THE USE OF IDENTITY STYLE TO PREDICT THE ALCOHOL CONSUMPTION OF AFRICAN MIDDLE AND LATE ADOLESCENTS

BY

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Declaration

I declare that the mini-dissertation hereby submitted to the University of Limpopo, for the degree of MA in Clinical Psychology has not previously been submitted by me for a degree at this or any other university; that it is my work in design and execution, and that all material contained herein has been duly acknowledged.

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Initials & Surname   **Date:**

Dedication

This study is dedicated to my loving parents and dear daughter: *Chipane Piet Mathabathe, may your soul rest in peace; Sejo Eliza Mathabathe; and Onthatile Aviwe Mathabathe.*

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- Firstly, I humbly thank God for His continuous mercy on me. I thank God for blessing me with strength to complete this study when I felt hopeless. He is worthy to be praised. ***Ke a leboga, Ntate Modimo!***

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Abstract

Identity is considered one of the variables useful in explaining the reasons for health risk behaviours such as alcohol consumption among adolescents. In this study, 441 Black African high school students, aged 15 to 24 years, were participants. They were administered the identity style inventory and the student alcohol questionnaire within the framework of a cross-sectional design. Preliminary results found that there was no interaction effect of gender and age, and no main effect of age on informational, normative and diffuse/avoidant identity processing styles. Nevertheless, there was a sex main effect on the informational and the diffuse/avoidant identity styles, with the normative-orientation identity style's results being marginally significant. Mean scores of females on the information-orientation and the normative-orientation identity processing styles were larger, and males mean scores tended to be larger on the diffuse/avoidant identity processing style. Classification of leaners into categorical identity processing styles shows that more females are classified as normative-orientation, whereas many males were classified as diffuse/avoidant. Main analysis found that sex and identity processing styles could not differentiate between drinking and non-drinking learners, and both variables could not predict the frequency and quantity of alcohol consumption, and the binge drinking.

Key words: *Adolescents, alcohol consumption, binge drinking, identity processing style, identity status,*

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CHAPTER 1

BACKGROUND TO THE STUDY

1.1   Motivation for the study

Adolescents face the task of forming an identity. They need to make up their minds on important issues in their lives, such as what profession to follow, what religion to believe, or what political ideas to adopt. They may approach such issues in different ways. For instance, they may gather information and make decisions accordingly, or they may adopt the guidelines set forth by significant others (Vleioras & Bosma, 2005). Erikson's (1982, 1968) psychosocial theory describes the process of identity formation as an exercise in resolving identity crises. During adolescence, the main crisis confronting the individual is that of formulating an identity.

The individual attempting to formulate an identity can succeed, in which case he or she will experience adolescence with minimal distress and confusion, and then transit to a stable adulthood. Failure to establish identity results in identity diffusion, a kind of maladaptation (Kroger, 1996). Marcia re-presented Erikson's theory, especially the aspect on identity crisis resolution, in a model better known as the identity status paradigm (Marcia, 1966, 1980). The model proposes four identity status categories, known as Achievement, Moratorium, Foreclosure and Diffusion. Their differences lie in the extent to which they have explored and committed to certain life decisions (regarding values, beliefs, goals, and so on). For instance, whereas the Achievement status is characterized by high commitment to life decisions, the Diffusion status has low commitment levels. The identity statuses are conceived as developmental, with Achievement as the most mature, and Diffusion the most immature, Moratorium and Foreclosure placed in the middle (Waterman, 1988).

Berzonsky (1989, 1992) further elaborated on the identity statuses by viewing them as processes rather than categories of identity. To do that, Berzonsky decoupled the commitment and exploration dimensions in Marcia's identity

status paradigm (cf. Bosch & Card, 2012). Berzonsky's approach focuses on exploration, incorporating the problem solving approach and decision making style characterizing an individual (Berzonsky, 1989; Schwartz, 2001). Thus, extensive research by Berzonsky (1992) has shown that identity achievers and moratoriums use mainly an orientation geared towards seeking information to resolve problems; foreclosures are conformist and consider norms central in problem-solving; and diffusions use a diffuse/avoidant orientation, typically procrastinating and lacking commitment to life-long decisions. In accordance with the aforementioned idea on the maturity of identity statuses, an information orientation is considered the most mature identity processing style, a diffuse/avoidant orientation the least mature, and the normative orientation lies in between (Berzonsky, 1990; Berzonsky & Adams, 1999).

Although identity exploration is part of a healthy development, it may also represent a risk factor for potentially risky behaviours such as alcohol experimentation (Adams & Marshall, 1996). Studies in the West have established this point (Bishop, Macy-Lewis, Schnexloth, Puswella, & Struessel, 1997; Bishop, Weisgram, Holleque, Lund, & Wheeler-Anderson, 2005; Jones & Hartmann, 1988; Jones, Hartmann, Grochowski, & Glider, 1989; Laghi, Baiocco, Liga, Lonigro, & Baumgartner, 2014; Laghi, Baiocco, Lonigro, & Baumgartner, 2013; Lewis & Gouker, 2007; Maggs, 1997). It would be valuable to investigate whether identity processing styles play a role in adolescents' consumption of alcohol in the African context.

The importance of gender in the consumption of alcohol is established across cultures (Rahav, Wilsnack, Bloomfield, Gmel, & Kuntsche, 2006). In South Africa there is a trend that males report consuming alcohol more than females (Reddy et al., 2013). On the other hand, it is not clear whether the consumption of alcohol by the identity processing styles will differ according to gender in an African socio-cultural context. Therefore, investigating the effects of gender on alcohol consumption by each of the identity processing styles seems in order. Bentrim-Tapio (2004) reported that alcohol consumption in males supports research that indicates ego identity status affects alcohol consumption levels. Identity foreclosed males in the same study consumed greater quantities of

alcohol than do males classified in moratorium status. Ego identity status does not significantly affect consumption levels in females (Bentrim-Tapio, 2004).

1.2 Statement of the problem

Many health risk behaviours in South Africa are under control or actually declining (Reddy et al., 2013; Shisana et al., 2013, 2014). However, the drinking of alcoholic beverages is one of those health risk behaviours that appear to be rising (Pengpid, Peltzer, & van der Heever, 2013; Reddy et al., 2013, 2010, 2003; Young, & de Klerk, 2008; Young, & Mayson, 2010). Reasons for health risk behaviours are many and diverse (Schulenberg, Maggs, & Hurrelmann, 1997). It is also considered that some of the reasons for health risk behaviour can be the level of identity development, and the process of establishing identity itself (Adams & Marshall, 1996; Berzonsky & Adams, 1999; Erikson, 1968; Marcia, 1980). Studies conducted in the West have found that risk behaviours can be linked to a less developed identity. Both identity status and identity processing style research have found that the more sophisticated an individual is in his or her personality development, the less likely that individual will engage in risky behaviours such as abusing substances such as alcohol (Bishop et al., 2005, 1997; Jones & Hartmann, 1988; Jones, Hartmann, Grochowski, & Glider, 1989; Laghi et al., 2014, 2013; Lewis & Gouker, 2007). Although not common, those studies that have also investigated the role of gender in the relationship between identity development and risk behaviour, have not been conclusive (Adams Munro, Munro, Doherty-Poirer, & Edwards, 2005; Berzonsky & Kuk, 2005; Boyd, Hunt, Kandell, & Lucas, 2003; Laghi et al. (2013).).

Research on identity development, especially the one that uses identity processing style, has been conducted in the West. There are indications that the way individuals conceive of identity in non-Western contexts may be different to how it is conceived in the West (Berman et al., 2011; Schwartz, Adamson, Ferrer-Wreder, Dillon, & Berman, 2006). Therefore, it is not clear if the findings about alcohol consumption and identity processing style found in the West will apply to adolescents in an African context. Given that the issue of

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sex in the development of identity and personality is remains inconclusive, it is also necessary to incorporate this aspect to the study.

1.3 Aim of the study

The primary aim of the study was to determine whether there is a relationship between identity processing styles and alcohol consumption among African mid- to late adolescent high school learners. The study also investigated whether there was an association between identity processing style and gender in relation to alcohol consumption the learners.

1.4 Objectives of the study

1.4.1 To investigate the relationship between identity processing styles and alcohol consumption

1.4.2 A further objective of the study was to investigate the role that gender plays in the relationship between identity processing style and alcohol use.

1.5 Hypothetical statements

Based on the literature, the following hypotheses were drawn:

1.5.1 There will be a statistically significant, negative relationship between alcohol consumption and mature identity processing styles, such that the diffuse/avoidant orientation, an immature identity processing style, is expected to predict higher levels of alcohol consumption and informational orientation is expected to consume less alcohol among middle and late adolescents.

1.5.2 The relationship between identity processing styles and alcohol consumption will depend on the gender of the adolescent.

1.6 Definition of concepts

1.6.1 Identity: A concept defined by Marcia as a self-structure, or an internal, self-constructed, dynamic organization of drives, abilities, beliefs, and individual history. This definition was derived from Erikson's (1968) theory of identity development (Marcia, 1980).

1.6.2 Identity status: A concept introduced by Marcia (1966) to explain how individuals construct an identity. It is defined by Marcia as any of the four modes of dealing with identity issues characteristic of late adolescents. The identity statuses are diffusion, foreclosure, moratorium and achievement (Marcia, 1980).

1.6.3 Identity processing style: A concept defined by Berzonsky (1992) to explain the processes adolescents use to acquire identity. It is conceptually similar to the concept of identity status, adding to it the process dimension. It refers to relatively stable differences in how individuals make decisions, solve personal problems, and process identity-relevant information (Berzonsky & Kuk, 2005). Identity processing style refers to differences in the way individuals construct and revise or maintain their sense of identity (Berzonsky, 1990).

1.7 Significance of the study

The study is important to conduct in South Africa since there is a problem of alcohol intake among the youth, and the onset of drinking occurs among age groups younger than 13 years old (Reddy et al. 2013). Reddy et al. also report that the drinking trend is more common among male learners than it is among female learners. Since drinking is a health risk problem among learners, the study is important. It is necessary to find strategies of preventing drinking from escalating even further. The present study is exploring the association of personality style to drinking. It will provide school authorities and health professionals with information relating to how a factor such as personality, in the form of identity style, could contribute to drinking. The information can be used to design more effective intervention strategies.

1.8   Chapter outlay

Chapter One gave a brief overview of the study, outlines the objectives based on the research problem and also includes a definition of relevant concepts. The next chapter (Chapter Two) comprises of extensive reviews of literature regarding existing aspects of the present study such as the identity processing styles in relation to alcohol use amongst adolescents. It also reviews the influence of gender on the relationship between identity and alcohol use. Chapter Three discusses and explains the methodological aspects of the study such as the research design, description of the population, sampling method, as well as the instruments and the procedures used. The results are presented in Chapter Four which includes the classification of the participants according to their identity processing styles in relation to alcohol consumption, as well as the gender in relation to alcohol use. In Chapter Five a discussion of the results is presented. The results are integrated into existing literature. The discussion is followed by a conclusion, limitations of the study and recommendations of future research.

CHAPTER

THEORETICAL PERSPECTIVE AND LITERATURE REVIEW

2.1 Introduction

Chapter two is a review of the literature relevant to the study. It begins with a description of the identity processing style concept. It then follows by elaborating on how identity processing style is related to the challenges of adolescent and young adulthood development.

2.2 The theoretical perspective of the study

The theoretical perspective of the study is the identity style model advocated by Berzonsky (1989). Berzonsky's model can be considered as an extension and modification of the identity status of model of Marcia (1966, 1980). Whereas Marcia formulated identity statuses as personality characteristics, Berzonsky (1989) viewed them as processing orientations or social-cognitive strategies of constructing identity or avoiding the task. Individuals use the informational, normative and the diffuse/avoidant identity styles to construct and maintain a personal identity.

However, even if Berzonsky's model is a process model, it is associated with the identity status model (Bosch & Card, 2012). The informational style tends to be positively related to the identity statuses of achievement and moratorium, the normative identity style is associated with foreclosure, and the diffuse/avoidant identity style is positively related to diffusion (Adams, Berzonsky, & Keating, 2006; Berzonsky, 1989; Berzonsky & Kuk, 2000). The identity status model has been used to study adaptive behaviour, including engagement in health risk behaviour. Similarly, the identity style model has been used to study adaptive behaviour. Thus, identity styles are used in the present study to investigate their relationship with drinking behaviour among African high school learners.

2.3 Historical background of identity processing styles

Erikson (1968, cf. Jones, 2011) has described the identity formation process of adolescence as a process of ego growth, wherein identifications of childhood are slowly replaced. Identity formation is a process of fitting childhood identifications into a new configuration (Erikson, 1968). In Erikson's view, during adolescence, a new form of identity emerges in which identifications of childhood are sifted, subordinated, and altered in order to produce a new identity configuration. For Erikson, successful resolution of the first four developmental stages (namely, trust versus mistrust, autonomy versus shame/doubt, initiative versus guilt and industry versus inferiority) is necessary for resolving identity issues during adolescence and young adulthood. These early psychosocial stages, left unresolved, will likely impede identity development as well as resolution of subsequent developmental stages during adulthood (stages six through eight).

Most research associated with Erikson's fifth stage has employed Marcia's identity status paradigm which defines four identity statuses in terms of crisis or exploration, and commitment. Marcia's paradigm has generated a wealth of research, most generally supportive of Erikson's developmental trajectory. Kroger, Martinussen and Marcia (2010) state that Marcia (Marcia, 1980, 1966; Marcia, 1993b) elaborated on Erikson's (1968) views of this process, and his ego identity status model has been a popular means of assessing the exploration and commitment dimensions of Erikson's (1968) identity formation concept. By cross-tabulating the exploration and commitment dimensions, Marcia identified four specific identity categories by which late adolescents and young adults undertake identity-defining decisions in domains such as vocation, ideology, and sexuality (Marcia, 1993b, 1980; Schwartz, 2001). Briefly, the identity statuses and their respective degrees of exploration and commitment are as follows: Identity achievement (commitment following exploration), Moratorium (in the process of exploration, vague commitments), Foreclosure (commitment without exploration), and Diffusion (no commitment, with or without exploration). Marcia's (Marcia, 2001, 1980, 1966) identity

statuses are observable phenomena linked to the underlying processes of ego growth described by Erikson (1968).

The identity statuses identified by Marcia (1980, 1966) tend to be hierarchical. The earliest identity development process may begin either with diffusion, in which no significant identifications are made, or with foreclosure, in which identifications with significant childhood figures take place. Then follows moratorium, which if successfully negotiated leads to the capacity to make life commitments. The latter suggests that the stage of achievement has been reached.

Berzonsky (1990) added a process component to the identity statuses by organizing the statuses in terms of three information or social–cognitive processing orientations. The informational processing style refers to actively seeking identity-salient information to solve life problems and make personal decisions. The normative processing style refers to reliance on standards and value orientations associated primarily with parentally or socially endorsed norms. The diffuse/avoidant processing style refers to an ineffective, procrastinating approach in which the individual eventually decides because of situational demands. Foreclosed individuals are most likely to utilize a normative orientation, diffuse/avoidant ones are most likely to use a diffuse or avoidant orientation, and the identity achieved and moratorium individuals are most likely to utilize an informational orientation (Kroger et al., 2010).

Identity processing style is similar to identity status, adding to it the process dimension. It refers to relatively stable differences in how individuals make decisions, solve personal problems, and process identity-relevant information (Berzonsky & Kuk, 2005). Identity processing style refers to differences in the way individuals construct and revise or maintain their sense of identity (Berzonsky, 1990). Identity style refers to differences in how individuals process self-relevant information as they negotiate (or manage to avoid) identity issues (Berzonsky, 1993).

2.4 Identity processing style and its association with adolescent challenges

Berzonsky (1989) has commented that identity processing styles are related to identity statuses in a theoretically consistent manner. A normative processing style is associated with identity foreclosure, an informational style is positively correlated with identity achievement and moratorium, and a diffuse-avoidant style is associated with identity diffusion (Berzonsky & Neimeyer, 1994; Krettenauer, 2005). This means that a processing style conceptualization of identity is a useful aspect of the identity development process, since they relate and share common correlates. Berzonsky and Kuk noted that an informational identity orientation has been found to be positively associated with experiential openness, conscientiousness, self-reflection, problem-solving coping, cognitive complexity, a high need for cognition, planful decision making, (Berzonsky, 1990, 1992; Berzonsky & Kuk, 2005, p. 236; Dollinger, 1995), and other characteristics related to identity achievement. In many ways the characteristics regarding informational identity orientation makes the identity style consistent with findings of identity achievement, the advanced identity status according to the identity status paradigm (Boyes & Chandler, 1992; Marcia, 1993a; Schwartz, 2001).

Students who entered college with an informational identity style were best prepared to function successfully in a university setting. They possess high levels of academic autonomy, have a clear sense of educational purpose, are socially skilled, and tended to perform well academically. In contrast, students with a diffuse-avoidant style are reported to be at relative disadvantage on these dimensions. Students with a normative identity style also have a clear sense of academic direction. However, they are significantly less tolerant, and less academically and emotionally autonomous than their informational counterparts (Soenens, Duriez, & Goossens, 2005).

Adolescents with an information-oriented, self-exploratory identity style are significantly more motivated to engage in active information processing and are more receptive to new ideas, personal feelings, and actions than adolescents with normative or diffuse/avoidant identity style. Relative to both informational

and diffuse/avoidant types, normative-oriented individuals are significantly less open to and willing to consider information that might threaten hard-core areas of the self, such as personal values and actions (Berzonsky, 1993). An information identity style is positively associated with values emphasizing independence (openness rather than conservation) in a way that transcended selfish interest. A normative identity style is positively associated with values such as security and tradition (conservation rather than openness). A diffuse-avoidant identity style is positively associated with values that highlight self-interest such as hedonism and power (Berzonsky, Cieciuch, Duriez, & Soenens, 2011).

Phillips and Pittman (2007) found that adolescents classified as having a diffuse/avoidant orientation have lower self-esteem and higher delinquent attitudes than those with either an information or normative orientation. At the same time, the diffuse/avoidant processing style is associated with higher hopelessness and lower optimism/efficacy than the normative and informational styles. Adolescents with diffuse-avoidant identity style have low levels of identity commitment and self-regulation (Berzonsky, Branje, & Meeus, 2007). Across all ethnic groups, ratings of moratorium status are associated with significantly more behaviour problems, less social competence, and lower self-esteem.

Other research pointed out that diffusion status, which is characterized by low commitment and limited self-exploration, is often linked to the most problematic outcomes in different fields of life, such as academic performance, social maladjustment, internalized and externalized symptoms, risky sexual practices and, not least, illicit drug and alcohol misuse. Furthermore, adolescents without a coherent and synthesized sense of identity possess lower adaptive interpersonal skills than achieved adolescents (Berzonsky & Kuk, 2000). Furthermore, Berzonsky et al. (2007) mentioned that adolescents with a diffuse-avoidant identity style have low levels of identity commitment and self-regulation and they perceive their parents as being low in trust, openness, and supervision.

Diffuse-avoidant identity style has been linked by Berzonsky et al. (2007) to an increased risk for a variety of problem behaviours, including depression, neuroticism, eating disorders, conduct disorders, and work- and alcohol-related problems. Students with a diffuse-avoidant identity style procrastinate and are reluctant to confront and deal with personal conflicts and decisions; their behaviour tends to be dictated and controlled by situational demands and incentives (Berzonsky, 1990). A diffuse-avoidant identity style has been found to be associated with low levels of self-awareness, conscientiousness, and cognitive persistence and high levels of maladaptive decisional strategies, dysfunctional cognitive strategies, self-handicapping, emotion-focused coping, and identity diffusion (Berzonsky, 1994; Berzonsky & Ferrari, 1996; Berzonsky & Kuk, 2000; Dollinger, 1995; Nurmi et al., 1997).

Students who are in the process of going through an identity crisis over occupational choice have the least favourable evaluations of their education, while students who have never experienced a crisis but are, nevertheless, committed to a vocational goal, hold the most favourable attitudes. Students who went through crisis over choice of major field while in college, shows more negative attitudes than do students not experiencing a crisis during their college years. This suggests that the association of crisis with college is an important factor in student dissatisfaction (Waterman & Waterman, 1970).

Support by other researchers show that a change in identity status would be associated with change in defences and narcissism (Cramer, 1995, 1998). Students with higher identity statuses make less use of defences and show higher narcissism (Cramer, 1995, 1998). In at least one study, males showed a clearer pattern of increasing maturity over a period of years than do females (Constantinople, 1969).

2.5 Identity processing style and alcohol use in adolescents

High alcohol consumption among high school and university students is a health concern increasingly documented in many countries, including South Africa (Peltzer & Phaswana, 1999; Peltzer et al., 2013; Reddy et al., 2013,

2010, 2003; Young, & de Klerk, 2008; Young, & Mayson, 2010). So far, most reports have been from the USA and Europe and have shown excessive alcohol use among university students, including binge drinking (a drinking style characterized by a high number of drinks per occasion) and heavy episodic drinking (a drinking style characterized by high consumption periods). Alcohol use has been associated with injuries, unplanned and unprotected sex, sexual aggression, fighting and violence, property damage and drinking and driving, thus posing a problem for students involved in heavy drinking and for those around them. One of the factors associated with alcohol misuse is identity development.

It should be clear from section 2.3 that some approaches to the establishment of an identity predispose individuals to health risk behaviours, while others are less prone to such. Thus, the impact of identity development on alcohol use is apt. Studies of identity development and alcohol use initially emanated from the identity status paradigm. Jones, Hartmann, Grochowski, and Glider (1989) conducted a comparative study between a substance abuse residential treatment group and an age and gender matched sample of high school learners. Learners in the substance use treatment group fell in the lower levels of identity development. An earlier study by Jones and Hartmann (1988) among seventh and twelfth grade learners found that alcohol use varied according to the stage of ego identity development. High alcohol use was common among individuals classified as identity diffused, relative to the achievement, moratorium and foreclosure ego identity statuses. Another study with learners in the same level of grades was conducted by Barkin, Smith and DuRant (2002) to assess substance use and ego identity development. Barkin et al. also found that frequency of use for individuals classified as diffused was comparatively higher than the remaining ego identity statuses. In Laghi et al. (2013) diffuse identity status learners were likely to be classified in the binge and heavy drinker categories (see also Adams et al., 2005).

Bishop et al. (1997) reconfirmed the findings of Jones and Hartmann (1988), but differed on one aspect. Whereas Jones and Hartmann found that foreclosed learners drank the least, Bishop et al. found that they were heavy drinkers.

However, Bishop et al. (1997) reasoned that the findings have to be interpreted in the context of age-appropriateness. Foreclosure learners in earlier stages are still within the control of their parents, and true to character, are most likely to abide by their rules. Once in university, they are independent, and are likely to succumb to the pressures of peer influence (see Dumas, Ellis, & Wolfe, 2012). Foreclosed students who had a relatively longer stay at university consumed more beer than the diffused. In any case, alcohol consumption levels increase from high school to university, at least in the American context (Bishop et al., 2005).

A study linking identity processing style in particular, and alcohol consumption, was conducted by Laghi et al. (2014). The results resembled those that were found when identity development was measured on the basis of identity statuses. Notably, information identity style individuals were categorised as social drinkers and the diffused/avoidant were categorised as binge and heavy drinkers. In the context of that study, binge and heavy drinkers are individuals who engage in several occasions of binge drinking in a month.

All the studies, including those that utilized the identity status and identity processing styles measures, suggest that there is a relationship between identity development and alcohol consumption. There may be differences of detail, such as whether foreclosed identity individuals drink more or less, but there is agreement that the less sophisticated identity predisposes an individual to alcohol misuse. The issue of gender does not seem to be settled, though. What is not clear, is whether these results will be reproduced in the African context, and whether a study conducted in Africa will help to resolve the sex issue.

2.6 Sex and identity processing style in relation to alcohol use

The issue of sex differences has always been controversial in the studies of identity development (Patterson, Sochting, & Marcia, 1992). Erikson's (1968) attempts to counter sexual bias in psychoanalysis opened his theory to criticism for being sexually biased. Erikson introduced a concept of inner space which

attempted to explain the biological basis of sexual differences. To this point researchers do not agree on the issue of the influence of sex on identity development. There are two points of view concerning the role of sex in identity development. Bosch and Card (2012), Kroger (1997) and Meeus, Iedema, Helsen and Vollebergh (1999) concluded on the basis of literature review that the scores of females and males on measures of identity development and related concepts are not different. However, there is evidence to suggest that the differences are there (Berzonsky, 1993; Cramer, 2000; Kumru & Thompson, 2003; Phillips & Pittman, 2007; Solomontos-Kountouri & Hurry, 2008). Schnur and MacDonald's (1988) conclusions regarding the progression of gender identity emphasizes the need to incorporate sex as a study variable. The developmental phases of 'reindividuation' and 'dedifferentiation' are conceptually equivalent to Marcia's (1993b, 1980) concepts of immature and mature identity statuses, respectively. As things stand, it appears that the issue of gender is unresolved and requires further study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section presents the design of the study, the variables used in the study, study population and sampling, tools and procedures of data collection; and method of data analysis.

3.2 Research Design

This current study is a cross-sectional study, whereby participants responded to the questionnaires at one point, and no follow-up data collection was expected to take place. This type of research design is useful when the study is explorative.

3.3 Research Variables

The variables included in the study are as follows:

- o Independent variable: the major independent variable considered in the present study is identity processing style.
- o Dependent variable: the dependent variable in this study is alcohol consumption.

3.4 Population

The study was conducted among learners at Ngaka Maseko High School in Mabopane, North of Pretoria, in the Gauteng Province of South Africa. The total population of the study was 927 Black African students at the time that the study was conducted.

3.5　Sampling

The sampling technique that was used in this study is convenience sampling. Convenience sampling, a type of non-probability sampling method, was used to select the required number of subjects. This sampling method proceeds by selecting participants according to their availability at a certain point in time and space (Bless & Higson-Smith, 1995; McMillan & Schumacher, 2006). A sample is therefore chosen by identifying a venue (e.g., high school) where in all likelihood the largest possible population will be available and taking all cases at hand until the sample reaches the desired size (Bless & Higson-Smith, 1995).

For the purpose of the study, the age range of the sample was limited to learners in middle to late adolescence, an age range estimated to be from 15 to 24 years of age. The final sample size of the study was 441 participants from Ngaka Maseko High School. The school is located in the Gauteng Province of South Africa, which is 100 percent Black African learners.

3.6　Measures

3.6.1　Demographic Information

In the demographics questionnaire, learners were asked to provide information about their personal backgrounds and current family situation. All respondents indicated their gender, age, family structure (with whom they lived with at home), and levels of education completed by each parent residing with them.

3.6.2 Identity Style Inventory

This study examined identity processing styles with the Identity Style Inventory (ISI-III; Berzonsky, 1989, 1997). The ISI-III (Berzonsky, 1992) is a 40-item measure responded to on Likert-type response scales. It consists of four subscales, one for each of the identity processing styles and a fourth to measure commitment. The scales are as follows: (a) The information orientation scale, consisting 11 items. Example of an item on this subscale is

"I've spent a great deal of time thinking about what I should do with my life"; (b) The diffuse/avoidant-orientation, with 10 items; (2) The diffuse-avoidant-orientation scale, with 10 items. An example of an item on this subscale is "I'm not really thinking about my future now; it's still a long way off"; (3) The normative-orientation scale, consisting of 9 items. An example of an item on this subscale is "I prefer to deal with situations where I can rely on social norms and standards"; (4) The identity commitment scale of the ISI-III has 10 items. An example of an item on this subscale is "Regarding religious beliefs, I know basically what I believe and don't believe" (Berzonsky & Kuk, 2005). The ISI-III has demonstrated good internal and test-retest reliability in a number of studies (Berzonsky, 1992, 1993). In various reports, Cronbach's alpha coefficients ranged from 0.64 to 0.76 (Berzonsky, 1997; Vleioras & Bosma, 2005). In the present study, the information-orientation scale's reliability was $\alpha = 0.605$, normative-orientation scale was $\alpha = 0.47$, diffuse/avoidant-orientation scale was 0.57 and commitment was $\alpha = 0.52$. Although the reliability levels were not particularly high, especially that of the normative-orientation scale, they were usable. Besides, the inspection of the item-to-total correlations showed that almost all the items in the normative-orientation scale were useful, since there was none that could be removed to improve the reliability beyond the $\alpha = 0.50$ level. The validity of this measure has been supported by correlations with measures of identity status as well as with other scales measuring constructs theoretically related to identity processing styles (Berzonsky, 1989).

3.6.3 Student Alcohol Questionnaire

The student alcohol questionnaire (SAQ; Engs, 1975, 2002) was used to measure alcohol consumption, consequences of alcohol consumption, and alcohol knowledge. The scale simply asks the respondent to state how many drinks he/she has had in a specified time (e.g., past week). The following is an SAQ alcohol consumption question: "When you drink **liquor**, how many drinks, on the average, do you usually drink at any one time?" and the response options were: **1** = "less than one drink", **2** = "1 or 2 drinks", **3** = "3 or 4 drinks", **4** = "5 or 6 drinks", **5** = "more than 6 drinks". To group the participants for the present study this question was added to the previous two questions since they are all

in the same format. This was an additional question to the already existing questions on alcohol consumption. The SAQ was found to be reliable and valid by several researchers (Engs & Hanson, 1994; Haworth-Hoeppner, Globetti, Stem, & Morasco, 1993). As part of its development the instrument was subjected to face validity by a panel of experts and college students. In this study, reliability was estimated in three ways: First, the six items measuring quantity and frequency were combined into a single alcohol consumption index; second, the three quantity items were formed into an index; lastly, the three frequency items were also combined into an alcohol consumption index. Reliability estimates for all three indexes were $\alpha = 0.977$, 0.938 and 0.934. In addition, the consequences of drinking scale was also administered to the learners. Its internal consistency was estimated at $\alpha = 0.952$.

3.7   Data collection procedure

The researcher obtained appropriate approval from the University of Limpopo's Ethics Committee prior to conducting the research. The study was introduced to the learners. They were also made aware about their rights as participants. Furthermore, it was explained to them that their responses will remain anonymous, in that they were not expected to provide their names or details that may reveal their personal identities. The researcher made it clear that participation is voluntary. Prospective participants were expected to complete a consent form before completing the questionnaire itself. An information letter was sent out to parents through the learners. Parents were also asked to give consent to their children's participation in the study. Parents who objected to their children been included were asked to direct the researcher in writing. It was assumed that those who do not object in writing shall have given passive consent for their children's participation. This was in addition to the consent form signed by each of the learners.

The ISI-III, SAQ and demographic information questionnaires were administered to. The questionnaires were administered to the respondents in their respective classrooms with the cooperation of educators. The researcher explained to the participants how the questionnaires were to be completed.

Moreover, she was also available for the whole data collection session give further clarifications and to answer any questions that may be raised by the respondents.

CHAPTER FOUR

RESULTS

4.1   Plan for analysing the data

This chapter presents the results and interpretation of the data relevant to the present study. The analysis was conducted using the computer programme IBM Statistical Package for Social Sciences, version 22 (IBM SPSS 22.0) (IBM Corporation, 2014). For the major variables of the study, that is, identity processing styles and drinking consequences, missing values were replaced with the mean of the item. In cases where missing values were more than 15% of the scale items, the protocol of the participant for the scale was considered missing and excluded from analysis. The three identity processing style groups were first formed according to their identity processing style classification. In the data some of the items in the ISI-III were reverse scored, while data were checked for errors and the reliability coefficients measured. One of the scales was found to have a low reliability estimate. Nevertheless, it was used since it was well above the $\alpha = 0.35$ cut-off, which Cuieford (1965) finds acceptable for purposes of analysis.

Before analysis could proceed, identity processing style categories were created based on the students' responses to the ISI-III. To create the identity processing style categories, the raw scores from the ISI-III were standardized into z scores, and the highest score of each participant was considered the identifying/defining identity processing style. Nevertheless, continuous scores were also used for analysis. The means of the three identity styles were compared to establish if there were any differences in the gender and alcohol consumption each respondent had experienced. In the current study, alcohol use was the dependent variable, identity the independent/predictor variable. A commitment scale forms part of the measure, but it was not included as part of the analysis for this study.

4.2 Preliminary analysis

4.2.1 Demographic characteristics of the sample

A tabular description of the sample is presented in Table 1 below. The sample of the study consisted of 441 high school learners from Ngaka Maseko High School in Mabopane, Pretoria, South Africa with a mean age of 17.0 (S.D. = 1.5). There were more (61.7%) female learners in the sample. Most learners (31.3%) who participated were in Grade 10, followed by grade 12 (26.8%), and grade 11 (22.0%). The least (18.8%) participants were from grade 9. Most of the learners (48.3%) lived in households headed by biological parents. The most spoken home language (59.2%) was Setswana.

Further analysis of the data revealed additional descriptive statistics of the sample. A crude differentiation of the learners into drinkers and non-drinkers was done. Drinkers were learners who had tasted any alcoholic beverage, regardless of frequency or quantity, and non-drinkers were learners whose reports suggest that they have never drank at all in their lives. The classification yielded 157 (35.6%) non-drinkers and 284 (64.4%) drinkers. The average age at which learners say they started drinking was 14.71 (SD = 2.201, range = 7—21). The majority of the learners (149/65.1%) had their first drink in the company of friends, followed by 56 (24.5%) who drank for the first time with family members, and then 22 (9.6%) and 2 (0.9%) had their first drinks with school mates and strangers, respectively. As for smoking marijuana, only 72 (20.4%) said they did, against 281 (79.6%) who said they had not. Most of the learners (65/90.3%) who had smoked marijuana also drank (X^2 (1) = 19.799, $p < 0.001$). Many (227/75.7%) of the learners reported that they did not smoke, a further 25 (8.3%) smoked at least once a year, 15 (5%) smoked once a month, 6 (2%) smoked at least once a week, and 27 (9%) smoked every day.

Table 1:

Demographic information of participants (N = 441)

Demographics

Mean age (SD)		*Age range*	
16.72 years	(SD= 1.511 years)	13—23 yrs.	
Gender			
Male	Female		
169 (38.3%)	272 (61.7%)		
Home base			
Village/Rural area	Township/Urban area		
35 (7.9%)	392 (88.9%)		
Level of study			
Grade 12	Grade 11	Grade 12	Grade 10
118 (27.1%)	97 (22.2%)	138 (31.7%)	83 (19.0%)
Home language			
isiNdebele	23 (5.3%)	isiZulu	57 (13.0%)	Southern Sotho	52 (11.9%)
isiSwati	5 (1.1%)	Northern Sotho	38 (8.7%)	Tshivenda	3 (0.7%)
isiXhosa	11 (2.5%)	Setswana	261 (59.7%)	Xitsonga	25 (5.7%)

Demographics

Family type

Biological parents	Mother-led	Father-led	Blended	Other
208 (48.1%)	110 (25.5%)	12 (2.8%)	46 (10.6%)	56 (13.0%)

Mother's highest education

Tertiary	Matric	Grade 12	Grades 7-11	<Grade 7
126 (28.6%)	114 (25.9%)	92 (20.9%)	70 (15.9%)	6 (1.4%)

Father's highest education

Tertiary	Matric	Grade 12	Grades 7-11	<Grade 7
156 (35.4%)	89 (20.2%)	59 (13.4%)	39 (8.8%)	13 (2.9%)

Note: Variable frequencies do not always add up to 441 because of missing values.

4.2.2 Classification of the participants by identity processing styles

The scores of the learners on the ISI-III were compared to determine if males and females and different age groups, scored differently. Age groups were formed for purposes of comparison in this analysis (see Laghi et al., 2014). Table 2 below was generated using GLM MANOVA, with identity processing style as the dependent variable and gender and age as between subject factors. It presents the continuous score means of the participants for the three identity processing styles. Multivariate analysis showed that there was no main effect for age on the informational orientation scale, $F(3, 423) = 0.188$, $p = ns$, $\eta_p^2 = 0.001$, the normative orientation scale, $F(3, 423) = 524$, $p = ns$, $\eta_p^2 = 0.004$, and the diffuse/avoidant orientation scale, $F(3, 423) = 1.032$, $p = ns$, $\eta_p^2 = 0.007$. There was also no interaction effect for gender X age in the information-orientation scale, $F(3, 423) = 0.220$, $p = ns$, $\eta_p^2 = 0.002$, normative orientation scale, $F(3, 423) = 1.272$, $p = ns$, $\eta_p^2 = 0.009$ and the diffuse/avoidant-orientation scale, $F(3, 423) = 1.657$, $p = ns$, $\eta_p^2 = 0.012$. But there was a main effect for gender in the information-orientation scale, $F(1, 423) = 11.700$, $p < 0.001$, $\eta_p^2 = 0.027$ and the Normative orientation scale, $F(1, 423) = 15. 142$, $p < 0.001$, $\eta_p^2 = 0.035$, with the diffuse/avoidant-orientation scale being marginally statistically significant, $F(1, 423) = 3.377$, $p < 0.100$, $\eta_p^2 = 0.008$. In table 2 all the means of the information-orientation and normative-orientation scales for female learners are larger than those of male learners. On the other hand, the diffuse/avoidant-orientation scale mean scores of male learners are larger than those of female learners.

Table 2:

Identity processing style mean scores and their respective standard deviations according to age and gender

<16 yrs. old (n = 97)			16 yrs. old (n = 112)			17 yrs. old (n = 95)			>17 yrs. old (n = 127)		
Information											
Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
42.53	40.14	41.81	42.48	41.06	41.88	43.52	40.64	42.52	42.84	40.65	41.91
(6.792)	(6.081)	(6.648)	(6.896)	(7.099)	(6.988)	(5.560)	(6.431)	(6.003)	(6.238)	(6.734)	(6.234)
Normative											
34.44	31.86	33.67	33.39	33.02	33.23	34.81	32.55	34.02	35.22	32.53	34.06
(4.915)	(4.635)	(4.953)	(5.412)	(4.610)	(5.065)	(4.915)	(5.233)	(5.116)	(4.718)	(5.510)	(5.230)
diffuse/avoidant											
27.18	29.86	27.98	25.56	28.27	26.72	27.48	27.00	27.32	27.76	26.75	27.76
(7.201)	(6.534)	(7.083)	(6.449)	(6.239)	(6.473)	(6.808)	(5.590)	(6.385)	(6.763)	(6.186)	(6.494)

4.2.3 **Sex and identity processing style classification**

To obtain categories of identity processing styles, the identity processing style scores were transformed to z scores. The highest of the standard scores for each individual was considered the individual's characteristic identity status. Four hundred and thirty-three participants whose scores were complete could be classified. Chi-square analysis shows that the pattern of classification was dependent on the sex of the participants, X^2 (2) = 6.296, p = 0.043. Most males (43%) were classified as diffuse/avoidant-orientation (Table 3). On the other hand, there were more females (32%) who were classified as normative orientation.

Table 3:

Distribution of the participants according to the three identity processing styles

Sex	Identity Processing Styles			
	Informational	Normative	Diffuse/avoidant	Total
Male	49 (29.7%)	45 (27.3%)	71 (43.0%)	165 (100.0%)
Female	83 (31.0%)	99 (36.9%)	86 (32.1%)	268 (100.0%)
Male & Female	132 (30.5%)	144 (33.3%)	157 (36.3%)	433 (100.0%)

4.2.4 **The effect of grade levels on identity processing style**

A further inspection of the identity processing style spread of the participants was done according to the grade levels. Table 4 is a tabular presentation of the distribution of the identity processing styles according to grade level and gender. Grade level could not differentiate between the identity processing styles of the learners (X^2 = 10.050, *df.* = 6, *p* = *ns*). The chi-square analysis for gender was only marginally significant (X^2 = 12.066, *df.* = 6, *p* < 0.100). An inspection of Table 4 shows that at earlier grades (up to grade 10), the percentage of female learners is relatively high in the informational orientation category of identity processing style compared to that of male learners. After grade 10, the percentage of male learners tends to be higher than that of their female counterparts in that category. For the normative identity processing style, female percentages are generally high across the grade levels, and the opposite situation prevails for the diffuse/avoidant identity processing style.

Table 4:

Distribution of identity processing styles according to gender and grades

Grade	Informational		Normative		Diffuse/avoidant		Total	
			Identity processing style					
Grade 12	37 (31.9%)		34 (29.3%)		45 (38.8%)		116	
	Female	Male	Female	Male	Female	Male	Female	Male
	21 (30.4%)	16 (34.0%)	23 (33.3%)	11 (31.4%)	25 (36.2%)	20 (42.6%)	69	47
Grade 11	21 (22.1%)		36 (37.9%)		38 (40.0%)		95	
	Female	Male	Female	Male	Female	Male	Female	Male
	12 (20.0%)	9 (25.7%)	25 (41.7%)	11 (31.4%)	23 (38.3%)	15 (42.9%)	60	35
Grade 10	50 (36.8%)		53 (39.0%)		33 (24.3%)		136	
	Female	Male	Female	Male	Female	Male	Female	Male
	35 (40.7%)	15 (30.0%)	34 (39.5%)	19 (38.0%)	17 (19.8%)	16 (32.0%)	86	50
Grade 9	23 (28.4%)		19 (23.5%)		39 (48.1%)		81	
	Female	Male	Female	Male	Female	Male	Female	Male
	15 (30.6%)	8 (25.0%)	15 (30.6%)	4 (12.5%)	19 (38.8%)	20 (62.5%)	49	32
All grades	131 (30.6%)		142 (33.2%)		155 (36.2%)		428	
	Female	Male	Female	Male	Female	Male	Female	Male
	83 (31.4%)	48 (29.3%)	97 (36.7%)	45 (27.4%)	84 (31.8%)	71 (43.3%)	264	164

Note: Percentages are calculated by row for each gender; total percentages do not amount to 100 due to rounding error.

4.3   Main analysis

For purposes of the main analysis, three indexes were created from the SAQ items measuring the frequency and quantity of alcohol consumption. A frequency of alcohol intake index consisted of all three SAQ items measuring the frequency of consumptions. A quantity of alcohol consumed index was also composed from the three SAQ items measuring the quantity consumption. Lastly, a binging item was identified from the SAQ. The item inquires about the number of times the respondent has consumed 5 (4 for women) or more drinks in a row. In all the analyses, the drinking variable was the dependent variable and identity and gender were the independent variables. Age was not used in any of the subsequent analyses since it was clear that it did not have an effect in this particular sample. The first analysis determined if the drinking status of the learners was dependent on both the categorical identity processing styles and sex (see Table 5). A binary logistic regression showed that the predictor set of sex and identity processing style were unable to differentiate between drinking and non-drinking learners (X^2 = 5.562, df. = 2, $p = ns$).

Further analysis was conducted with the frequency and quantity indexes of alcohol consumption described earlier, including the alcohol binging item. Results of regression analyses showed that in predicting indexes of alcohol intake the multiple correlation Rs for regression did not differ significantly from zero (frequency of alcohol intake index: R = 0.062, R^2 = 0.004, $F_{(4,\ 428)}$ = 0.417, $p = ns$; quantity of alcohol consumption index: R = 0.087, R^2 = 0.008, $F_{(4,\ 428)}$ = 0.825, $p = ns$; combined frequency and quantity index: R = 0.066, R^2 = 0.004, $F_{(4,\ 428)}$ = 0.470, $p = ns$; alcohol binging: R = 0.152, R^2 = 0.023, $F_{(4,\ 219)}$ = 2.531, $p = ns$. Subsequently, neither sex nor identity processing styles were important predictors in the regression models ($p = ns$).

The final analyses determined whether identity processing styles would be related to alcohol use age and grade at which alcohol was first used. Learners were divided into alcohol use groups according to age and grade level. Learners were divided into four age groups of under 14 year olds, 14 to 15 year olds, over 15 year olds, and non-drinkers; the grade-level groups were below

grade 8, grades 8—9, and grades 10—12. The MANOVA F statistic for both variables was not statistically significant (Age groups: $F(9, 997.983) = 0.983$, p = *ns*, $\eta_p^2 = 0.006$; Grade-level groups: $F(9, 903.067) = 0.878$, p = 0.878, $\eta_p^2 = 0.004$). The results suggest that the independent variables of age and grade-level alcohol groups did not have an overall impact on identity processing style variables as a set.

Table 5:
Identity processing styles by alcohol drinking status

	Identity processing style						Total
	Informational		Normative		Diffuse/avoidant		
	Female	Male	Female	Male	Female	Male	
Non-drinker	34 (32.1%)	11 (23.4%)	42 (39.6%)	13 (27.7%)	30 (28.3%)	23 (48.9%)	
	45 (29.4%)		55 (35.9%)		53 (34.6%)		153 (100.0%)
Drinker	49 (30.2%)	38 (32.2%)	57 (35.2%)	32 (27.1%)	56 (34.6%)	48 (40.7%)	
	87 (31.1%)		89 (31.8%)		104 (37.1%)		280 (100.0%)

CHAPTER FIVE
DISCUSSION

5.1   Introduction

In the present chapter, the researcher discusses the results in terms of the original hypotheses with regard to the literature that was reviewed. The meaning of the results and their congruence or lack of it with results of other studies are explored. The discussion is based on the primary variables of identity processing style and alcohol use, as well as the role of gender in the relationships. However, secondary analysis was also conducted with other demographic variables, such as school grade level and age.

5.2   Description of the study sample

This study found that there were generally more learners who were in the diffuse/avoidant identity processing style. The results were in line with the trends observed by Bishop et al. (1997, 2005), Phillips (2008) and Le Couteur, Reid and Byrd (2001) among high school students. However, females in the present study were more identity mature than males, and the latter were mostly in the diffuse/avoidant processing orientation. This finding is partially supported by a recent meta-analytic study which found that in the earlier developmental period, males tend to be diffuse in their identity processing orientations (although the effect size was small) (Bosch & Card, 2012). Nevertheless, classification of the learners did not reflect any age influence, meaning that placement in an identity processing style was independent of the learners' age. The distribution of identity processing styles according to grade level seems to support observations based on age. This contrary to trends in the literature (Bishop et al., 2005; Waterman, 1985).

The present study did find lack of age and grade-level effects. However, when the data is broken down according to gender, the results tend to follow the logic of

common observation. Although the results are marginal, their meaning is logical, in that females surpass males in their identity development. Beyond grade 10, males begin to emerge as identity mature. In the South African context, this could mean that after grade 10, boys and girls begin to be impacted by gender ideology and stereotypes. Boys assert themselves more and girls become cautious in their self-assertion. Ideology in South Africa supports gender equality, yet the full results remain to be seen in actual practice.

5.3 The association between identity processing styles and alcohol consumption

This study explored the relationship between identity processing styles and alcohol consumption among African high school learners in Soshanguve, Pretoria. The results contradict existing findings in the literature. Studies using different conceptualizations of identity have found that the construct is related to alcohol use. Self- and social identity are able to predict rates and behaviour associated with drinking (Verkooijen, 2006). Racial identity has been used to identify patterns of alcohol use among different ethnic groups (Caldwell, Sellers, Bernat, & Zimmerman, 2004). Association between gender identity and alcohol consumption has been explored in qualitative and quantitative designs (Dumbili, 2015; Lyons & Willott, 2008; Onorati, 2012; Schnur & MacDonald, 1988). Jones (2011) used the Erikson Psychosocial Inventory Scale (EPSI), a scale of the first six stages of Erikson's developmental model, to investigate the role of substance abuse and identity development among high school learners.

Identity as defined from the identity status paradigm has featured in many of the studies relating identity to alcohol use. The less mature identity status of diffused tends to score high on measures of excessive and/or problematic alcohol consumption, and the more mature ones are less prone to the abuse of alcohol (Bishop et al., 1997, 2005; Jones et al., 1989; Jones & Hartmann, 1988; Lewis & Gouker, 2007). Identity processing styles (Berzonsky, 1990), identity concepts with

a demonstrated conceptual equivalence to the identity statuses, produces the same results in their association with alcohol consumption (Adams et al., 2005; Laghi et al., 2014). The developmentally immature processing style of diffuse/avoidant is associated with alcohol misuse. It is therefore not understandable why the results of this study do not seem to replicate the existing results in the literature. Although the present results were also found by Le Couteur et al. (2001), this is an exception. Actually, Bishop et al. (2005) attributes Le Couteur et al.'s findings to the limitation of how they measured alcohol consumption.

In this study data was analysed in different ways to establish the association between identity processing style and alcohol consumption. First, since the association between identity processing style and alcohol consumption is dependent on the sex of the respondent (Adams et al., 2005), the present study factored in sex in the analysis of identity status and alcohol consumption. The combination of sex and identity processing style could not differentiate between drinking and non-drinking learners. Also, sex and identity processing style could not predict the quality and quantity of alcohol consumption, and binge drinking. Evidence suggests that diffuse/avoidant-orientated individuals and males report comparatively more use of alcohol than informational- and normative-oriented and female respondents, respectively (Adams et al., 2005). Gender was used as a moderator before (Boyd, Hunt, Kandell, & Lucas, 2003), but in this study it failed to moderate, lacking a main and/or interaction effect, as in Berzonsky and Kuk (2005) and Laghi et al. (2013). Regarding binge drinking, available evidence suggests that low maturity identity development is associated with the phenomenon (Laghi et al., 2013). For that reason, it is not clear why identity processing style was not related to alcohol consumption in the present study.

The reason the results of this study are different could be that the learners' conception of identity is different from the one measured by the ISI (Berman et al., 2011; Dwairy, 2004). Relationships between identity measures and their correlates

that are common in the West tend not to be reproduced with some South African samples (Mashegoane, 2012). The levels of reliability achieved by the scales is also not as high as those obtained with Western samples. This may also contribute to the results.

5.4 Conclusion

In this study it was found that the identity processing styles, together with their interaction with gender, do not predict alcohol use among learners. This was the case when alcohol consumption was measured using quantity and frequency measures of alcohol use, a combined quantity and frequency measure, binge drinking, and dichotomous drinker and non-drinker items. The results are consistent when one takes into account even the secondary analyses conducted. There was no age and grade trend, where the identity processing styles would occur with more frequency as the learners become older and go to higher grade levels. Thus, it is possible that the conception of identity in this particular sample of learners is different to how learners in the West conceptualize it.

5.5 Limitations of the present study

This study has a few limitations. One of the limitations is that, since the study was conducted among the Ngaka Makeo High School learners only, the interpretation of the results can only be limited to this group and not any other. Another limitation is that the scales used, especially the ISI, was not subjected to any validation study before being used to analyse and interpret the results. Given that the population of this study is completely different to previous populations where the scales were used, it is possible that the psychometric properties would be completely different. It was also a disadvantage to use only measure of the identity processing style variables. Since the concept is difficult to assess, measuring it with one measure and not including another one to cross-validate the results is a limitation.

5.6   Recommendations

Based on the above results, the following recommendations are made:

- A replication of the study is necessary in order to strengthen and confirm the findings.

- Future studies need to establish the validity of the identity scale. It may be necessary to determine if the problem is with the whole scale or some of the items used.

- It may also be necessary to consider using the White, Wampler and Winn's (1998) version of the ISI, which was revised to a sixth grade reading level. Although the learners study in English-medium schools, they nevertheless are second language speakers. Therefore, there is a possibility that language also compounds the problem of understanding and appreciating the items of the identity scale.

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Appendix