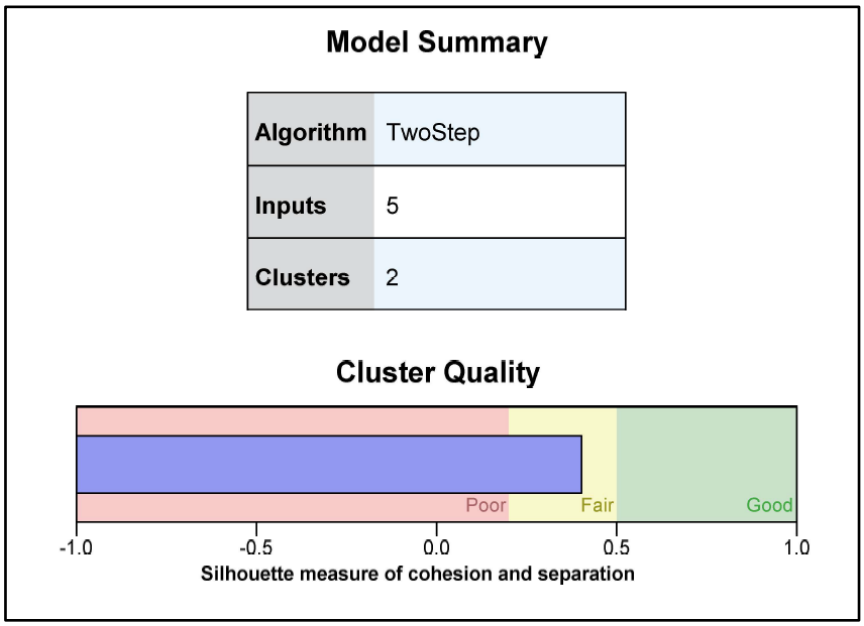


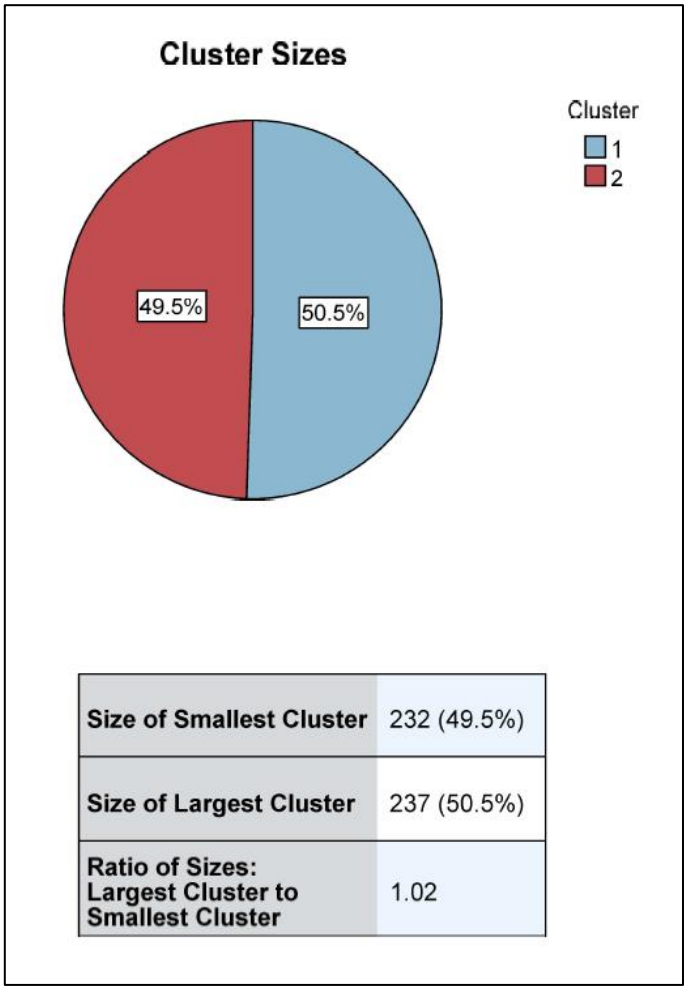
FIGURE 4.10: MODEL SUMMARY AND CLUSTER QUALITY (2 CLUSTERS)

Based on the aforementioned procedures, the resulting cluster distribution is presented in **Table 4.18,** indicating the ratio of every cluster as well as the percentage that every cluster represents. It is evident that the clusters are more or less equally divided.

TABLE 4.18: DISTRIBUTIONS OF THE TWO-STEP CLUSTER ANALYSIS (2 CLUSTERS)

Cluster Distribution			
Cluster	N	% of Combined	% of Total
1	237	50.5	50.5
2	232	49.5	49.5
Combined	469	100.0	100.0
Excluded observations	0		0
Total	469		100.0

An additional visual presentation of the two clusters is presented in **Figure 4.11**, reiterating the equally division between the two clusters. The ratio of sizes between the largest cluster to the smallest cluster is 1.02, which is deemed acceptable, as the general rule suggests a ratio below three sufficiently justifies both clusters and a ratio of two or lower is even better (Gaskin, 2012).



Size of Smallest Cluster	232 (49.5%)
Size of Largest Cluster	237 (50.5%)
Ratio of Sizes: Largest Cluster to Smallest Cluster	1.02

FIGURE 4.11: PIE CHART OF THE CLUSTER RATIO (2 CLUSTERS)

The algorithm for the hierarchical part of the cluster analysis included the centroid method, which defines the distance between two clusters by investigating the distance between the centroids (i.e. cluster averages for every variable) (Mazzocchi, 2008:267). Below the means and standard deviations of every factor in the respective clusters can be seen.

TABLE 4.19: DESCRIPTIVE STATISTICS OF THE TWO-STEP CLUSTER ANALYSIS (2 CLUSTERS)

Centroids				
		Cluster 1	2	Combined
Ethical clothing	Mean	**5.294**	3.938	4.623
	Std. Deviation	0.721	0.877	1.050
Clothing longevity	Mean	**6.737**	6.203	6.472
	Std. Deviation	0.357	0.854	0.704
Repurposed CC	Mean	**5.803**	4.195	5.008
	Std. Deviation	0.836	1.254	1.333
Unique handcraft	Mean	**5.812**	4.543	5.184
	Std. Deviation	0.879	1.298	1.275
Need-based CC	Mean	**5.854**	4.461	5.165
	Std. Deviation	0.923	1.316	1.331

Note: Rating scale (seven-point Likert-scale) used response options ranging from 1 ("Strongly disagree") to 7 ("Strongly agree").

From the data above, the clusters can be explained as follows: Cluster one includes 237 female respondents, who engage in voluntary simplistic clothing consumption practices more frequently than cluster two. Cluster two is comprised of an almost equal number of respondents, i.e. n = 232. Overall, the means in cluster one ranged from 5.294 to 6.737, indicating a very positive response to the engagement in voluntary simplistic clothing consumption practices. "Clothing Longevity (CL)" in particular, had the highest mean (M = 6.737), indicating that cluster one's respondents already take part in initiatives such as donations, exchanging clothing and extending the life of their clothing by wearing it for longer periods of time, as part of their voluntary simplistic clothing consumption practices. Overall, members of the first cluster can to some degree be classified as "voluntary simplifiers" as they seem to be quite engaged in living a life where voluntary simplistic clothing consumption practices (VSCCP) are prioritised. Although they may not altogether match the profile of voluntary simplifiers identified in previous empirical research, they do seem to live simply, recycle, eliminate clutter and avoid impulse buying. Despite their agreement to taking part in activities that prolong the life cycle of their clothing, members of the second cluster did not engage in such activities to the same extent as those who belong to the first cluster.

The means relating to cluster two ranged between 3.938 and 6.203, indicating significant variations in terms of female consumers' voluntary simplistic clothing consumption practices.

"Ethical Clothing (EC)" in particular had the lowest mean (M = 3.938), indicating female consumers' reluctance or oblivion towards only purchasing clothing that is eco-friendly or that was manufactured locally or ethically. Reasons for this could be attributed to external factors such as availability or price of ethical clothing options, a general lack of knowledge pertaining to environmentally and socially sound options or that these options are poorly promoted in the local context and therefore not easily identifiable. Overall, the respondents that belonged to the second cluster seem to be less engaged in voluntary simplistic clothing consumption practices (VSCCP) and was therefore classified as partial to non-voluntary simplifiers. Their engagement ranged from having adopted some forms of VSCCP to barely none (McDonald *et al.*, 2006), which distinguishes them from members of the first cluster who seem to be much more engaged in VSCCP (McDonald *et al.*, 2006; McGouran & Prothero, 2016). Members of the second cluster seemingly choose to make minor changes in their lives to live a more simplistic lifestyle, but their changes are often inconsistent and limited (Bekin *et al.*, 2005). A large portion of this cluster might also only be engaging in certain aspects of VSCCP because of external reasons such as challenging economic conditions (buying only what you need, reusing clothing to avoid carrying a financial burden of having to buy new clothes, repairing clothes to make it last longer etc.) and others might not even participate at all because they are indifferent or unaware of the move towards living a more sustainable lifestyle (Elgin & Mitchell, 1978).

In terms of input or predictor importance, the following data was extracted. In both **Figure 4.12 and 4.13**, it is evident the "Ethical Clothing" was the most important predictor, with a value of 1, followed by "Repurposed Clothing Consumption" with a value of 0.84. "Need-based Clothing Consumption" was also relatively important, with a value of 0.60, while "Unique Handcrafted Clothing" and "Clothing Longevity" were deemed less important with values ranging between 0.30 and 0.54. In summary, this indicates that the clusters were mainly based on the "Ethical Clothing" factor as well as the "Repurposed Clothing Consumption" factor.

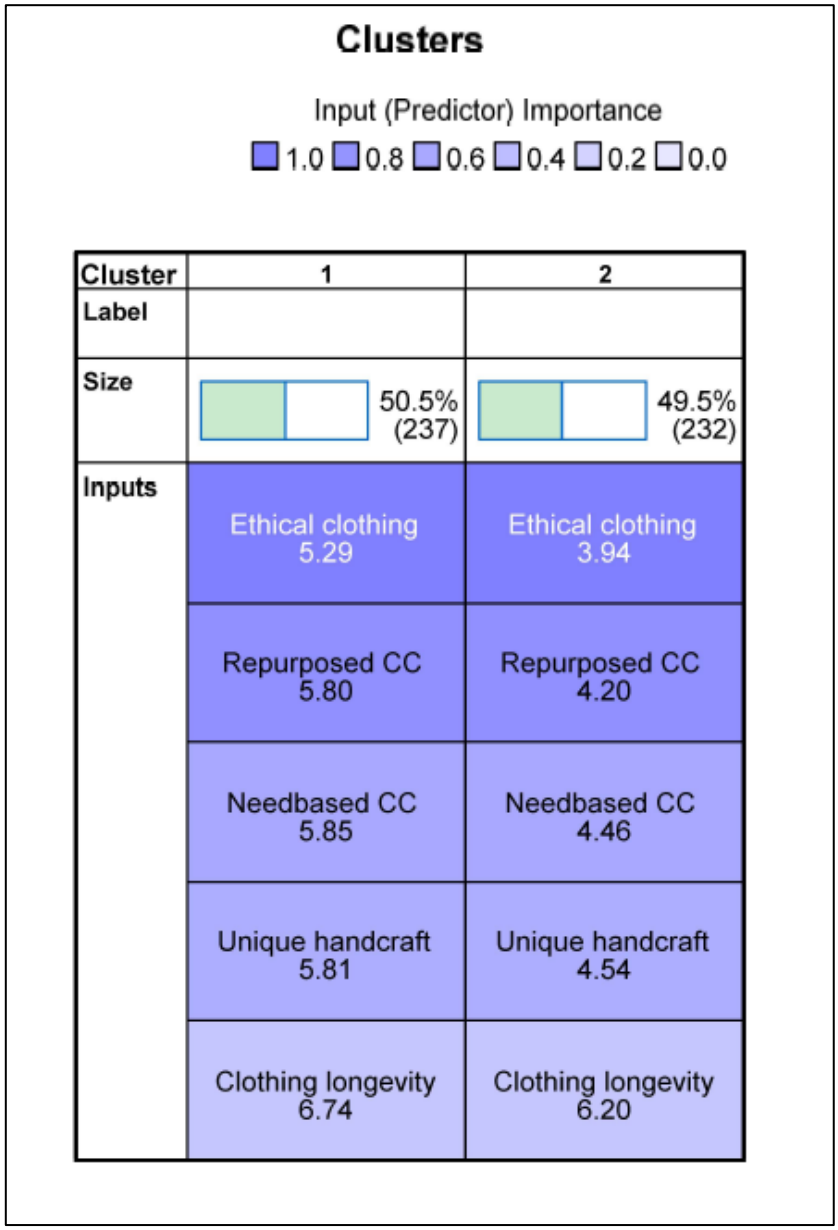


FIGURE 4.12: COMPARISON TABLE OF THE INPUT / PREDICTOR IMPORTANCE OF VSCCP FACTORS (2 CLUSTERS)

From the aforementioned, it is worth noting the contrast between the means and the predictor importance of the five factors that were used to cluster respondents' level of engagement in VSCCP. Although "Clothing Longevity" seems to outshine the rest in terms of having the highest mean overall, it was the least significant in terms of predictor importance during the two-step cluster analysis. In contrast, "Ethical Clothing" that had the lowest mean in terms of engagement in VSCCP had the highest value in terms of predictor importance, which resonates similar outcomes as found in the EFA and CFA of VSCCP.

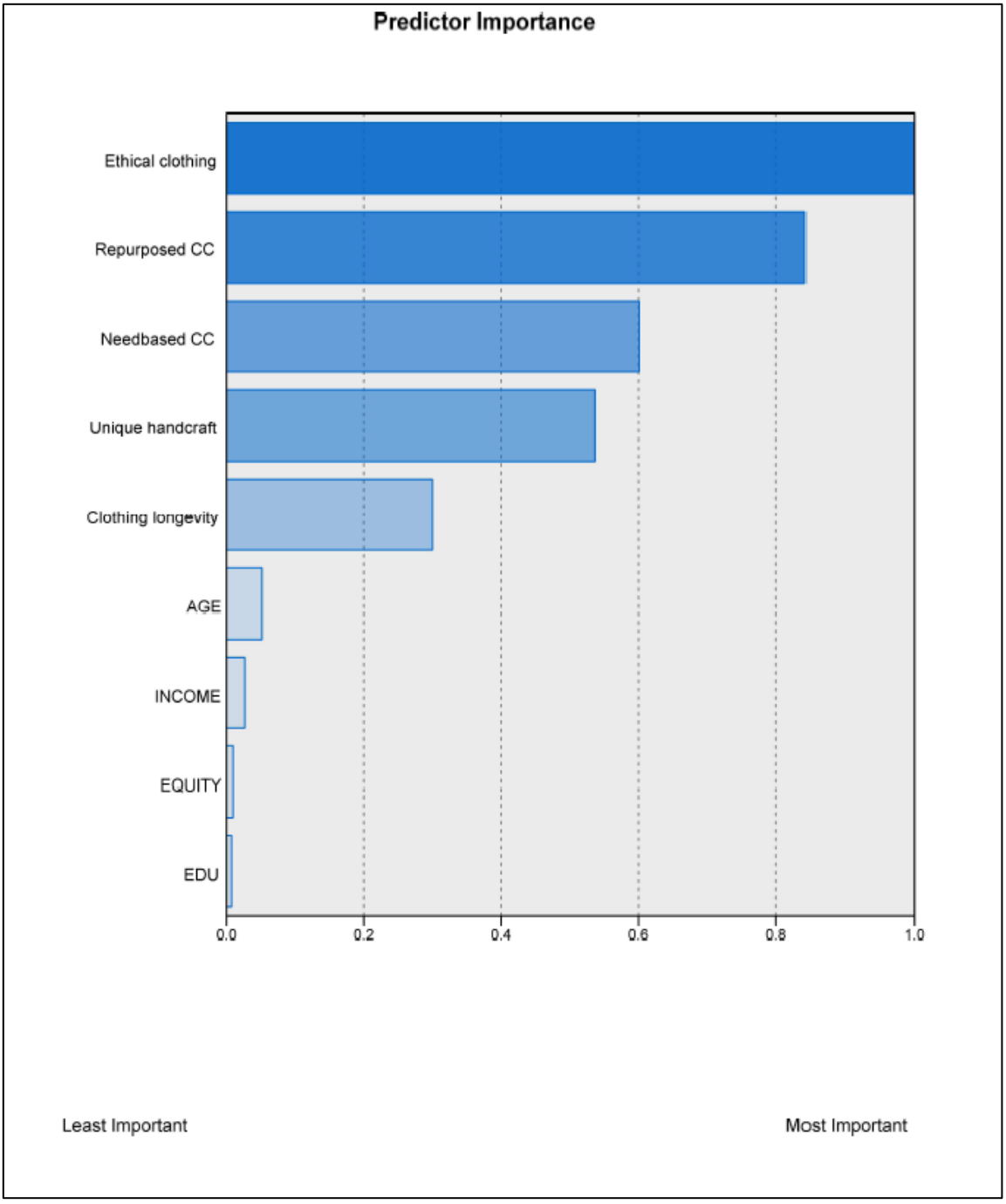


FIGURE 4.13: BAR CHART OF THE PREDICTOR IMPORTANCE OF VSCCP FACTORS (2 CLUSTERS)

Lastly, the bar chart in **Figure 4.13** illustrates that the demographic characteristics, that formed part of the evaluation fields of the cluster analysis, were the least important differentiating variables in terms of respondents' engagement in VSCCP, with all the values achieving values below 0.1.

Age was the most important predictor in terms of demographics, but remained fairly insignificant when compared to the five VSCCP factors.

Having examined the output of the initial two-step cluster analysis whereby the number of clusters remained unspecified, another two-step cluster analysis was performed, but this time specifying three clusters to be extracted. The reasoning behind this decision was based on prior research that generally classify consumers as either full, partial or non-voluntary simplifiers based on the scope of their behaviour and practices (Etzioni, 1998; McDonald *et al.*, 2006). This additional analysis was executed to further explore the classifications of female consumers based on their engagement in VSCCP and to confirm whether any significant differences appeared between the two variations of clustering, before continuing with the k-means cluster analysis. The two-step algorithm was repeated with the five inputs (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing and need-based clothing consumption), similar to the previous process, but this time round with the specification of three clusters. As can be gathered from **Figure 4.14**, the cluster quality remained fair, but it was not deemed as good as the two-cluster solution.

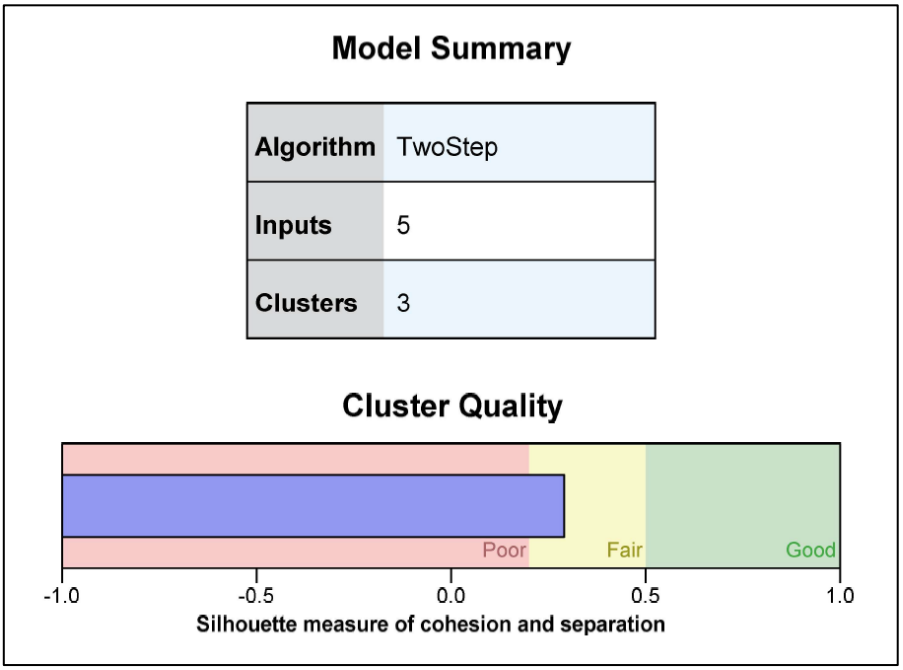


FIGURE 4.14: MODEL SUMMARY AND CLUSTER QUALITY (3 CLUSTERS)

Based on the specification of three clusters in the two-step cluster analysis, results indicate an unequal distribution among the female consumers who engage in VSCCP (as seen in **Table 4.20**).

The ratio of sizes (i.e. largest cluster to smallest cluster) is 1.93, which remains below the acceptable to excellent threshold of two, but is not as good as the two-cluster solution that has a ratio of 1.02 (Gaskin, 2012). Thus far it is evident that although three clusters might be considered fair and acceptable in terms of quality and data, the initial two-cluster solution that was generated by the software is a more acceptable solution.

TABLE 4.20: DISTRIBUTIONS OF THE TWO-STEP CLUSTER ANALYSIS (3 CLUSTERS)

Cluster Distribution			
Cluster	N	% of Combined	% of Total
1	201	42.9	42.9
2	164	35.0	35.0
3	104	22.2	22.2
Combined	469	100.0	100.0
Total	469		100.0%

In terms of descriptive statistics, the following conclusions can be made: Cluster one includes female consumers that engage in voluntary simplistic clothing consumption practices (VSCCP) very often, while cluster two includes female consumers that do not participate in VSCCP as much and cluster three includes the female consumers that are the least committed to taking part in VSCCP. Overall, cluster one was classified as voluntary simplifiers, while cluster two indicated moderate levels of engagement in VSCCP, categorising them as partial voluntary simplifiers and lastly cluster three was classified as partial to non-voluntary simplifiers, with varying levels of commitment to VSCCP. With regard to descriptive statistics, the results generated during the three clusters were very similar to the results as seen in the two-cluster solution. “Ethical Clothing” was once again highlighted because of its low mean values, while “Clothing Longevity (CL)” presented high mean values.

In terms of input or predictor importance, “Repurposed Clothing Consumption” and “Ethical Clothing” (Predictor importance = 1) were the most significant. It partially resembles the predictor importance of the two-cluster solution where “Ethical Clothing” came out at the top in terms of predictor importance and “Repurposed Clothing Consumption” was a close second. Furthermore, “Need-based Clothing Consumption” was deemed least important in the three-cluster solution, with a value of 0.49, while it was deemed relatively important in the two-cluster solution, with a value of 0.60. “Unique Handcrafted Clothing” remained less important in terms of predictions or

inputs with the value barely changing between the two- and three-cluster solutions (Predictor importance: 0.51 – 0.54) and “Clothing Longevity” was deemed relatively important in the three factor solution, with a value of 0.70; while it was deemed the least important in terms of predictor importance in the two cluster solution (Predictor importance = 0.3). Based on the above mentioned it is evident that the means of the five factors associated with VSCCP did not change based on the number of clusters; however, the predictor importance did present slight differences. The same holds true for the demographic characteristics that made up the evaluation fields of the cluster analysis process. All demographics remained insignificant and had values below 0.05 in terms of predictor importance relating to female consumers’ level of engagement in VSCCP.

Based on the conclusions regarding the minimal differentiations between the two- and three cluster solutions, as well as the fact that the two-cluster solution was deemed most optimal, the two-cluster solution was brought forward to be used during the k-means cluster analysis.

4.4.5.2 K-means cluster analysis

The k-means algorithm is a non-hierarchical clustering method that assigns objects into clusters once the number of clusters has been specified in a prior exploratory phase (Hair *et al.*, 2014:443; Mazzocchi, 2008:268). Before the actual analysis can take place, the cluster seeds (i.e. the initial value that is used to start non-hierarchical processes where clusters are constructed around the prescribed points) need to be specified (Hair *et al.*, 2014:416,443). There are various sources that can be used to specify the cluster seeds, one of which is referring back to prior research regarding the topic at hand or by making use of hierarchical clustering algorithms to establish the number of clusters and generate seed points from these results (Hair *et al.*, 2014:443).

In the case of this study, prior research was used as an initial reference with regards to classifying consumers based on their engagement in voluntary simplistic activities. Research indicated that consumers are generally classified as either full, partial or non-voluntary simplifiers based on the scope of consumers’ practices (Etzioni, 1998; McDonald *et al.*, 2006). In addition to this, two-step cluster analysis was performed on the dataset prior to the k-means cluster analysis, in which observations were automatically combined into two clusters using a hybrid hierarchical procedure (Mazzocchi, 2008:270-271; Şchiopu, 2010). To summarise, three clusters could have been used as a referral to determine the number of clusters; however, during the exploratory phases of clustering the dataset (as discussed in the chapter above), the two-cluster solution was suggested as optimum software output, and thus the two-cluster solution was used to perform the k-means cluster analysis.

Based on the results obtained from the two-cluster solution that was specified during the k-means cluster analysis (**Table 4.21**), cluster one included 276 cases (58.9%), grouping together all the respondents who indicated higher levels of engagement in VSCCP. Cluster two, on the other hand, contained 193 cases (41.1%) grouping together all the female consumers who indicated lower levels of engagement in the five VSCCP factors.

TABLE 4.21: DISTRIBUTIONS AND MEANS OF THE K-MEANS CLUSTER ANALYSIS (2 CLUSTERS)

Number of cases in each cluster and final cluster centres			
	Cluster 1	Cluster 2	Entire sample
	Voluntary simplifiers (VS)	Partial to non-VS	
N	**276**	193	469 (Missing = 0)
%	**58.9**	41.1	100
Means (Cluster centres) (Response options ranged from 1 (-) to 7 (+))			
Ethical clothing	**5.146**	3.877	4.512
Clothing longevity	**6.675**	6.183	6.429
Repurposed CC	**5.739**	3.962	4.851
Unique handcraft	**5.734**	4.399	5.067
Need-based CC	**5.752**	4.326	5.039

In terms of proportions it is evident that the two clusters are similar in size with cluster one (N = 276; 58.9%) being only marginally larger than cluster two (N = 193; 41.1%), indicating a slight majority of respondents that participate in VSCCP more frequently compared to those who participate less. The occurrence of higher involvement in VSCCP could be due to various reasons, such as female consumers consciously contributing to saving the environment for future generations or even contributing to provide fellow human beings with basic needs such as clothing. On the other hand, external events may be the cause for these types of practices, where South African consumers have no choice other than to live sparingly with their possessions and resources due to current economic status quo or other ongoing water and electricity crises. (BusinessTech, 2018a; Donnenfeld *et al.*, 2018).

Additionally, the results of the k-means cluster analysis were presented in a visual manner to summarise the details regarding the two clusters, as seen above in **Table 4.21**. **Figure 4.15** clearly indicates two clusters; one includes female consumers with higher levels of engagement in the

five factors (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing and need-based clothing consumption) (i.e. cluster 1) and the other includes female consumers with lower levels of engagement in VSCCP (i.e. cluster 2). The results of the k-means cluster analysis are similar to the two-step cluster analysis, where two clusters were automatically extracted and similar conclusions were made regarding each cluster's level of engagement in VSCCP. In both instances and in both clusters that were extracted through the two methods of clustering, "Clothing longevity" resulted in the most prominent factor and "Ethical clothing" was the least prominent. This reiterates earlier descriptive statistics that the female consumers who took part in this study strongly support the notion to prolong clothing items' lifecycles by donating it to friends or charities, re-selling it or even exchanging it. On the other hand, the notion to refuse clothing purchases that are deemed unethical/ imported as well as clothing that is detrimental to the environment, where not prioritised.

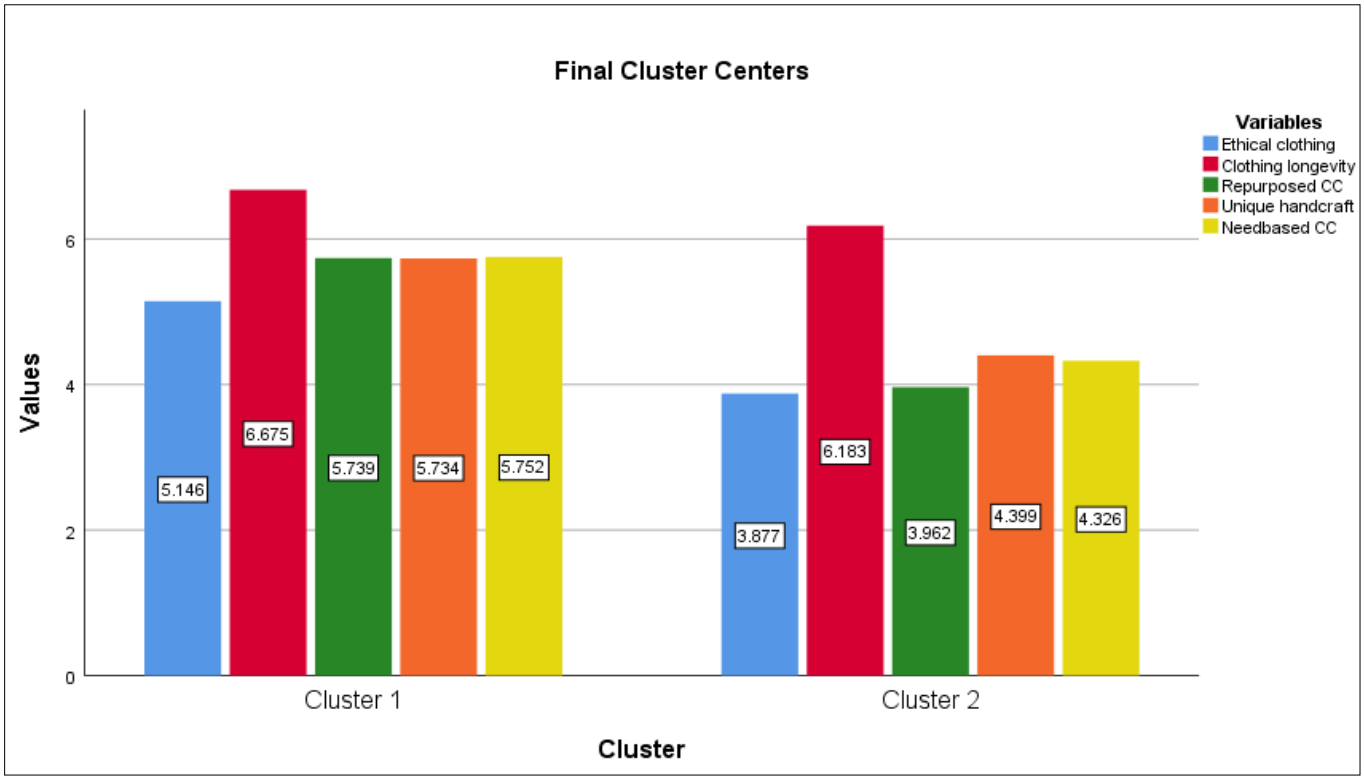


FIGURE 4.15: BAR CHART OF THE MEAN DISTRIBUTIONS OF THE VSCCP FACTORS (2 CLUSTERS)

More specifically, the following results of the k-means cluster analysis reiterate the results found during the two-step cluster analysis (two-cluster solution) and are listed below:

Cluster one:

- Cluster one indicated higher levels of engagement in VSCCP than cluster two.
- "Clothing Longevity (CL)" had the highest mean (M = 6.675), indicating cluster one's current involvement in activities such as donations, exchanging clothing and extending the life of their clothing by wearing it for longer periods of time.
- The female consumers that make up cluster one may be classified as **voluntary simplifiers** based on the fact that they seem to be more engaged in voluntary simplistic clothing consumption practices.

Cluster two:

- The means relating to cluster two were overall lower than cluster one, indicating a neutral to moderate level of engagement in VSCCP.
- "Ethical Clothing (EC)" had the lowest mean (M = 3.877), indicating a lower level of engagement in activities such as exclusively purchasing clothing with eco-friendly attributes or that was manufactured locally in a socially responsive manner. Various reasons could be attributed to the lower involvement of this particular practice, such as a lack of availability, price concerns, a limited awareness of environmentally and socially sound options in the local context, and/ or a lack of efficient marketing campaigns to create greater awareness of sustainable options.
- In summary, the members of the second cluster seem to be less engaged in voluntary simplistic clothing consumption practices (VSCCP) and are therefore classified as **partial to non-voluntary simplifiers.** Their engagement ranged between adopting some forms of VSCCP to not adopting any sustainable consumption practices (McDonald *et al.*, 2006). Existing literature describes this group in a few ways, but in general they do not engage in VSCCP to the same extent as full voluntary simplifiers (McDonald *et al.*, 2006; McGouran & Prothero, 2016). These types of simplifiers choose to make minor changes in their lives to live a more simplistic lifestyle, but their changes are often deemed inconsistent and limited (Bekin *et al.*, 2005). It is argued that some might not be aware of the move towards living a more sustainable lifestyle; some might sympathise with values that are associated with VSCCP and act upon it where deemed appropriate and lastly, some might even know about it, but simply do not care (Elgin & Mitchell, 1978).

(For the sake of being thorough and comprehensive in terms of pursuing all possible options, an additional three factor k-means cluster analysis was performed and added as **Addendum I**).

In conclusion, various cluster analyses (two-step and k-means on two and three cluster solutions) were performed in order to classify female consumers based on their engagement in VSCCP. Ultimately, all the results indicated that the female consumers who took part in this study can basically be classified as either voluntary simplifiers or partial voluntary simplifiers. Neither one of the groups can be classified as full voluntary simplifiers who tend to reject the norms of a capitalist society and live a simple life avoiding any forms of consumption (McDonald *et al.*, 2006). However, more or less half of the female consumers who indicated higher levels of engagement in VSCCP can be described as voluntary simplifiers to a great extent as they are consumers who would generally participate in activities such as buying organic food, eco-friendly clothing, or products made from recycled materials as well as practice the concept of recycling, reusing, reducing, etc and eliminate clutter from their lives. It can be assumed that these consumers take part in VSCCP out of own free will, because they want to improve their lifestyles and live more sustainably. The other half of the female consumers tend to be partial voluntary simplifiers with varying degrees of involvement in VSCCP. This could be due to various factors such challenging economic conditions, a lack of availability of appropriate products, price concerns, a lack the knowledge of the environmentally and socially sound options, or a lack of efficient marketing to make consumers aware of these more sustainable options and various other factors that have not yet been explored in this study. Another possibility might be that they initially participated in VSCCP due to external factors, but that this lifestyle has been internalised and that they now take part in VSCCP because they want to and not because it is the only options. Future studies could benefit from delving deeper into the reasoning behind partial voluntary simplifiers' engagement in certain areas of VSCCP and possibly define clusters even more specifically.

4.5 CONCLUSION

In conclusion, chapter four presented the discussion and interpretation of the results of this study. Firstly, the demographic characteristics of the sample were presented and explained by means of descriptive analysis, including a table indicating numerical data such as frequencies and percentages (Fouché & Bartley, 2011:249). Secondly, the respondents' current involvement and experience with regards to sustainable clothing practices were discussed and presented in the form of graphs. Furthermore, EFAs, CFAs, Cronbach's Alphas, AVEs, correlations and SEM was conducted to extract inferential results and interpret construct associations between basic psychological needs and self-determined motivations that were deemed most significant in terms of female respondents' VSCCP. Lastly, cluster analysis (two-step and k-means) was performed on the VSCCP items that were finalised during the EFA and CFA to establish whether the female respondents that took part in this study were classified as full-, partial-/ non-voluntary simplifiers (Mazzocchi, 2008:265). All the results were structured and presented according to the main objectives and hypotheses of this study. The chapter to follow will focus on some of the practical and theoretical implications of the results in addition to an explication of the limitations of the study in conjunction to recommendations for future research.

CHAPTER 5: CONCLUSIONS

The concluding chapter gives a brief overview of the study as a whole before moving on to the summary of findings and conclusions that were formulated according to the problem statement, objectives and hypotheses. Thereafter, the implications for the industry and policy formation as well as the theoretical contribution of this study are discussed. Lastly the limitations and recommendations are highlighted for future research purposes.

5.1 INTRODUCTION

The overconsumption of clothing by consumers globally is a significant cause of various social and environmental issues. These include, but are not limited to issues surrounding poor labour standards, the oversaturation of local markets with imported clothing, natural resource depletion, loss of biodiversity and climate change, to name a few (Fashion Revolution, 2018; Wahnbaeck & Roloff, 2017). Developed countries have been categorised as some of the biggest culprits in fuelling the fire surrounding these issues; but developing countries are steadily moving towards the same realisation as emerging markets expand and population figures increase, resulting in increased consumption patterns. This is especially evident in an emerging country such as South Africa, where the apparel retail sector has grown by 4.8% in the past few years, reaching a value of $7,502 million (Marketline, 2018). In contrast to the development and expansion of South Africa as emerging market, many third world issues such as income inequality and poor living standards still prevail among certain population segments (The World Bank, 2018). That being said, regardless of who you are or where you find yourself, no one segment is solely responsible or affected by environmental and social problems relating to unsustainable ways of living, and therefore everyone is accountable for these issues to make sure they live a sustainable lifestyle for themselves and everyone else around them that is also affected by their lifestyles. Unless consumers feel competent and free as well as self-motivated to voluntarily consume clothing in more sustainable ways, regardless of external/ social influences, these issues will prevail and lead to detrimental consequences. Therefore, voluntary simplistic ways of living, especially in terms of clothing consumption, need to be adopted across the spectrum of the population, but especially amongst the upper- and middle-class consumers who tend to burden the entire population by overconsuming and living conspicuously. This research was therefore specifically focused on gaining a deeper understanding of the psychological needs and self-determined motivations that

act as antecedents of voluntary simplistic clothing consumption practices, more specifically among female consumers, who tend to be early adopters of particular clothing practices.

Although extensive research has been done on the topic of voluntary simplicity in more developed countries, little is known about this phenomenon in the context-specific setting of South Africa, particularly with regard to its application in clothing consumption. Existing empirical findings might also not reflect the contextual realities of the current consumption patterns in South Africa, which underscores the importance of this study in the local context.

A quantitative, cross-sectional research approach was followed to address the purpose of this study. The online survey eventually yielded 482 responses from female consumers of which 469 (97.3%) responses were useable and 13 (2.7%) were deemed incomplete and thus discarded. The focus for this study was solely on female consumers as they are generally more willing to take part in socially responsible initiatives, could possibly be prominent role players in households' overall clothing consumption practices and may encourage fellow household members to adopt more sustainable behaviour in their daily lives. Once the data collection process was concluded, data was analysed according the objectives and hypotheses of the study by making use of descriptive as well as inferential statistics. Statistical procedures included amongst other, exploratory and confirmatory factor analyses, structural equation modelling and cluster analysis.

The theory of intrinsic motivation and self-determination (i.e. the Self-Determination Theory (SDT)) was used as the theoretical basis for the proposed conceptual framework, objectives and hypotheses of this study (Deci & Ryan, 1985b). This theory describes how adopting simplistic, non-materialistic lifestyles would require self-determined motivation that is supported by the fulfilment of three psychological needs including competence (i.e. allowing consumers to have a sense of control and proficiency), autonomy (i.e. the ability to act independently) and connectedness or relatedness (i.e. a sense of belonging to a social group) (Darner, 2009; Deci & Ryan, 1985b). Once these needs are fulfilled, self-determination is enhanced and includes intrinsic motivation (associated with pleasure and enjoyment), integrated regulation (executed to accomplish personal outcomes) and identified regulation (identifying with a behaviour on a conscious level and personally endorsing it) (DeHaan & Ryan, 2014). In addition to the theoretical framework, a section pertaining to the level of engagement in voluntary simplistic clothing consumption practices was also included as part of the proposed conceptual framework, and objectives. This section was based on the identification of various categories of voluntary simplifiers in existing literature and respondents were subsequently clustered based or their current engagement in VSCCP. Elgin and Mitchell (1978) for example established four categories

of voluntary simplicity, namely full voluntary simplicity, partial voluntary simplicity, sympathizers and indifferent, unaware, or opposed. Later on, Etzioni (1998) explained voluntary simplicity in terms of degrees of intensity, and classified voluntary simplistic consumers according to three categories, namely “holistic simplifiers”, “strong simplifiers” and “downshifters” (Balsa-Budai *et al.*, 2019). In similar vein, McDonald *et al.* (2006), discuss the different levels of intensity and classify consumers as voluntary simplifiers, beginner simplifiers and non-voluntary simplifiers. In terms of this study, respondents were initially grouped together as either full, partial or non-voluntary simplifiers and after analyses, classified as either voluntary simplifiers or partial voluntary simplifiers.

This study therefore addresses the current gap in existing literature pertaining to the prevalent basic psychological needs and self-determined motivations of South African female consumers regarding voluntary simplistic clothing consumption practices (i.e. reducing, reusing, repairing, recycling and refusing clothing in a sustainable manner) as well as the current state of engagement in these afore-mentioned practices in the local context specific setting of South Africa. Based on the results that were captured in Chapter four, the following findings were identified and summarised below.

5.2 SUMMARY OF FINDINGS

This study used the SDT as a theoretical basis to explore the influence of basic psychological needs and self-determined motivation on female consumers’ voluntary simplistic clothing consumption lifestyles in the South African emerging market context. A proposed conceptual framework was developed that included basic psychological needs (i.e. competence, autonomy, connectedness /relatedness), the three types of self-determined motivation (i.e. identified regulation, integrated regulation, intrinsic motivation), and voluntary simplistic clothing consumption practices (VSCCP) (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing, need-based clothing consumption) that provide feedback in the form of experience. Additionally, the proposed conceptual framework also included classifications of consumers based on their engagement in VSCCP (i.e. full, partial or non-voluntary simplifiers). This led to the formulation and exploration of objectives and subsequent testing of various hypotheses.

In terms of demographic results, all the respondents were female and majority of them were between the ages of 21 and 39, white with some sort of tertiary degree or diploma. Almost half of the respondents earn an approximate income of between R 5 001 ($ 345) and R 25 000 ($ 1720) per month and may therefore have more disposable income to spend on clothing compared to those in lower income groups (1 USD = 14.50 ZAR).

In order to investigate and analyse the first three objectives of this study, the basic psychological needs, self-determined motivation and the VSCCP were subjected to exploratory and confirmatory factor analyses. This was done to isolate the relevant constructs according to the dataset as all the scale items pertaining to the aforementioned constructs were derived from previous studies and adapted according to voluntary simplistic clothing consumption practices as well as the conditions that prevail in the local emerging market context. In terms of objective one, an initial EFA was conducted and two factors, as opposed to the three theoretical constructs, were extracted and labelled as follows: (1) autonomy and competence (AUT) indicating consumers' competence and independence in making choices out of their own free will and (2) connectedness or relatedness (CON) that has to do with connecting or getting along with fellow voluntary simplifiers. It should be mentioned that the three basic psychological needs are closely related and could easily be interpreted as a single concept rather than single independent needs as per current empirical insights. The cumulative percentage variance explained reached a value of 62.103%, indicating acceptable results in terms of the social sciences domain that generally suggests a threshold of at least 60% (Hair *et al.*, 2014:107). The Cronbach's alphas were deemed reliable as they exceeded the acceptable threshold of 0.7 (Hair *et al.*, 2014:617), and the Average Variance Extracted (AVE) indicated satisfactory convergence for exceeding the minimum threshold of AVE ≥ 0.5. Subsequently, CFA was conducted and a good model fit was presented throughout all fit indices.

In terms of objective two, an EFA was performed and similarly to the basic psychological needs, two factors (as opposed to the specified three theoretical constructs) were extracted and labelled as follows: (1) integrated regulation (INT) that portrays sustainable clothing practices as integral or fundamental elements of the female consumers' lives and (2) identified regulation and intrinsic motivation (IDEN) that has to do with enjoyment and reasoning. Once again, the three types of self-determined motivation that exist in theory are often not inseparable and could therefore justify the merge of certain constructs. The cumulative percentage variance explained was 66.701%, indicating a variance well above the acceptable threshold of 60% as suggested in the social sciences domain (Hair *et al.*, 2014:107). The Cronbach's alphas (α) for both the factors were deemed reliable, exceeding the acceptable threshold of 0.7. The AVE indicated satisfactory

convergence for both INT (AVE = 0.717) and IDEN (AVE = 0.605). The measurement model fit indices were close to excellent in terms of thresholds and ultimately the sample size of this study (N = 469) presented a good model fit in terms of self-determined motivation.

Objective three followed the same process in which an EFA was conducted using Principal Axis Factoring and Varimax rotation with Kaiser Normalization. Five factors were extracted and subsequently labelled as follows: (1) ethical clothing, encompassing the notion of purchasing clothing that is either eco-friendly or locally sourced (2) clothing longevity, relating to the concepts of reusing and/ or recycling clothing in an eco-friendly manner, (3) repurposed clothing consumption, relating to repairing or repurposing clothing, (4) unique handcrafted clothing, relating to novelty, handcrafted clothing as opposed to mass-produced clothing, and lastly (5) need-based clothing consumption, which involves the reduction of clothing that is bought, used or thrown away in favour of a more need-based approach. These five factors strongly resemble the five "R" approach, namely recycle, repair, reuse, reduce and refuse that has been discussed in the theory above. The five-factor solution accounted for 51.70% of the total variance which was deemed acceptable, considering the fact that the concepts that were measured are in fact underlying socio-psychological factors that are intertwined with other aspects such as the larger society and environment – hence in the mind of the consumer such factors are seldom compartmentalised and it is often difficult to draw clear distinctions between the constructs (Hair *et al.*, 2014:107).

In terms of this objective the Cronbach's alpha for factor 1 (ethical clothing) was 0.876 and factor 3 (repurposed clothing consumption) was 0.704, which fall within the acceptable range according to Delport and Roestenburg (2011:177), indicating internal consistency (Pallant, 2011:97). Factor 2 (clothing longevity) had a Cronbach's alpha of 0.648, which is just below the minimum threshold of 0.7, but is classified as acceptable according to Hair *et al.* (2014:123). The mean inter-item correlations for all five factors exceeded 0.3 which is the threshold for inter-item correlations according to Hair *et al.* (2014:123) indicating that all the items within the factors are measuring the same underlying characteristics (Pallant, 2011:100). The Cronbach's alphas for factor 4 (unique handcrafted clothing) and factor 5 (need-based clothing consumption) could not be determined, due to the fact that the factor only included two items. Therefore, the "Spearman's rho" correlation was performed on factor 4 (unique handcraft) and factor 5 (need-based clothing consumption), resulting in significant correlations of 0.605 and 0.474. Based on these results, factors 4 and 5 were retained and used for further analysis (i.e. confirmatory factor analysis). The five-factor solution was validated by means of CFA and the AVE indicated adequate convergence on majority of the factors except for the factor relating to clothing longevity (CL), which is just below the

acceptable threshold of 0.5. All the fit indices of the measurement model reached the acceptable thresholds and came close to being deemed excellent.

Once the initial analyses (exploratory- and confirmatory factor analyses) were conducted on concepts relating to objectives 1, 2 and 3, the most prominent voluntary simplistic clothing consumption practices were identified and retained for further investigation and analysis (i.e. structural equation modelling (SEM)). The factors that originally formed part of the basic psychological needs (i.e. competence, autonomy, connectedness/ relatedness) as well as the factors that originally formed part of the self-determined regulations (i.e. identified regulation, integrated regulation, intrinsic motivation) either merged or overlapped during the EFA and CFA resulting in two-factor solutions, rather than three. That being said, the decision was made to perform a SEM analysis on all the concepts in an effort to explore all options as specified in existing literature, rather than limiting the outcomes of the SEM to the initial results retained from the EFA's and CFA's in an effort to resemble the structure of the SDT as closely as possible and to offer the most comprehensive view of the literature at hand. As mentioned above, the analyses regarding the VSCCP (during the EFA and CFA) resulted in a five-factor solution (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing, and need-based clothing consumption) that in itself presented complex results based on the vast amount of data gathered on this subject of interest. It should however be noted that for the purposes of the SEM analysis, a decision was made to group together the most prominent VSCCP as one concept (rather than the five individual factors) to simplify and present a more streamline model that resembles the underlying SDT assumptions in a more accurate manner. All items that were retained during the streamlining of the VSCCP concept for the purposes of the SEM analysis were related to the "Ethical Clothing" factor.

The results of the SEM support most of the hypotheses, as presented in Chapter one, and are in line with previous empirical findings related to the SDT. In this study, competence emerged as the most prominent, significant basic psychological need in relation to self-determined motivation and voluntary simplistic clothing consumption, followed by the need for connectedness and lastly, autonomy. These findings are partially supported by previous investigations that found that when all three needs are met, consumers' motivation will be enhanced and it will lead to increased self-determination (Pelletier 2002; Darner 2009; Rich et al. 2017). Of the three basic psychological needs, competence is the strongest predictor of self-determined motivation, and more specifically the strongest determinant of intrinsic motivation, that originates from the self and is associated with the human need for competence and self-determination (Ryan and Deci 2000). Competence provides consumers with a sense of control and is an effective means for interaction with the

environment as it may guide desired outcomes such as sustainable clothing behaviours (Darner 2009). The need for competence is said to encourage consumers to challenge themselves and to continuously attempt to maintain and enhance their skills (DeHaan and Ryan 2014). In the local context, this relates to the focus on female empowerment and gender equality, which may have increased a sense of competence among local female consumer populations.

Furthermore, the results reveal that intrinsic motivation, which is the most self-determined or autonomous type of motivation, is subsequently the strongest predictor of voluntary simplistic clothing consumption lifestyles. This is also in line with previous research relating to the SDT. More specifically, Sheldon and McGregor (2000) report that people with intrinsic goals tend to consume less and were more likely to nurture a sustainable environment (Ryan et al. 2008). Self-determined motivation leads to behaviours originating from the consumer itself and is not extensively controlled by external forces (Darner 2009). The more self-determined a consumers' motivation is, the more persistent they are to execute particular behaviours such as voluntary simplistic clothing consumption, and in turn, the more they will achieve psychological well-being (Pelletier 2002; Ryan et al. 2008). The postulated relationship between integrated regulation and voluntary simplistic clothing consumption proved to be insignificant. Female consumers' voluntary simplistic clothing consumption lifestyles therefore do not stem from integrated regulation (that is closely related to intrinsic motivation) (Deci and Ryan 2002). Lastly, identified regulation that also falls under the self-determined side of extrinsic motivation has a negative relationship with voluntary simplistic clothing consumption, indicating that female consumers do not wholeheartedly identify with the voluntary simplistic clothing consumption lifestyles on a conscious level (DeHaan and Ryan 2014). The last two mentioned relationships often lead to consumers perceiving their behaviours to be of personal value and importance and are executed to avoid guilt or to boost the ego and is self-esteem-related (Olafsen et al. 2017). In summary, this may indicate that South African female consumers are more prone toward voluntary simplistic lifestyles as exemplified through clothing consumption behaviours. These behaviours may stem from the self and a sense of competence that is intrinsically motivated rather than extrinsically influenced or because they feel guilty. In turn, this behaviour may enhance their basic psychological needs, which also heightens their self-determined motivation and ultimately increases their behavioural persistence and psychological well-being.

Lastly, objective 4 was concerned with classifying the respondents based on their engagement in VSCCP. Therefore, cluster analysis was performed including all of the VSCCP factors (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing and need-based clothing consumption) that were extracted from the initial exploratory factor analysis

(EFA) and confirmatory factor analysis (CFA). These five factors were subjected to two-step cluster analysis as the first stage of cluster analysis, after which k-means cluster analysis was performed as an additional stage to further confirm the grouping of female consumers based on their level of engagement in VSCCP. In both instances, a 2-cluster solution as well as a 3-cluster solution was extracted to explore all possible statistical solutions. During the initial two-step cluster analysis (with no prior specification of the number of clusters to be extracted), the software revealed a two-cluster solution as the most optimum output. For additional exploratory reasons, a three-cluster solution was also investigated by means of the two-step cluster procedure to ensure all possible solutions were thoroughly reviewed. Overall, the two-cluster solution seemed more appropriate, which was then further used as input for the subsequent k-means cluster analysis. In the end, the various methods and variations of cluster analyses presented similar results in terms of classifying the respondents based on their engagement in VSCCP. More specifically, they could either be clustered as voluntary simplifiers or partial voluntary simplifiers. The voluntary simplifiers indicated higher levels of engagement in VSCCP, while the partial voluntary simplifiers engaged in VSCCP to some extent, but their engagement was mostly inconsistent, which could be attributed to personal preference, indifference or because of external factors that mould their lifestyles and lead them to participate in certain practices based on economical and other practical reasons.

5.3 CONCLUSIONS

The overarching aim of this study was focused on understanding the influence of basic psychological needs and self-determined motivation on female consumers' voluntary simplistic clothing consumption practices (VSCCP) in the South African emerging market context. Based on the work of Elgin and Mitchell (1977) that conceptualises voluntary simplicity with its underlying dimensions, namely material simplicity (i.e. consuming less), self-determination (i.e. desire to control one's destiny and striving toward self-sufficiency), ecological awareness (i.e. concern for environmental issues) and human scale (i.e. supporting community and small scale/ local institutions) (Elgin & Mitchell, 1978; Leonard-Barton, 1981), as well as the underlying assumptions of Deci and Ryan's (1985) theory of intrinsic motivation and self-determination (more commonly known as the Self Determination Theory (SDT)), a proposed conceptual framework was developed for this study (see Chapter two).

Based on the results of the initial exploratory- and confirmatory factor analyses, five voluntary simplistic clothing consumption practices (VSCCP) emerged as relevant factors that were labelled as follows: (1) ethical clothing, relating to ecological awareness and human scale (2) clothing longevity, relating to ecological awareness, (3) repurposed clothing consumption, relating to self-determination, (4) unique handcrafted clothing, relating to human scale, and lastly (5) need-based clothing consumption, relating to material simplicity. The five factors also strongly resembled the five "R" approach, namely recycle, repair, reuse, reduce and refuse (Zamwel *et al.*, 2014). Although the resulting factors still reflect some of the original dimensions (i.e. material simplicity, self-determination, ecological awareness and human scale) of voluntary simplicity as postulated by Elgin and Mitchell (1978), they constitute a more practical manifestation of voluntary simplicity in consumers' clothing consumption practices within the context specific setting of South Africa. The proposed conceptual framework was thus revised to incorporate the aforementioned results (as can be seen in **Figure 5.1**) in order for it to serve as an appropriate basis for future empirical investigation.

In sum, the framework depicted in **Figure 5.1** is based on the underlying assumptions of the SDT, which suggests that the fulfilment of basic psychological needs (i.e. competence, autonomy, connectedness/ relatedness) enhances consumers' motivation and promotes the development of more self-determined regulations (i.e. identified regulation, integrated regulation, intrinsic motivation) (Darner, 2009; Pelletier, 2002; Rich *et al.*, 2017; Ryan *et al.*, 2008; Vallerand, 2000). Consequently, self-determined motivation leads to behaviours such as voluntary simplistic clothing consumption practices (i.e. ethical clothing, clothing longevity, repurposed clothing consumption, unique handcrafted clothing, need-based clothing consumption) which originates from within and is not always solely controlled by external forces (Darner, 2009). Theories linked to the SDT also indicate that the fulfilment of these three needs is crucial for psychological growth such as intrinsic motivation, integrity such as internalisation, well-being such as life satisfaction, and the experience of vitality and self-congruence (Deci & Ryan, 2000; Ryan & Deci, 2001; Ryan *et al.*, 2008). Intrinsic or self-determined motivation powers the decision-making process and facilitates the management of motives which often leads to the selection and engagement of many chosen behaviours such as VSCCP (Deci, 1975a; Deci & Ryan, 1980). Thereafter, the chosen behaviours (VSCCP) and communications provide feedback in the form of experience which makes the person feel more competent when performing future motivated behaviours (Deci & Ryan, 2002:12). In addition to the aforementioned, the classifications of voluntary simplifiers (i.e. full, partial or non-voluntary simplifiers), as seen in the proposed conceptual framework, were also adapted based on the results pertaining to female consumers' levels of engagement in VSCCP. Therefore the classifications of voluntary simplifiers were regrouped into voluntary simplifiers and

partial voluntary simplifiers based on the degree of engagement in these VSCCP (Etzioni, 1998; McDonald *et al.*, 2006).

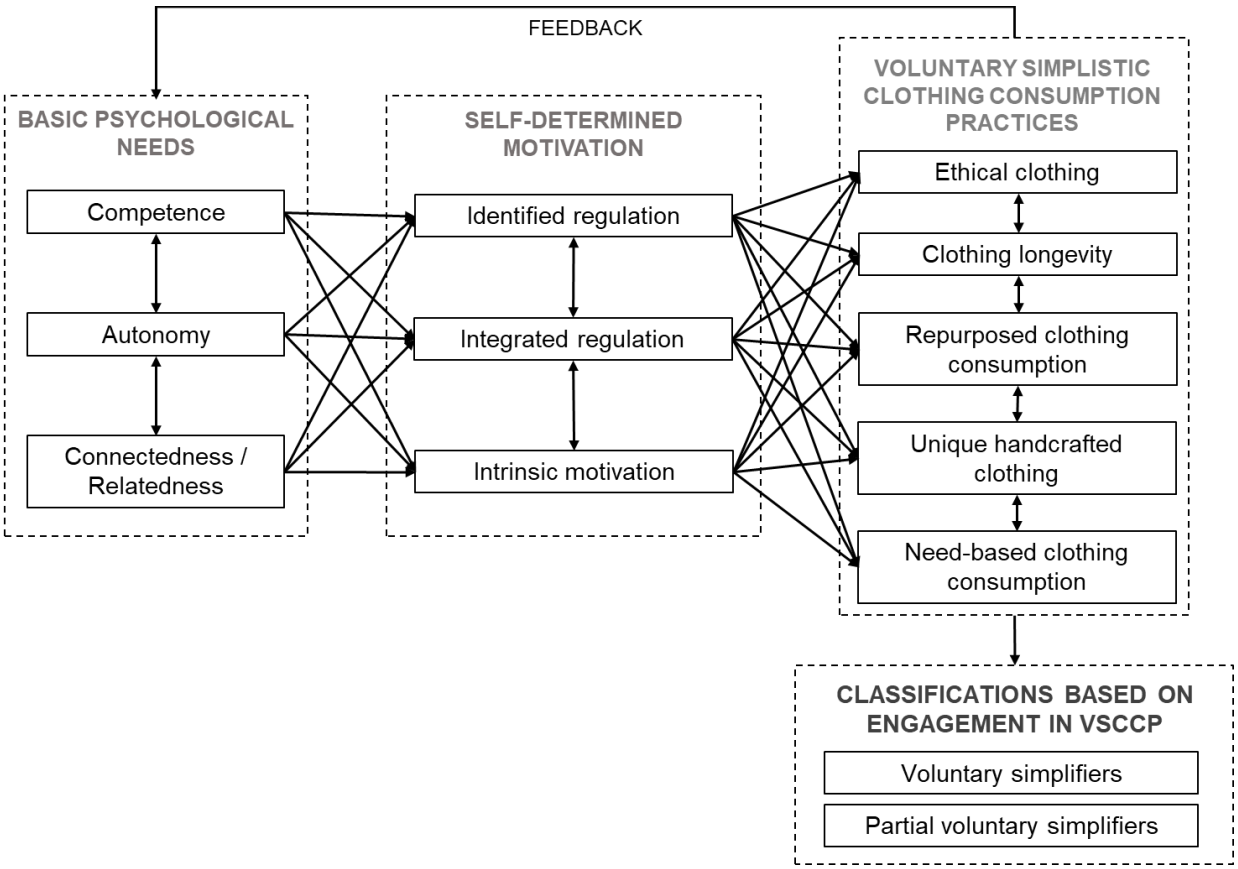


FIGURE 5.1: REVISED CONCEPTUAL FRAMEWORK (Deci & Ryan, 1985a; Deci & Ryan, 1985b; Deci & Ryan, 2002; McDonald *et al.*, 2006; Zamwel *et al.*, 2014)

Once the initial stages of analyses (exploratory- and confirmatory factor analyses) pertaining to objectives 1, 2 and 3 were conducted, the most prominent voluntary simplistic clothing consumption practices were retained for further analysis (i.e. structural equation modelling). The hypothesised construct associations were either accepted or rejected based on the statistical output. Covariances were added between the three the basic psychological needs (i.e. competence, autonomy and connectedness) as well as the three types of self-determined motivation (i.e. identified regulation, integrated regulation and intrinsic motivation) as they essentially form sub-dimensions of the same overarching core constructs. In terms of hypotheses, the following conclusions were presented:

Hypothesis 1 stated that there is a significant positive relationship between competence and self-determined motivation.

- More specifically, **Hypothesis 1a** stated that there is a significant positive relationship between competence and identified regulation,
- **Hypothesis 1b** stated that there is a significant positive relationship between competence and integrated regulation, and
- **Hypothesis 1c** stated that there is a significant positive relationship between competence and intrinsic motivation.

Based on the results from the SEM, competence does in fact have a positive, significant influence on self-determined motivation. More specifically, a positive, significant relationship exists between competence and identified regulation ($\beta = 0.544$; $p \leq 0.001$), competence and integrated regulation ($\beta = 0.627$; $p \leq 0.001$), as well as competence and intrinsic motivation ($\beta = 0.762$; $p \leq 0.001$). In essence, competence is the strongest predictor of intrinsic motivation, while the relationship between competence and integrated regulation is also relatively strong (Taljaard & Sonnenberg, 2019a). This seems to be in line with previous studies that suggest that self-determined motivation is dependent on the fulfilment of the three psychological needs, namely competence, autonomy and connectedness/relatedness (Darner, 2009; Deci & Ryan, 1985b; Pelletier, 2002). More specifically, when consumers learn to voluntarily engage in the simplified, alternative behaviours/ practices, they experience more competence, which leads to increased intrinsic motivation (Kasser, 2009). Furthermore, Deci (1975a) described intrinsically motivated behaviours as those that are associated with the human need for competence and self-determination. The results reflect similar outcomes with regards to voluntary simplistic clothing consumption practices. In addition to that, competence was also quite strong in terms of affecting integrated regulation (the most autonomous type of extrinsic motivation) (Deci & Ryan, 2002:18; Ryan *et al.*, 2008). This type of regulation is closely related to intrinsic motivation, however it remains extrinsic in the sense that it is executed to accomplish personal outcomes rather than inherent enjoyment (Deci & Ryan, 2002:18). Results and research alike suggest that the more extrinsic motivation becomes, the less it is affected or influenced by the basic psychological needs. This is reflected in the statistics above.

Hypothesis 2 proposed that there is a significant positive relationship between autonomy and self-determined motivation. With regards to the sub-hypotheses:

- **Hypothesis 2a** suggested that there is a significant positive relationship between autonomy and identified regulation,

- **Hypothesis 2b** suggested that here is a significant positive relationship between autonomy and integrated regulation, and
- **Hypothesis 2c** suggested that there is a significant positive relationship between autonomy and intrinsic motivation.

The results presented the following conclusions: A significant positive relationship exists between autonomy and identified regulation (β = 0.228; p ≤ 0.01(p = 0.002)). However, a significant, yet negative relationship exists between autonomy and integrated regulation (β = -0.195; p ≤ 0.01 (p = 0.004)), and an insignificant, negative relationship exists between autonomy and intrinsic motivation (β = 0.089; p = 141) and thus H2c is not supported. To summarise, H2a, H2b and H2c, that postulate the relationship between autonomy and the three types of self-determined motivation, are not all positive and only some achieved statistical significance (p ≤ 0.01). Consequently, H2a and H2b are supported but the same does not hold true for H2c. This seems to be contradictory to studies that indicate a positive relationship between autonomy and self-determined motivation (Darner, 2009; Deci & Ryan, 1985b; Pelletier, 2002). More specifically, research has indicated that consumers who act out of their own free will, will be more self-determined to pursue a voluntary simplistic lifestyle (Brown & Ryan, 2003; Ryan *et al.*, 2008). The results indicate that autonomy did not have a positive effect on all the self-determined motivations, yet a positive, significant relationship was identified between autonomy and identified regulation that plays an important part in the transitional process from external regulation into self-regulation in the sense that a person identifies with the behaviour on a conscious level and personally endorses it; thus leading to a high degree of perceived autonomy (Deci & Ryan, 2002:17; DeHaan & Ryan, 2014). In this case, the more extrinsic motivation becomes, the more it is affected by autonomy.

Hypothesis 3 indicated that there is a significant positive relationship between connectedness and self-determined motivation, more specifically:

- **Hypothesis 3a** indicated that there is a significant positive relationship between connectedness and identified regulation,
- **Hypothesis 3b** indicated that there is a significant positive relationship between connectedness and integrated regulation, and
- **Hypothesis 3c** indicated that there is a significant positive relationship between connectedness and intrinsic motivation.

Based on the results, connectedness has an insignificant, negative effect on identified regulation (β = -0.013; p = 0.874) which does not support the H3a. On the other hand, there seems to be a significant, positive relationship between connectedness and integrated regulation (β = 0.283; p ≤ 0.001), as well as between connectedness and intrinsic motivation (β = 0.245; p ≤ 0.001), supporting H3b and H3c. Thus, the standardized path coefficients that relate to H3a, H3b and H3c display varying results. Some of these results seem to be supported by previous studies (H3b and H3c), while others vary (H3a) in the sense that basic psychological needs namely competence, autonomy and connectedness/relatedness leads to increased self-determined motivation (Darner, 2009; Deci & Ryan, 1985b; Pelletier, 2002). From the results above, it is clear that connectedness / relatedness does not always display a significant positive relationship with self-determined motivation, as is the case with identified regulation (H3a). The more self-determined the motivation becomes, the more it is affected by connectedness / relatedness. Research indicates that when consumers feel part of a group, they might feel more connected and thus be more motivated to continue with voluntary simplistic behaviours because their newfound lifestyles and behaviour are more relatable to others who follow similar lifestyles. This seems to only be true on some accounts in terms of this study.

Lastly, **Hypothesis 4** stated there is a significant positive relationship between self-determined motivation and voluntary simplistic clothing consumption.

- More specifically, **Hypothesis 4a** stated that there is a significant positive relationship between identified regulation and voluntary simplistic clothing consumption,
- **Hypothesis 4b** stated that there is a significant positive relationship between integrated regulation and voluntary simplistic clothing consumption, and
- **Hypothesis 4c** stated that there is a significant positive relationship between intrinsic motivation and voluntary simplistic clothing consumption.

From the results, the following conclusions were derived: Identified regulation has a significant, yet negative effect on voluntary simplistic clothing consumption practices (β = -0.325; p ≤ 0.05 (p = 0.021)), while integrated regulation has an insignificant, positive relationship with voluntary simplistic clothing consumption practices (β = 0.209; p = 0.074), i.e. not supporting H4b. Lastly intrinsic motivation has a significant, positive effect on voluntary simplistic clothing consumption practices (β = 0.759; p ≤ 0.001),supporting H4c. Thus, the effect of self-determined motivation on voluntary simplistic clothing consumption practices (VSCCP) seems to vary as some types of self-determined motivation has a strong, positive effect on VSCCP (H4c), while others are either negative (H4a) or insignificant (H4b). This seems to correlate to some degree with previous

studies that have indicated that the frequency and variety of sustainable behaviour correlates with self-determined motivation. The more behaviour becomes externally regulated, the less frequent consumers will engage in them (Darner, 2009; Green-Demers *et al.*, 1997; Pelletier *et al.*, 1998). Furthermore, Sheldon and McGregor (2000) indicated that people with intrinsic goals tend to consume less and were more likely to nurture a more simplistic, sustainable environment (Ryan *et al.*, 2008). This is in accordance with the results that indicate a strong, positive relationship between intrinsic motivation and VSCCP (Taljaard & Sonnenberg, 2019a). It can therefore be deducted that consumers with high levels of self-determined motivation will act in a voluntary simplistic manner when it comes to clothing consumption. It is further emphasised by the findings of Brown and Kasser (2005) who indicated that people who embrace the extrinsic goals (i.e. more extrinsic motivations) tend to consume more and negatively impact the environment (Ryan *et al.*, 2008). This is in accordance with the results as integrated regulation and identified regulation are classified as extrinsic motivations (Deci & Ryan, 2002:18; DeHaan & Ryan, 2014). Integrated regulation is closely related to intrinsic motivation, however it remains extrinsic in the sense that it is executed to accomplish personal outcomes rather than inherent enjoyment (Deci & Ryan, 2002:18). Close to the integrated regulation, is the identified regulation that also falls under the self-determined side of extrinsic motivation (Deci & Ryan, 2002:17; Ryan *et al.*, 2008). Identification plays an important part in the transitional process from external regulation into self-regulation in the sense that a person identifies with the behaviour on a conscious level and personally endorses it; thus leading to a high degree of perceived autonomy (Deci & Ryan, 2002:17; DeHaan & Ryan, 2014). These types of behaviours are executed because consumers perceive their behaviours of personal value and importance (Olafsen *et al.*, 2018). The SEM indicating the standardised coefficient paths is illustrated below in **Figure 5.2**.

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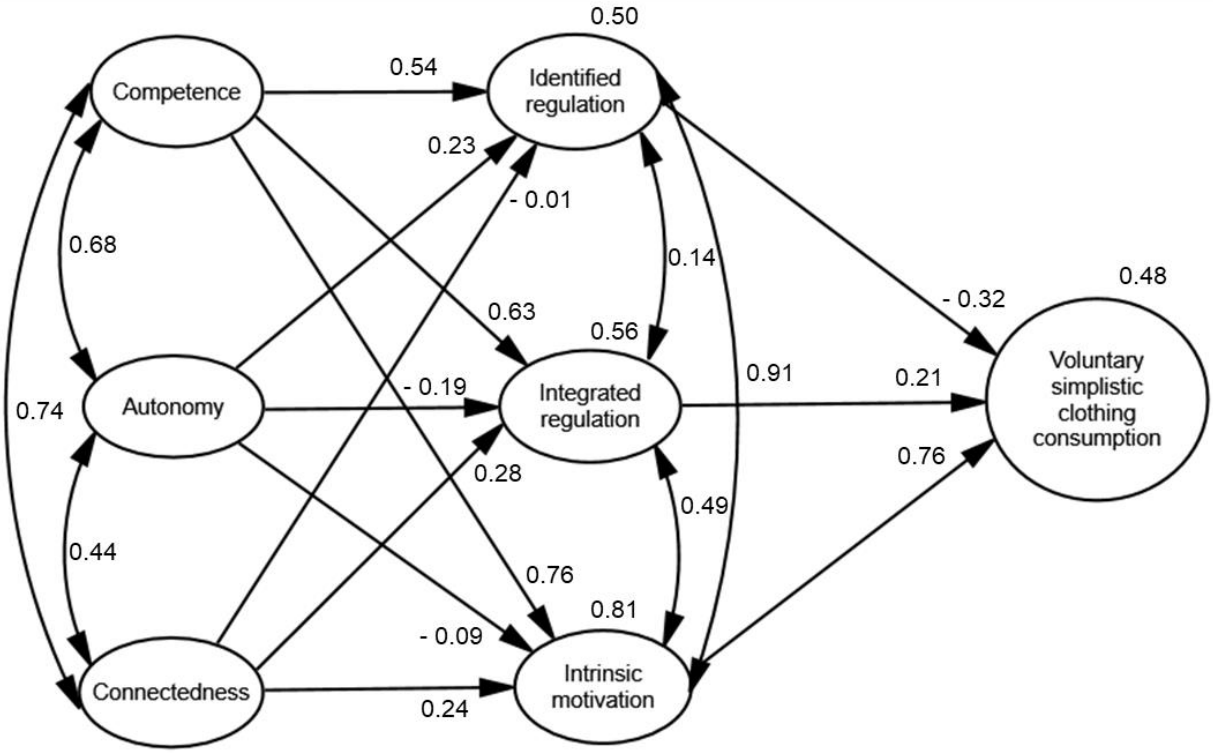

FIGURE 5.2: FIRST ORDER STRUCTURAL EQUATION MODEL (SEM)

Overall, the findings suggest that competence plays a major role in increasing female consumers' intrinsic motivations which enables them to participate in voluntary simplistic clothing consumption practices. Once female consumers feel competent enough to participate in these practices, they start enjoying it which leads to sustained behaviour that evolves into a voluntary simplistic lifestyle.

Lastly, the results pertaining to the cluster analysis phase of the study reconfirmed that the majority of female consumers who took part in this study are quite involved in donating and passing clothes on to others as well as wearing clothes for more than one season (i.e. Clothing Longevity). Based on these results it can be assumed that female consumers might be engaged in these practices for various reasons such as living a more sustainable lifestyle, and contributing positively towards living a better life, or they might do so to utilise the resources and possessions that they currently have at their disposal, because they are limited by issues such as the unstable economic and political environment in South Africa or by the erratic changes in the state of South Africa's water and electricity crises. (BusinessTech, 2018a; Donnenfeld *et al.*, 2018). On the other hand, very few of them are involved in practices such as acquiring clothing that is either eco-friendly or locally made. (i.e. Ethical Clothing). Both these factors require the acquisition of clothing that have certain

attributes and female consumers might not have the means, competence or knowledge to engage in these practices.

In terms of clustering, results indicated that this group of female consumers are classified as either voluntary simplifiers or partial voluntary simplifiers. The cluster labelled as voluntary simplifiers indicated higher levels of engagement in VSCCP and they seem to be quite engaged in all the activities surrounding voluntary simplistic clothing consumption practices. It can be assumed that this group of female consumers have committed themselves to living simpler lifestyles by recycling, reusing, reducing, repurposing and repairing clothing before either purchasing new clothes or discarding of old clothes. The cluster classified as partial voluntary simplifiers seem to be less engaged in VSCCP in general (they might even be classified as partial to non-voluntary simplifiers), and have adopted varying forms of VSCCP or have barely adopted any sustainable consumption practices (McDonald *et al.*, 2006). A large portion of this cluster might also only be engaging in certain aspects of VSCCP because of external reasons such as challenging economic conditions (buying only what you need, reusing clothing to avoid carrying a financial burden of having to buy new clothes, repairing clothes to make it last longer etc.), a lack of availability of appropriate products, limited awareness of environmentally and socially sound options, and/ or a lack of efficient marketing campaigns to promote awareness of more sustainable options in addition to various other factors that have not yet been explored in this study.

Much can be done, by consumers as well as stakeholders, surrounding VSCCP to encourage and instil more sustainable lifestyles among female consumers with particular emphasis on their clothing consumption practices. The implications for industry and policy formation regarding these issues will be discussed in the section to follow.

5.4 IMPLICATIONS FOR INDUSTRY AND POLICY FORMULATION

As mentioned before, the global production and overconsumption of products, more specifically clothing, contributes significantly to various negative environmental and social issues that are detrimental to life on earth. Unless consumers make a mind shift, and are self-motivated to voluntarily consume clothing in more sustainable ways regardless of external/social influences, these issues will prevail and lead to unfavourable consequences for generations to come. However, evidence gained through research of this nature, can assist in developing effective policies to facilitate the transition to voluntary simplistic clothing consumption lifestyles that

originate from the consumers themselves (Sass, Pauw, Donche & Petegem, 2018), rather than rules and regulations that enforce such behaviours. The research revealed that many female consumers already engage in some forms of voluntary simplistic clothing behaviour such as recycling, repairing, reusing and reducing possibly due to pro-environmental and pro-social motives; however results also indicated that very few of the female consumers would go to the extent of "refusing" clothing that is harmful to the environment or the larger community. Hence, there is scope for more sustainable engagement, such as educational programs and/or information sessions to enable consumers to make better decisions in terms of their clothing consumption practices. In striving towards a green economy, (as specified in the South African Green Economy Strategy and the National Strategy for Sustainable Development and Action Plan), government and other relevant stakeholders could develop policies and enable interventions to build sustainable communities that embrace voluntary simplistic practices (Department of Environmental Affairs, 2019; Enviropaedia: Rethinking Reality, 2017; National Strategy for Sustainable Development and Action plan, 2011). Ultimately, such behaviour not only benefits the local economy and environment, but it also contributes to human well-being and a better quality of life for all.

Furthermore, the Local Agenda 21, a plan for sustainable development agreed to by most United Nations (UN) member nations to minimise the negative environment impact, including South Africa, encourages all local government, i.e. local authorities and municipalities, to reshape policies, laws and regulations to reflect sustainable solutions in terms of the local environmental, economic and social circumstances. It also encourages the public of South Africa to work towards a society where everybody contributes to living more sustainably and preserving the environment for future generations (Enviropaedia: Rethinking Reality, 2017).

In addition to that, stakeholders in the South African clothing and textile industry, as well as governmental organisations could benefit from the findings of this study to encourage businesses to market sustainable options in such a way that will promote self-determined behaviours amongst consumers. According to the research, basic psychological need fulfilment is required before self-determined motivation is established. Therefore, marketers need to focus on making consumers feel competent when searching for and acquiring sustainable clothing options, as well as giving them the choice to make decisions regarding sustainable clothing based on their own free will (Chekima *et al.*, 2016). This could be established by creating awareness and increasing knowledge amongst consumers through, for example, proper labelling (i.e., providing information regarding the country of origin, sustainable ways of washing) and advertising (i.e. explaining the benefits of purchasing the product and including information on how best to take care of and

recycle the product). Furthermore, marketers could market their sustainable clothing options to encourage engagement, not only with the sustainable businesses, but also with other consumers who might also choose to acquire and consume sustainable clothing options voluntarily (e.g., adding labelling that includes access to a website with more sustainable options, blogs surrounding sustainable living or even an online community on social media that shares the same interests). This could enhance their connectedness / relatedness by feeling a sense of belonging when they purchase sustainable clothing options and consume it in a voluntary simplistic manner.

Once marketers have addressed the psychological needs of consumers, their self-determined motivation increases, which could result in less reliance on external stimulus such as advertising and marketing campaigns to acquire, use and dispose of clothing in sustainable ways, but rather do it out of their own free will, or even for enjoyment. In turn, this could ultimately reduce the explicit need for marketing tools and create a sustained interest among consumers to voluntarily consume sustainable clothing options; thus creating a greater demand for such products and reducing expenses originally incurred by marketers and businesses alike to promote sustainable options (Deci, 1975b; Deci & Ryan, 2002:17; Niemiec & Ryan, 2009; Ryan & Deci, 2000a).

Lastly, marketers could make use of the results and analyses pertaining to the cluster analysis to tailor marketing campaigns and intervention strategies to best suite consumers' preferences and needs based on their level of engagement in VSCCP. This could in turn, create awareness amongst the partial and/or non-voluntary simplifiers and provide current voluntary simplifiers with more diversified options in which they could enhance their current voluntary simplistic way of living.

5.5 THEORETICAL CONTRIBUTION

5.5.1 Contribution to theory

To date, comparatively few research studies have tested and applied the SDT to explore and explain the topic of voluntary simplistic clothing consumption practices in the global context, and even less, if any, have been conducted in the local context of South Africa. That said, research surrounding the topic of interest has mainly originated in developed countries such as the United States of America and other European countries (Armstrong *et al.*, 2016; Etzioni, 1998; Ruppert-Stroescu *et al.*, 2015; Zavestoski, 2002), which might not reflect the contextual realities of consumption patterns in South Africa. This study therefore contributes to the body of knowledge

and addresses an important theoretical gap in existing literature by creating a basis for further empirical research, especially in terms of Deci and Ryan's (1985) SDT and voluntary simplistic clothing consumption practices in emerging markets such as South Africa. This study furthermore offers a newly proposed theoretical framework that encapsulates the SDT as well as the voluntary simplistic clothing consumption practices that relate to the emerging market context, which can be taken further in future research endeavours.

As this study specifically relates to the basic psychological needs (i.e. competence, autonomy, connectedness/ relatedness) and self-determined motivations (i.e. identified regulation, integrated regulation, intrinsic motivation) associated with female consumers' voluntary simplistic clothing consumption practices in an emerging market context, existing scale items had to be adapted to reflect the topic of interest. Because of these adaptions, a series of exploratory factor analyses (EFA) and confirmatory factor analyses (CFA) had to be performed to explore and isolate the relevant constructs and concepts that were applicable to female consumers in South Africa. Ultimately, the analysis of the scale items contributed greatly to the clarification of basic psychological needs and self-determined motivations that act as antecedents of voluntary simplistic clothing consumption practices among female consumers in an emerging market context, but will only be fully explained by further investigation in this regard. The scale items pertaining to this study may prove to be of practical value to researchers in other emerging markets who want to explore voluntary simplistic clothing consumption practices as part of the SDT.

5.5.2 Contribution to methodology

Furthermore, structural equation modelling was also conducted to determine whether (and which) basic psychological needs and self-determined motivations were most prominent in terms of South African female consumers' voluntary simplistic clothing consumption practices. Based on the findings of this study, it would seem that local female consumers tend to be quite competent and self-determined to take part in voluntary simplistic clothing consumption. This could be due to their independent decisions to engage in voluntary simplistic lifestyles and processing relevant information on what they believe to be good and right rather than taking part in "mindless" behaviours that require much less involvement and are not consciously chosen. In this regard, the study's findings add new insights pertaining to the SDT as a theoretical basis for understanding the underlying motivation that drives sustainable voluntary simplistic clothing consumption practices among female consumers in emerging markets. Consequently, it also provides a platform from which future researchers can explore the topic more extensively.

Lastly, a range of cluster analyses (two-step and k-means) were also performed in order to classify South African female consumers based on their level of engagement in voluntary simplistic clothing consumption practices. Based on this research that has been conducted, future studies could benefit from delving deeper into the classifications of consumers regarding their VSCCP as well as the reasoning behind partial voluntary simplifiers' engagement in certain areas of VSCCP to possibly define clusters even more specifically.

5.6 LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This study contributes to an understanding of female consumers' basic psychological needs and self-determined motivation toward voluntary simplistic clothing consumption lifestyles in an emerging market context and could thus serve as a theoretical basis for future research studies. As a whole, this study could contribute to future exploration surrounding the Self-Determination Theory (SDT) and voluntary simplistic lifestyles, in this case, focusing on clothing consumption practices in particular. However, insight derived from this study is subject to certain limitations, including the following:

Firstly, a non-probable purposive sampling approach was chosen that exclusively focused on younger and middle-aged female consumers in upper- and middle-income groups who may act as early adopters of voluntary simplistic clothing consumption. Despite the fact that they may be prominent role players in households' overall clothing consumption behaviour, the results derived from this sample cannot be generalised to the larger South African population. It is also worth mentioning that the concept of voluntary simplicity with accompanying sustainable clothing consumption practices does not always carry the same weight throughout the various income and population groups due to factors such as evolving lifestyles, historical events and cultural differences. The local population groups have evolved substantially in terms of their lifestyles over the last 20 years due to political changes and empowerment (Bevan-Dye *et al.*, 2012; Kaus, 2013). Yet, future research should endeavour to recruit more representative samples. This will enable further insight and provide the opportunity to compare various demographic categories. Furthermore, future studies can also for example focus on male consumers' voluntary simplistic clothing consumption practices in South Africa and explore whether their practices, self-determined motivations and basic psychological needs differ from the existing research. Age variations, income groups, population groups etc. could all provide greater insight into this

phenomenon which could ultimately enable marketers to better promote such lifestyles and encourage more sustainable lifestyles among targeted groups.

Secondly, future research could include a broader geographical scope and also be conducted in other developing countries to compare whether the outcomes regarding the SDT and voluntary simplistic clothing consumption in South Africa correspond to other emerging contexts and hence allow for broader insight into such markets. Furthermore, future research specifically related to this topic could even be conducted in developed countries to explore the juxtaposition of voluntary simplistic clothing consumption practices in countries with differentiating levels of development from all over the world. Engagement in the various types of voluntary simplistic clothing consumption practices (VSCCP) as well as the classifications of consumers based on these VSCCP could provide very interesting data that could be used to tailor government regulations, agendas and policies.

Thirdly, response bias is a continual concern in sustainable consumption studies, because consumers have a tendency to overrate their current sustainable behaviours that may distort results and findings (Jacobs, Petersen, Hörisch & Battenfeld, 2018). Efforts should thus be made to combat response bias as far as possible. In terms of the questionnaire design and development, intentional effort was made to combat any biasness towards one concept or the other. Pretesting of the questions were also essential to minimise any chance of consumers being confused or overloaded with information, causing respondent fatigue.

Fourthly, quantitative methodologies such as this study offer a lot of potential in exploring consumers' basic psychological needs and self-determined motivation in terms of voluntary simplistic clothing consumption lifestyles; however, a need also exists in the research domain for a more in-depth understanding of how and why consumers feel the need to satisfy their basic psychological needs to enhance their self-determined motivation to persist in living a voluntary simplistic lifestyle in terms of clothing. Additionally, the volume of consumers' commitment to voluntary simplistic clothing consumption practices is not clear in the sense that little is known about the percentage of their clothing they referred to when completing the questionnaire. Some might have indicated that they "repair" their clothing, because they sew on one button per year, while others repair their clothing by mending it multiple times and altering the clothing to fit them again. Lastly, the reasons for taking part in voluntary simplistic clothing consumption practices remain debatable, and should be explored as part of future research endeavours. Therefore, qualitative approaches could be used in future to gain more insight into this phenomenon. As a continuation of this research focus, the aim is to pursue future endeavours regarding these

concepts by collection data in blog formats where consumers voluntarily sign up and are challenged to abstain from purchasing any clothing items unless they have been exchanged, repaired, reused or purchased at a second-hand store. Another exception will include subjects being able to purchase eco-friendly/local clothing and will be requested to document their finds on the blog. Furthermore, participants will be allowed to make use of leftover fabric (not newly bought fabric) to construct clothing for themselves and will also be requested to dispose of clothing in a sustainable manner during the remainder of the field experiment (e.g. donate, recycle, reuse) (Ruppert-Stroescu *et al.*, 2015).

As part of the data collection of this study, all the respondents were asked to answer a question at the end of the questionnaire regarding their willingness to participate in a 10-week follow-up blog regarding sustainable clothing practices. Of the total respondents that completed the surveys (N = 469), just less than half of the respondents (44.8% / n = 210) indicated that they were willing to participate in a 10-week follow-up blog, after which they were asked to provide their contact details for a follow-up contact session. This outcome indicates a great willingness amongst the female respondents to act sustainably in terms of clothing consumption and future research regarding this topic could provide valuable insight into the notion of adapting one's lifestyle to live more sustainably in terms of clothing consumption. Additionally, future research could gain an in-depth understanding of possible behavioural changes in this sample by comparing the results from this study with similar results that could be collected after the 10-week blog, to determine whether the blogging has actually enabled the respondents to adapt their lifestyles and sustain it in the long run. This could hopefully also deliver an in-depth look at the basic psychological needs and self-determined motivation as drivers of VSCCP. In addition to that, qualitative approaches are especially useful in emerging markets where methodological challenges, such as incomplete questionnaires due to lower literacy, are often experienced during survey-based projects.

Based on the aforementioned, it might be beneficial to combine quantitative and qualitative methods of data collection and analysis, in the form of a mixed method approach, to support the blend of positivism as well as interpretivism (Denscombe, 2010:120-122). The purpose of such a combination is to employ methods that will succeed in addressing the research problem and that will yield findings that are of practical value. In addition to that, a mixed method approach could offer a more comprehensive interpretation of this phenomenon by facilitating a blend of explanatory and exploratory research (Blaxter *et al.*, 2006:85).

Lastly, future studies could benefit from further developing the existing measurement scales to improve the statistical results. This could ensure that the data collected for future research is easily interpreted and delivers excellent measurement models throughout the analyses.

In conclusion, research of this nature needs to be explored further, especially in terms of theoretical frameworks that indicate the antecedents of sustainable clothing practices in emerging market contexts. Furthermore, substantiating this framework could significantly contribute to explaining and interpreting the basic psychological needs and self-determined motivations that lead female consumers to take part voluntary simplistic ways of living in terms of their clothing consumption. This in turn could be significant in the field of Consumer Science that focuses on well-being and sustainable lifestyles of consumers and endeavours to continuously inform and educate consumers and marketers alike regarding real-life issues such as these.

5.7 FINAL CONCLUSION

A reflection was presented at the start of this chapter to encapsulate the study as a whole, after which the summary of findings and conclusions regarding the overall problem statement, objectives and hypotheses were discussed. The various implications relating to this study as well as the theoretical contributions were also included in this chapter. Lastly, the limitations and future recommendations were stipulated. As mentioned before, the human population is consuming more resources than the earth can provide and this has already lead to a significant loss (60%) of biodiversity between 1970 and 2014 (World Wide Fund, 2018). If humans continue to consume conspicuously and live mindlessly, soon there will not be enough resources to sustain the earth for generations to come. Therefore, it is vital to establish more sustainable value chains in the clothing and textiles industry as well as encourage consumers to adapt their lifestyles by lowering consumption levels and/ or choosing more sustainable alternatives (Wahnbaeck & Roloff, 2017). To do so, an intentional effort should be implemented by all parties to create more awareness and increase the adoption of voluntary simplistic lifestyles throughout all possible channels to ensure a sustainable economy for current and future generations alike (Gwozdz *et al.*, 2017). By doing so, humans could fulfil their true nature by means of simple acts of kindness or gratitude (Huta & Ryan, 2010). This type of lifestyle results in vitality, health as well as a sense of meaning and community; essentially happiness (Hansen, 2015; Ryan *et al.*, 2008).

"I believe that the very purpose of life is to be happy. From the very core of our being, we desire contentment. Since we are not solely material creatures, it is a mistake to place all our hopes for happiness on external development alone. The key is to develop inner peace." – Dalai Lama

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