UNIVERSITY OF
EXETER

DOCTORATE IN CLINICAL PSYCHOLOGY

Identity-Complexity, Stigmatised Identities and Psychological Well-being in Adolescents

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Target Journal: European Journal of Social Psychology

Submitted in partial fulfilment of requirements for Doctorate Degree in Clinical Psychology
University of Exeter

Word Count: Manuscript 7905 (Excluding tables)
Lit review 3763, Extended Appendices 4972

DATE OF SUBMISSION: 1st August 2013

Acknowledgements

Contents

Abstract

Research suggests that people define themselves, at least in part, in terms of their group memberships and that their psychology often depends on the state of the groups that defines the self (Haslam, Jetten, Postmes, & Haslam, 2009). Historically, the number of social groups in which people are active or with which they identity is seen as social capital and as leading to better mental health (e.g. identity-complexity, or social complexity, Linville, 1987). As such, social and clinical psychologists generally advocate and perpetuate the idea that multiple group membership and complex patterns of identification is psychologically beneficial to individuals. However, is identity-complexity straightforwardly positive for everyone?

The current study examined how issues of identity-complexity are associated with psychological well-being in a young population (16-25). We hypothesised that identity-complexity might not be straightforwardly positive when multiple identities conflict with one another or when particular groups are stigmatised. The sample was made up of 464 young persons from a variety of social, cultural, economic, and educational backgrounds in schools, colleges, and universities.

As hypothesised, participants who reported multiple identity conflicts and stigma were found to have less resilience and life satisfaction, and more depression and anxiety. Notably, findings also revealed that while it was psychologically advantageous for White participants to belong to multiple groups, the reverse was found for Black participants. Limitations and directions for future research are discussed. Results provide further insight on the relationship between multiple group membership and well-being.

Key words: self-complexity, self-concept clarity, social identity, ethnic identity, stigma, identity conflict, overlap, adolescent well-being

Background

The social identity approach (social identity theory, Tajfel & Turner, 1986; self-categorisation theory, Turner, Hogg, Oakes, Reicher, & Wetherall, 1987) argues that a person has not one, "personal self", but rather multiple selves that correspond to widening circles of group membership. For example, a typical school student might identify him/herself by their gender, race, ethnicity, school, religion, sports team and personal relationships. In this way, one's social identity is defined as an "individual's knowledge that he (or she) belongs to certain social groups together with some emotional and value significance to him (or her) of this group membership." (Tajfel, 1978, p. 63). Contrasting previous conceptualisation of the self as one-dimensional, the social identity approach depicts identity as multifaceted and complex. These multiple identities vary in their importance to the individual and in the probability that each will become salient in different contexts (Tajfel & Turner, 1986). At some times, in some contexts, a man might be most aware of being male, and yet at other times and in other contexts, the same man might be most aware of being a Catholic, being Black, or being a member of a political party.

Building on the notion of a multi-faceted sense of identity, Linville (1985) introduced the self-complexity model which posits that self-knowledge is represented in terms of multiple self-aspects and greater self-complexity involves representing the self in terms of a greater number of cognitive self-aspects and maintaining greater distinctions among self-aspects. According to Linville (1987) the number of aspects is likely to be a function in part of the number of actual roles or group memberships one has in his or her life (e.g., teacher, researcher, parent, spouse and tennis player). Accordingly, people who have self-aspects which are numerous and more greatly differentiated have high self-complexity. In contrast, those with low self-complexity have few self-aspects and these aspects are relatively undifferentiated, sharing a number overlapping characteristics. Similarly, Roccas and Brewer (2002) developed the notion of 'social identity-complexity', which refers to an individual's subjective representation of the interrelationships among his or her multiple group identities. The complexity of one's identity reflects the degree of overlap perceived to exist between groups of which a person is

simultaneously a member, with lower overlap reflecting high identity-complexity (Miller, Brewer & Arbuckle, 2009).

Identity-Complexity and Psychological Well-Being

Since the introduction of the notion of self-complexity model, a plethora of writers have investigated the process of identification with multiple social groups and its associations with well-being (Brook, Garcia and Fleming, 2008; Koch & Shepperd, 2004; Rafaeli-Mor & Steinberg, 2002). For example, Linville (1985, 1987) tendered the self-complexity buffering hypothesis that complex representation of the self serves to moderate the adverse impact of stressful events on physical and mental health outcomes. Furthermore, identity-complexity was reported as inhibiting "spill over" from negative events in one dimension of the self to the rest of the self (Linville, 1987). In a study conducted by Linville (1985) participants with high self-complexity experienced less swings in affect and self-appraisal, compared to those with low self-complexity following an experimentally manipulated failure or success. Niedenthal, Setterlund and Wherry (1992) also found support for self-complexity acting as a mediator between participants' affective reactions to evaluative feedback on their present and future goals. Similarly, Gara et al. (1993) reported a positive correlation between multiplicity of the self and lower levels of depression. This view was also echoed in Koch and Shepperd's (2004) paper which suggests a positive, moderating relationship between self-complexity and coping in response to stress and negative events. As such, social and clinical psychological publications generally advocate and perpetuate the idea that a complex pattern of identification is psychologically beneficial to individuals (e.g. Jetten, Haslam & Haslam, 2012). Therapeutic methods to increase engagement in activities, and thereby presumably increase one's self-aspects, are often part of current clinical procedures (e.g. activity scheduling for depression; Beck, Rush, Shaw & Emery, 1979). Despite these encouraging findings, other researchers have found that those having higher self-complexity cope no better, or even cope worse than those with low self-complexity (e.g. Anderson, 1992; Campbell, Chew & Scratchly, 1991) – suggesting that identity-complexity might sometimes bear a psychological cost. For example Woolfolk and colleagues (1999) associated self- complexity with longer depressive episodes. Similarly, Block (1961) posited that rather

than buffering the adverse effects of life stressors, a complex organization of self-knowledge may put a

person at increased risk for emotional suffering or physical sickness. Thus research on the link between

identity-complexity and psychological well-being has produced mixed results. Indeed, results of a meta-

analysis revealed an overall slightly negative correlation between self-complexity and well-being

(Rafaeli-Mor & Steinberg, 2002). However, a limitation of the meta-analytic procedure is that collapsing

across studies and treating them all as similar and equivalent may obscure important differences

between studies that may moderate effects – particularly as the studies included used varying measures

of self-complexity (Koch & Sheppherd, 2004). That said, the fact that there were great variations in

positive and negative effect across studies, suggests that moderators of the self-complexity $-$well-being

relationship likely exist.

Given the research interests on the topic, there appears to be a paucity of research to explain why

identity-complexity is sometimes positively associated with well-being (positive identity-complexity)

and other times negatively associated with well-being (negative identity-complexity). However, there are

suggestions in the literature that when multiple identities conflict with one another (Brook et al., 2008)

or when particular groups are stigmatised (Tajfel, 1982), social identity-complexity might not be as

straightforwardly positive. These ideas are the focus of the current study and they are expanded upon

below.

Role Conflict, Incompatible Contents and Inter-Identity Complications

Gove (1984) considered role conflicts as possible sources of negative identity-complexity.

Accordingly, it was suggested that identity-complexity lowers well-being when there are incompatible

expectations from different groups to which a person identifies with, for example being a mother and

being a professional (Ryan & David, 2003). The demand of managing conflicting expectations can

negatively impact the relationship between identity-complexity and psychological well-being. Extending

the idea of role conflict, Brook and colleagues (2008) demonstrated that an association between identity-

complexity and psychological well-being depends on both the harmony between the identities and their

importance to the person's self-concept. Results from their study showed that having highly important identities that conflicted with each other was associated with lower psychological well-being when participants had more identities compared to those who had fewer identities. Thus suggesting that the linear and additive model of multiple identities as social capital may only hold when a person has multiple high-status and harmonious identities. However, when the values and expectations between multiple important identities are incongruous, the experience of multiple identities is likely to be neither positive nor additive. For example, Sewell (2001) explored identity-complexity in African-Caribbean students who reported incompatibilities between their 'Black masculinity' identity and studious student identity. Students in that study reported that the discrepant social values between both identities meant that they were constantly hiding their academic achievement from their Black peers in order to be accepted. One can hypothesise that the salience of multiple identities of this kind will be associated with perceived disharmony and low self-concept clarity thus resulting in psychological costs. According to Campbell (1990) self-concept clarity is the extent to which self-beliefs are clear, internally consistent and stable. Campbell conceptualised self-concept as subdivided into two components namely the knowledge component ("who/what am I?") - this component includes beliefs about one's specific attributes such as physical attributes as well as roles, group membership, values and personal goals. The second component is the evaluative component ("how do I feel about myself?") which includes a global self evaluation that results as a product of viewing the self as an attitude object (Campbell et al., 1996). Research on self-concept clarity has found it inversely related to indices of psychological distress (e.g., rumination, anxiety, negative affect) and is positively related to subjective well-being (Campbell et al., 1996; Slotter, Gardner, & Finkell, 2010). Furthermore, self-concept clarity has been found to be a mediator in the relation between stress and psychological well-being (Ritchie, Sedikides, Wildschut, Arndt, & Gidron, 2010). Given the above arguments, it is possible that having multiple conflicting identities weaken one's sense of self-concept clarity and weakened self-concept clarity in turn, impairs subjective well-being (Campbell, Assanand & Di Paula, 2003; De Cremer & Sedikides, 2005; Slotter et al., 2010). Accordingly, it is the current study's aim to test if the relationship between identity-complexity and well-being is mediated by self-concept clarity.

Stigma and Intra-Identity Complications.

   In the previous section, conflicts between identities and weakened self-concept clarity were discussed as possible sources of negative identity-complexity. In the example of being a mother and being a professional, one could hypothesise negative complexity due to conflicting demands between the identities. However, the individual identities of motherhood and professionalism are socially valued identities which might uphold the buffering hypothesis on their own but only giving rise to negative complexity when combined due to discrepant expectations. The current study also considers an alternative: that even single identities might be problematic particularly with low status and stigmatised groups. According to the social identity approach (Tajfel's, 1978; Turner, 1991; Cameron, 2004) social identification is multidimensional and includes three distinct factors: a cognitive prominence or awareness of group membership (Cognitive centrality*)*, emotional evaluation of that group membership (in-group affect) and the perception of bonds and similarity with other group members (in-group ties). It is generally assumed that these factors are collapsible into a single measure of identification in research as they typically align (Cameron, 2004). This is justified within the notion that people categorise themselves as members of groups that are central to how they see themselves, that they feel good about belonging to and that they share a sense of similarity to other group members (Turner, Oakes, Haslam, &McGarty, 1994). However it can be argued that this alignment is exclusive to socially valued group membership. For members of low-status or stigmatised groups, one would expect that the location and perceived appraisal of their group within the wider social context will have an impact on this process of alignment. For example while group membership such as those based on race or disability may be highly prominent for members of such stigmatised groups and therefore cognitively central, individuals may neither experience positive affect by being members of the group nor have a desire to affiliate with other members of that group. For example, Black people are often victims of prejudice and discrimination as a result of their race and ethnicity and research shows that this can affect self-esteem and well-being (McCoy & Major, 2003). Therefore within such stigmatised groups, conflict and a lack of clarity may be more prevalent than in high-status/ non-stigmatised groups thus having negative consequence on well-

being. The present study will explore stigmatised identities as a source of negative identity-complexity as well as its associations with psychological well-being.

The Present Study

   The current study aims to explore how issues of identity-complexity are associated with psychological well-being. Research in this area has to a large extent focused on an adult population and we were interested in examining this process in the context of a young population. Adolescence is a period of multiple transitions, changes and identity formation which can make this period of life more or less stressful for the individual. It can also highlight issues of identity compatibility thus having important consequences for self-concept clarity and psychological well-being. In addition, we were also interested in examining this process in the context of stigmatised groups. Literature shows that being a member of a minority group can have a number of psychological costs. In particular, perceiving that one's minority group is victimised by prejudice and discrimination can harm self esteem and psychological well-being (McCoy & Major, 2003). The current study considers the possibility that having a salient but devalued social identity could increase the likelihood of dissonance with other dimensions of one's self-concept. We are also interested in ascertaining the mediating role of self-concept clarity in the relationship that may exist between stigma and well-being. The sample therefore includes young persons (age (16-25) from a variety of social and cultural backgrounds in schools, colleges and universities and not mainly middle-class university students as has been precedent in previous researches (e.g. Brook et al, 2008; Linville, 1987; Woolfolk et al., 1999). Sampling participants from this varied group will aid the research in ascertaining the impact of conflicting and stigmatised identities on psychological well-being among young persons.

Aim and Research Questions

This study will extend previous research by considering the inter-relationship between identity conflict, stigmatised identities and self concept clarity in the relationship between multiple group membership

and well-being (i.e. depression, anxiety, life satisfaction and resilience). The research will be examining the following questions: (1) How is identity quantity related to well-being? Is belonging to more groups associated with an improved well-being? (2) What is the role of perceived incompatibility and self-concept clarity in determining this relationship? (3)Do ethnicity and stigma play a role in the relationship between identity-complexity and well-being?

Hypotheses

In light of the literature discussed, the present study will test the proposed model (Figure 1). The model is not tested as a whole but in segments using a series of regressions via the following hypotheses: (H1) Higher number of group membership (Identity quantity) will be associated with better outcomes on well-being. (H2)Individuals with salient stigmatised identities will report more identity conflict and stigma will be positively correlated with (a) anxiety, (b) depression and negatively correlated with (c) resilience and (d) life satisfaction. (H3) Conflict among identities will be positively correlated with (a) anxiety, (b) depression and negatively correlated with (c) resilience and (d) life satisfaction. (H4) Self-concept clarity will mediate the relationship between psychological well-being and (a) stigma and (b) conflict. (H5) Self-complexity hypothesis will not hold for members of stigmatised groups. Having higher number of group membership (Identity quantity) will not be associated with better outcomes on well-being for Black participants.
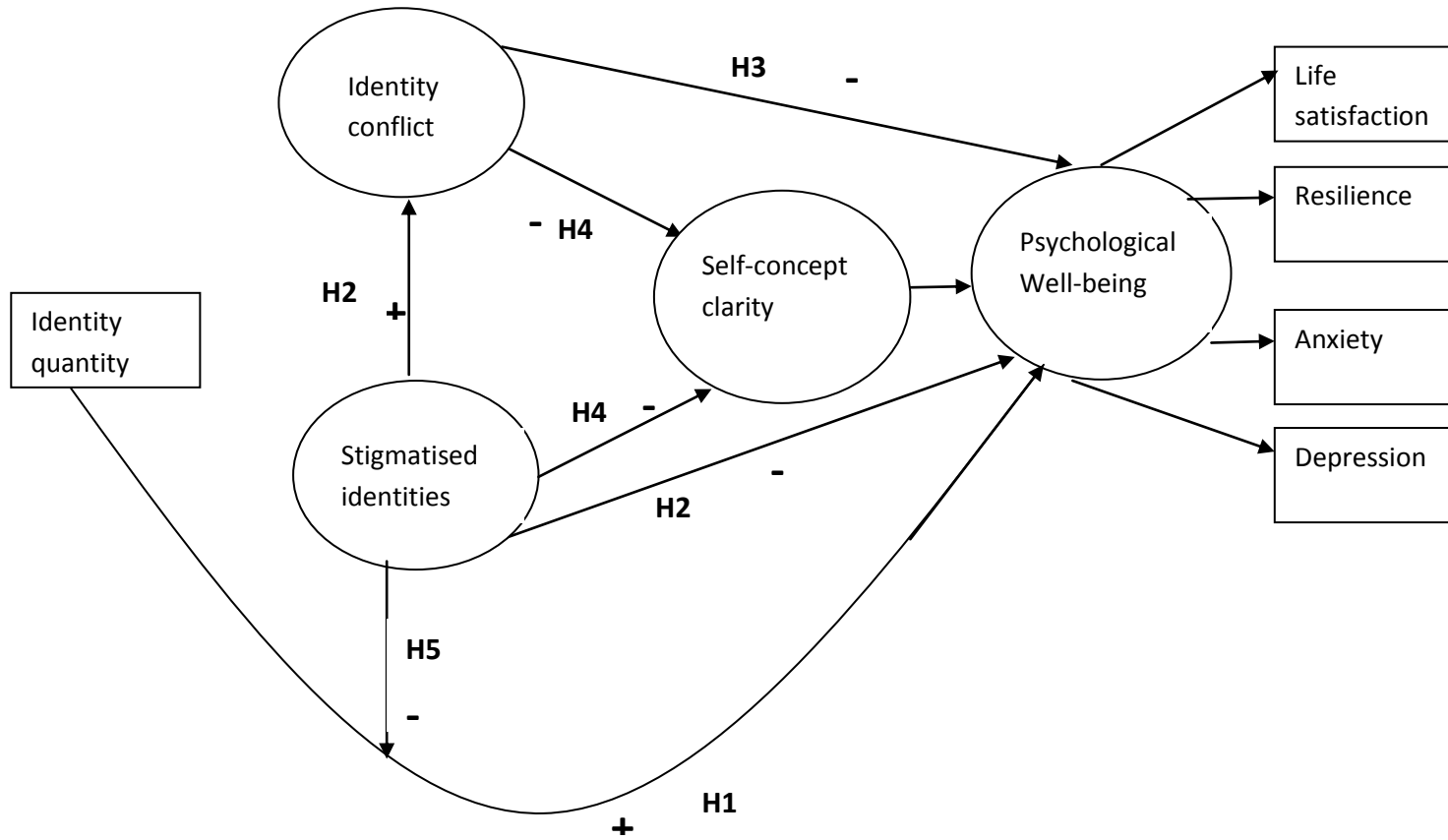
Figure1: The proposed model with hypothesised relationships.

Method

Participants

The sample consisted of 464 young persons (147 male and 317 female). Participants' age ranged from 16 to 25 years (Mean=18.31, SD= 2.13). Participants were recruited mainly from youth programmes, schools, sixth forms colleges, and Universities in Bristol, Exeter, Gloucester, London and Wolverhampton. In response to religious beliefs, the majority replied *none* (59%, n=275) followed by *Church of England* (15.5%, n=72) and *other Christian* (14.2%, n=66). The sample included 12 different ethnicities, but the vast majority of participants identified themselves as *White* (78.9%, *n*=366). Demographic information is detailed in Table 1. "Black" in this study refers to people who identified as one of the following: Black African, Black African-Caribbean, and Black British. "Mixed" refers to people who identified as having parents from different racial groups e.g. White and Asian. They are not included in the Black sample. Please see research questionnaire in Appendix 4; section E for more information on how demographic data was collected.

Table 1

Demographic Details

Variables		Frequency	Percentage
Gender	Female	317	68.3
	Male	147	31.7
Ethnicity	White	366	78.9
	Black	29	6.3
	Asian	16	3.4
	Mixed	26	5.6
	Chinese	18	3.9
	Arab and other	9	1.9
Religion	None	275	59.3
	Church of England	72	15.5
	Roman Catholic	24	5.2
	Other Christian	66	14.2
	Islam	13	2.8
	Buddhism	3	.6
	Sikh	1	.2
	Jewish	4	.9
	Hindu	1	.2
	Pagan	1	.2

	Other	4	.9
Age	16 years	89	19.2
	17 years	101	21.8
	18 years	116	25
	19 years	58	12.5
	20 years	34	7.3
	21 years	25	5.4
	22 years	12	2.6
	23 years	9	1.9
	24 years	10	2.2
	25 years	10	2.2

Measures

The questionnaire pack contained measures which have been previously validated in the literature and used with the age group in this study (Appendix 4).

Identity measures. Participants were asked to think about the groups they belonged to (i.e. social identities) after which they were asked to indicate on a seven-point Likert scale their perception of how many groups they belonged to e.g. "not many groups (1)" to "lots of groups (7)" (i.e. complexity). They were then required to list four group memberships that they feel most defined them after which they responded on a seven-point Likert scale (1=strongly disagree, 7=strongly agree) to the following questionnaires about each identity: *Three- Dimensional Strength of Group Identification Scale* (Cameron, 2004). A 12-item scale to measure the three factors of identification (*centrality, affect, ties*).It includes statements such as "Being a member of this group is an important part of my self-image "(scale reliability α=.88). *Compatibility* was measured by two items "I feel that this identity is compatible with other parts of me" and "I feel that this identity is quite different from other parts of me (reversed)" (scale reliability α=.64). *Stigma* was measured using four items including "People look down on me because I belong to this group". A Cronbach's alpha value of .74 was obtained for this measure

After rating each of their chosen identities on these dimensions, participants then answered some more general questions also on a 7-point Likert scale. *Self-concept clarity* was measured using the *Self-Concept Clarity Scale* (SCCS; Campbell et al., 1996). The SCCS consists of 12 statements (e.g., "In general, I

have a clear sense of who I am and what I am."). Scale reliability α=.86. *Overlap* was measured by four items such as "Many of my friends belong to all four groups". (Alpha reliability coefficient = .54). This is a measure of an individual's perception of the similarities between ingroup members and the prototypical attributes of the groups they are simultaneously a member (Brewer & Pierce, 2005).

Well-being measures. *Anxiety* and *depression* were assessed using the *Hospital Anxiety and Depression Scale (HADS;* Zigmond and Snaith, 1983) which comprised of 14 questions. Participants responded on a four-point verbal rating scale, to measure anxiety (7 items), depression (7 items) or emotional distress (all 14 items). Scale reliability α=.84. *Life satisfaction* was measured using the *Satisfaction with Life Scale* (SWLS; Diener, Emmons, Larsen & Griffin, 1985). A short 5-item instrument designed to measure global cognitive judgments of satisfaction with one's life. It contains statements such as "I am satisfied with life". A Cronbach's alpha value of .84 was obtained for this measure. *Resilience* was measured using the *Resilience scale (RS* -14-item version; Wagnild & Young, 1993). This scale has two factors, personal competence and acceptance of self and life, which measure the construct of resilience. Although originally tested with adult subjects, numerous studies have validated that the scale has worked well with samples of all ages and ethnic group. Participants answered on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) to statements such as "My self-belief get me through hard times". A Cronbach's alpha value of .81 was obtained for this measure.

Procedure

The research questionnaires were made available online and the researcher approached head teachers, programme directors, and tutors at a number of colleges and youth programmes to advertise the study. Posters and flyers were also advertised at canteens and social networking sites (e.g. Facebook) as well as by email to personal and professional contacts. The advert contained a message of invitation as well as a link to the study. For ease of data collection, paper copies of the questionnaire were utilised at some colleges. On the first page of the website/questionnaire, participants were provided with information about the purpose of the study and what they would be required to do were they to decide to take part. They were also provided details of the research team, ethics committee (Appendix 3) and of

the raffle draw. Participants gave their consent to participate and they were reminded of their rights to withdraw without any penalties. On the consequent pages, participants were given the identity and well-being questionnaires after which demographic information was collected. Following completion, participants were presented with debrief information about wider aims of the study and contact details were they to find themselves distressed as a result of completing the study.

Results

Data Analysis.

The data was analysed using SPSS for Windows Version 20. Preliminary analyses were performed to confirm no violation of the assumptions of normality, linearity and homoscedasticity. Data analysis was conducted in two steps. Firstly, descriptive statistics (Means, standard deviations, and correlations) were generated for the variables to provide a general overview of participant responses and variable relationships. Next, guided by the preliminary results as well as by the study hypotheses, inferential statistics (regression, ANOVA, mediation and moderation analyses) were conducted to determine in greater detail any statistically significant associations between the identity and well-being variables.

Descriptive findings. Participants in general perceived themselves as belonging to an average number of groups M= 4.19 (on a 7 point scale where 1= not many groups, 4=average and 7= Lots of groups). They generally reported favourable life satisfaction M=4.7, SD=1.29 and resilience M=5.31, SD=0.87. Depression and anxiety were in the "normal" range (M=0.51, SD=0.42 and M=1.17, SD=0.58 respectively on a 4-point scale). In addition, participants perceived moderate degrees of stigma M=3.14 SD=0.74, overlap M=4.10, SD=1.18 and compatibility M=4.78, SD=0.81 (see Table 2). A demographic breakdown of the sample with respect to the research variables is displayed in Table 2A. Due to low numbers, it was not possible to perform inferential analysis on the results at a subgroup level for the Asian, Chinese, Mixed Race and Arabic participants. They have therefore being collapsed into "other" for the purpose of presenting the results. No further analysis was conducted with the "others" group due to this heterogeneity. Furthermore, the specific effects of other demographic variables such as religion, gender and social class were not assessed as no predictions were made about their effect. Although such variables are important for identity, there was not enough power to predict the effect that may exist. In addition, the literature reviewed emanated mostly from research addressing issues related to Black and White identity. Black and White identity therefore became the focus of the results analysed.

Table 2:

Descriptive Statistics and Correlations among the Variables.

		M	SD	2	3	4	5	6	7	8	9
1	Identity quantity	4.19	1.57	-.06	.09	.14**	.20**	-.10*	-.14**	-.10*	.17**
2	Overlap	4.10	1.18	1	.40**	.201**	.26**	-.31**	-.24**	-.29**	.29**
3	Self-concept Clarity	3.75	1.13		1	.41**	.42**	-.56**	-.39**	-.21**	.30**
4	Life Satisfaction	4.71	1.29			1	.57**	-.50**	-.52**	-.36**	.26**
5	Resilience	5.31	0.87				1	-.48**	-.55**	-.31**	.26**
6	Anxiety†	1.17	0.58					1	.54**	.18**	-.17**
7	Depression†	0.51	0.42						1	.27**	-.27**
8	Stigma	3.14	0.74							1	-.30**
9	Compatibility	4.78	0.81								1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
N= 464
† Anxiety and depression were measured on a 4 point scale (0-3); all other measures were taken on 7-point scales

Table 2a:

Demographic Breakdown of Results.

		White N=366	Black N=29	Other N=69
Gender	Male (%)	33	34.5	15
	Female (%)	66	65.5	54
SES	School (%)	17.5	0	17.4
	College (%)	30.3	20.7	21.7
	University (%)	52.2	79.3	60.9
Age	Mean	18.06	19.38	19.18
	SD	1.96	2.62	2.40
Identity quantity	Mean	4.19	3.97	4.29
	SD	1.57	1.64	1.74
Overlap	Mean	4.07	4.46	4.10
	SD	1.17	1.32	1.15
Self-concept Clarity	Mean	3.70	4.26	3.78
	SD	1.12	1.16	1.14
Self-concept Clarity	Mean	4.78	4.18	4.57
	SD	1.25	1.12	1.46
Resilience	Mean	5.30	5.56	5.28
	SD	.85	.70	1.01
Anxiety	Mean	1.17	1.04	1.20
	SD	.58	.58	.59
Depression	Mean	.49	.54	.61
	SD	.41	.37	.50
Stigma	Mean	3.13	3.33	3.12
	SD	.73	.88	.72
Compatibility	Mean	4.78	4.76	4.78
	SD	.81	.87	.76

Hypothesis 1: *Higher number of group membership (identity quantity) will be associated with better outcomes on well-being*

Considering the scope of the study, associations of primary interest centred on those involving identity quantity and the well-being measures. Identity quantity was also found to be significantly and negatively correlated with depression (*r*= - .14, *p*=.002) and anxiety (*r*=-.10, *p*=.029) but positively correlated with resilience (*r*= .20, *p*=.001) and life satisfaction (*r*= .14, *p*=.002). Participants with higher group membership reported lower levels of depression and anxiety, and higher levels of resilience and life-satisfaction – thus supporting hypothesis 1.

Hypothesis 2*: Individuals with salient stigmatised identities will report less psychological well-being on anxiety (2a), depression (2b), resilience (2c), and life satisfaction (2d)*

Significant correlations were also found between stigma and the well-being variables. Stigma was positively correlated with anxiety (*r*=.18, *p*=.001) and depression (*r*=.27, *p*=.001). Stigma was negatively correlated with life satisfaction (*r*=-.36, *p*=.001) and resilience (*r*=-.28, *p*=.001). Individuals with higher stigmatised identities reported more anxiety and more depression, but lower satisfaction and lower resilience – thus supporting hypothesis 2.

Hypothesis 3*: Conflict among identities will correlate with less psychological well-being on anxiety (3a), depression (3b), resilience (3c), and life satisfaction (3d)*

Identity compatibility was positively correlated with life satisfaction (*r*= .26 *p*=.001) and resilience (*r*=-.22, *p*=.001). However, Identity compatibility was negatively correlated with anxiety (*r*=-.17, *p*= 0.001) and depression (*r*=-.27, *p*= 0.001). Therefore, higher experience of identity compatibility (low identity conflict) was associated with higher feelings of life satisfaction and higher resilience and lower levels of anxiety and depression – thus supporting hypothesis 3.

Hypothesis 4: *Self-concept clarity will mediate the relationship between stigma and psychological well-being (4a), conflict and psychological well-being (4b)*

SPSS PROCESS procedure developed by Hayes (2012) was used to estimate direct and indirect effects of stigma and incompatibility on the well-being variables with self-concept clarity as a mediating variable. In these analyses, mediation is significant if the 95% confidence intervals for the indirect effect do not include'0' (see Preacher & Hayes, 2008 for further discussion). The indirect effects of stigma and compatibility on well-being via self-concept clarity are shown in Table 3. The more compatibility there was among the groups to which an individual was simultaneously a member, the higher the self-concept clarity and the better their sense of psychological well-being as seen in positive relationship with life satisfaction β= .175, 95% CI[.118, .255] and resilience β=.120, 95% CI[.080, .173] and a negative relationship with anxiety β = -.122, 95% CI[-.172,-.084] and depression β =-.053, 95% CI [-.076,-.035]. The more stigma participants experienced the less self-concept clarity they had and the worse their sense of well-being as seen in a negative relationship with life satisfaction β= -.129, 95% CI [-.206,-.073] and resilience β = -.092, 95% CI [-.141,-.051] and a positive relationship with anxiety β =.092, 95% CI [.057, .142] and depression β =.042, 95% CI [.023, .064]. All the effect size measures have confidence intervals that do not include zero suggesting that there is a genuine indirect effect from which we can infer that there is mediation (Preacher & Hayes, 2008). Thus it would appear that stigma and identity conflict are negatively associated with well-being through a reduction in self-concept clarity – supporting hypothesis 4.

Table 3:

Indirect Effect of Stigma and Compatibility on Well-Being via Self-Concept Clarity (mediator)

Initial Variable	Outcome Variable	Effect	Boot SE	Boot CI (95%) low	Boot CI (95%) high
Stigma	Life satisfaction	-.13	.0326	-.2059	-.0725
	Resilience	-.09	.0235	-.1414	-.0508
	Anxiety	.09	.0208	.0564	.1418
	Depression	.04	.0106	.0228	.0635
Compatibility	Life satisfaction	.17	.0343	.1183	.2547
	Resilience	.12	.0232	.0800	.1735
	Anxiety	-.12	.0215	-.1718	-.0835
	Depression	-.05	.0103	-.0755	-.0346

Table 4:

Correlations when Data was Split by Ethnicity

		M	SD	Overlap	SCC	LS	Res	Anx	Dep	Comp	Stigma
White (N=363)	ID quant	4.19	1.57	-.09	.105*	.16**	.19**	-.11*	-.12*	.14**	-.05
Black (N=29)	ID quant	3.97	1.63	-.40*	-.44*	-.46*	.02	.14	-.23	.10	.06

**. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed). ID quant = Identity quantity, M= Mean, SD = Standard deviation, SCC = Self-concept clarity, LS =Life satisfaction, Res = Resilience, Anx =Anxiety, Dep = Depression, Comp = Compatibility.

Hypothesis 5*: Self-complexity hypothesis will not hold for members of stigmatised groups*

Next, the data was split by ethnicity and correlations between identity quantity and well-being variables were calculated for comparison (see Table 4). It was found that the self-complexity hypothesis was only valid for the White participants and higher identity quantity was correlated with higher self-concept clarity(r=.11, p=.046), more resilience (r=.19, p=.001), more life satisfaction(r=.16, p=.002) less anxiety (r=-.11, p=.042) and less depression (r=-.12, p=.025). However for the Black participants the self-complexity hypothesis did not hold. It was found that identity quantity was negatively correlated with self-concept clarity (clarity r= -.44, p=.016), life satisfaction (r= -.46, p=.013) and overlap (r = -.40, p=.033). Therefore the more groups they belonged to, the lower their sense of self-concept clarity, life satisfaction and overlap among their identities.

An analysis of variance (ANOVA) test revealed no significant difference in mean scores on identity quantity, anxiety, depression and resilience between Black and White participants in this sample. However there were significant differences in mean scores on self-concept clarity ($F_{(1,392)}$ = 6.67, p=.010) and life satisfaction ($F_{(1,393)}$ =6.29, p=.013) with the Black participants reporting higher self-concept clarity (White Mean=3.70, SD =1.12; Black Mean = 4.26, SD =1.16) but less life satisfaction (White Mean = 4.78, SD 1.26; Black Mean = 4.18, SD = 1.12) when compared to their White counterparts. It appears that there were different processes affecting life satisfaction and self-concept clarity for White participants when compared to Black Participants.

On the basis of the correlations reported above as well as the study hypothesis, moderation analyses were conducted to ascertain the role of ethnicity in the relationship between identity quantity and life satisfaction. Prior to the analysis identity quantity was mean centred to avoid multicollinearity. A new variable with just White and Black participants was coded (0=White, 1= Black) and an interaction variable identity quantity x ethnicity interaction was computed by multiplying both variables. Regression analyses were conducted in which the main effect terms was entered at the first step followed by the interaction term at Step 2. At Step 1, entry of the main effects terms contributed significantly to the

variance explained R^2 =0.30, $F_{(2,391)}$ = 5.99, p = .003. In the second step of the regression analysis, the interaction term between ethnicity and identity quantity explained a significant increase in variance in life satisfaction, change in R^2 = .051, change in $F_{(1,390)}$ = 8.93, p = .003. As expected, the interaction term was significant (β=-0.155 t $_{(390)}$ = -2.99, p=0.003). Thus ethnicity was a significant moderator in the relationship between identity quantity and life satisfaction. This is further illustrated in Figure 2 and 3. The 95% confidence interval (see Table 5) does not include zero so the beta value in the population is likely to be more than zero so there is a moderation effect in the population (Preacher & Hayes, 2008). This relationship is depicted graphically in Figure 4. Test of simple slope showed β=-.312, t=-2.204, p=.028 for Black participants and β=.129, t=3.135, p=.002 for White participants. The relationship is significant in both Black and White participants although the beta coefficients are in opposite directions. Thus suggesting that life-satisfaction increases with identity quantity for White participants but the reverse is observed in Black participants where life-satisfaction decreases as identity quantity increased.

Table 5:

Linear Model of Predictors of Life Satisfaction

	Coeff.	SE	*t*	*p*
Constant	4.73 [4.61,4.85]	.062	76.23	p=.001
Ethnicity	-.67 [-1.06, -.27]	.202	-3.30	p=.001
Identity Quantity Centred	.10 [.01, .18]	.043	2.24	p=.026
Interaction	-.44 [-.68, -.21]	.120	-3.68	p=.001

95% confidence intervals reported in parentheses. Confidence intervals and standard errors based on 1000 bootstrap samples.
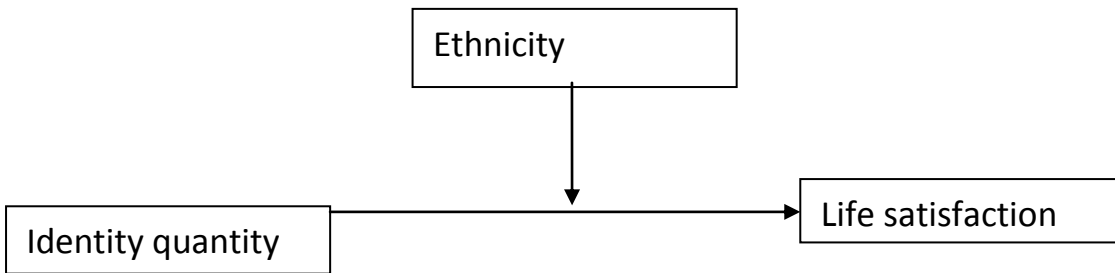
Figure 2: Ethnicity as moderator in the relationship between identity quantity and life satisfaction
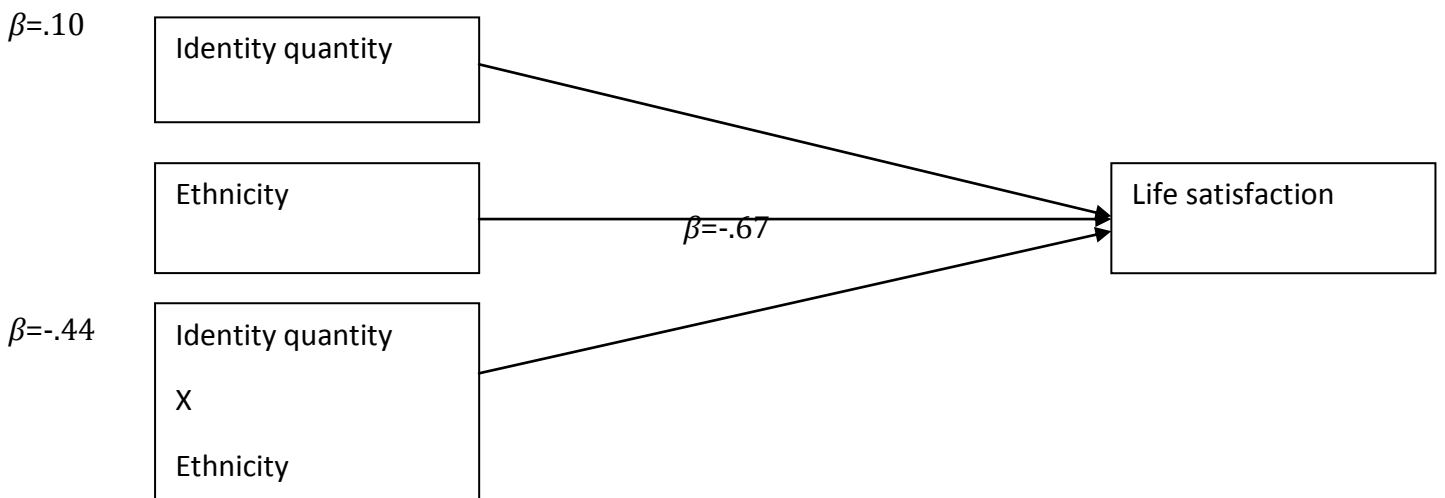
(conceptual diagram)

Figure 3: Ethnicity as moderator in the relationship between identity quantity and life satisfaction (statistical diagram)
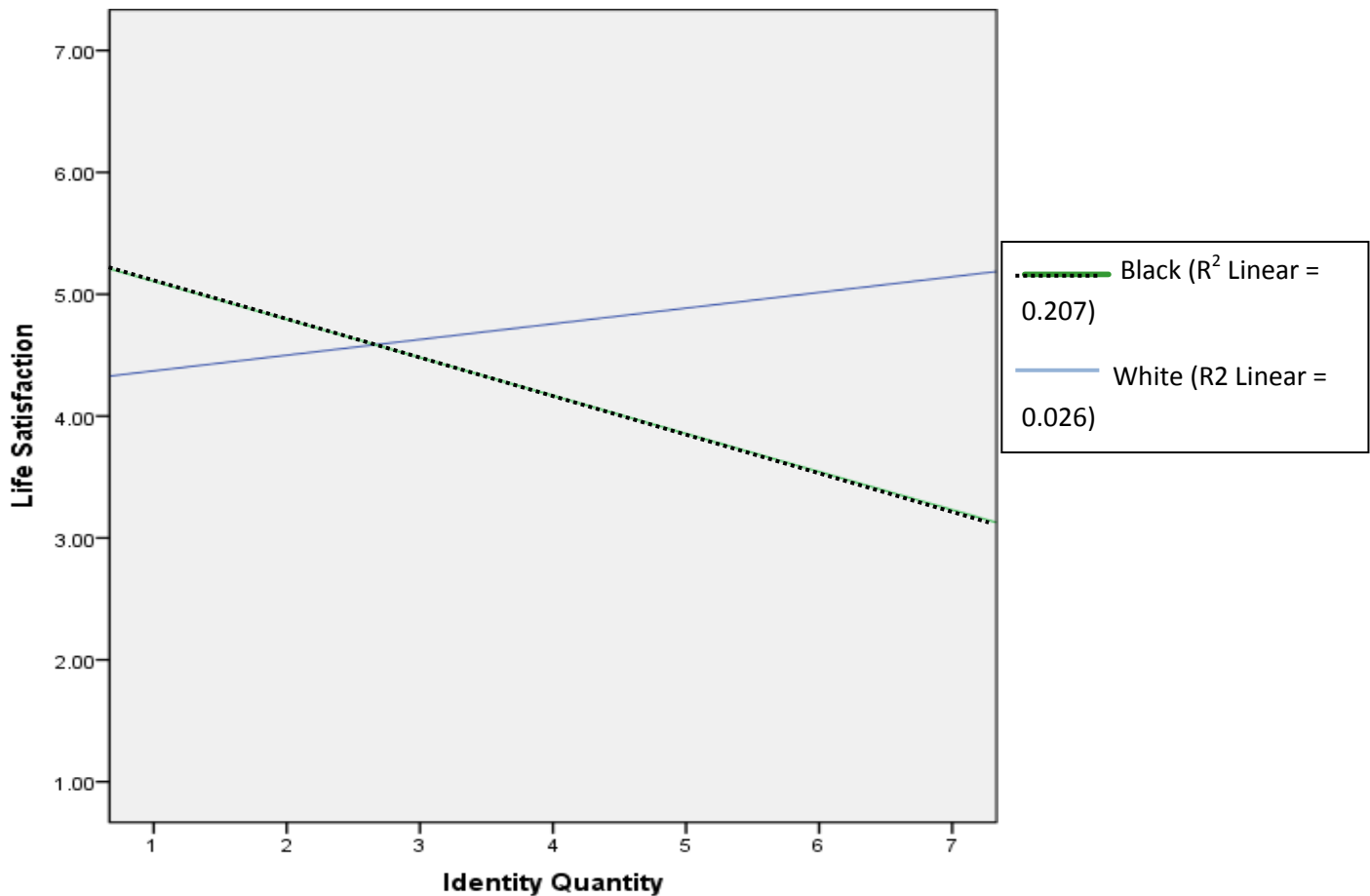
Figure 4: Opposite relationships between identity quantity and life sastisfaction for Black and White participants

The analysis was repeated again with self-concept clarity as the dependent variable. Ethnicity was also found to be a moderator in the relationship between identity quantity and self-concept clarity. At Step 1, entry of the main effects terms contributed significantly to the variance explained R^2 =.21, $F_{(2,391)}$ = 4.10, p=.017. Inspection of the regression coefficients at this stage revealed that this was due to a main effect of ethnicity alone (β=.13 t $_{(392)}$ = 2.62, p=.009) such that Black participants were higher in SCC than White participants. The main effect of identity quantity was not significant (β=.062 t $_{(391)}$ = 1.24, p=.214). The inclusion of the interaction at step2 resulted in a significant increase in the R^2 beyond the independent effects of identity quantity and ethnicity R^2 =.41, $f_{(3,390)}$ = 5.59, p=.001. As expected, the interaction term was significant (β=-.151 t $_{(391)}$ = -2.90, p=.004). Thus ethnicity was a significant moderator in the relationship between identity quantity and self concept clarity. The linear model with the 95%

confidence intervals is shown in Table 6. Test of simple slope showed β=-.313, t=-2.437, p=.015 for Black

participants and β=.075, t=2.012, p=.045 for White participants. The relationship is significant in both

Black and White participants although the beta coefficients are in opposite directions. Thus suggesting

that self-concept clarity increases with identity quantity for White participants but the reverse is

observed in Black participants where it decreases as identity quantity increased (see graph in Figure 5).

Table 6:

Linear model of predictors of self concept clarity

	Coeff.	SE	*t*	*p*
Constant	3.73 [3.62,3.84]	0.564	66.22	p=.001
Ethnicity	.50 [.08, .91]	.212	2.33	p=.020
Identity Quantity Centred	.05 [-.03, .18	.0364	1.27	p=.203
Interaction	-.38 [-.62, -.16]	.118	-3.28	p=.001

95% confidence intervals reported in parentheses. Confidence intervals and standard errors based on 1000 bootstrap samples.
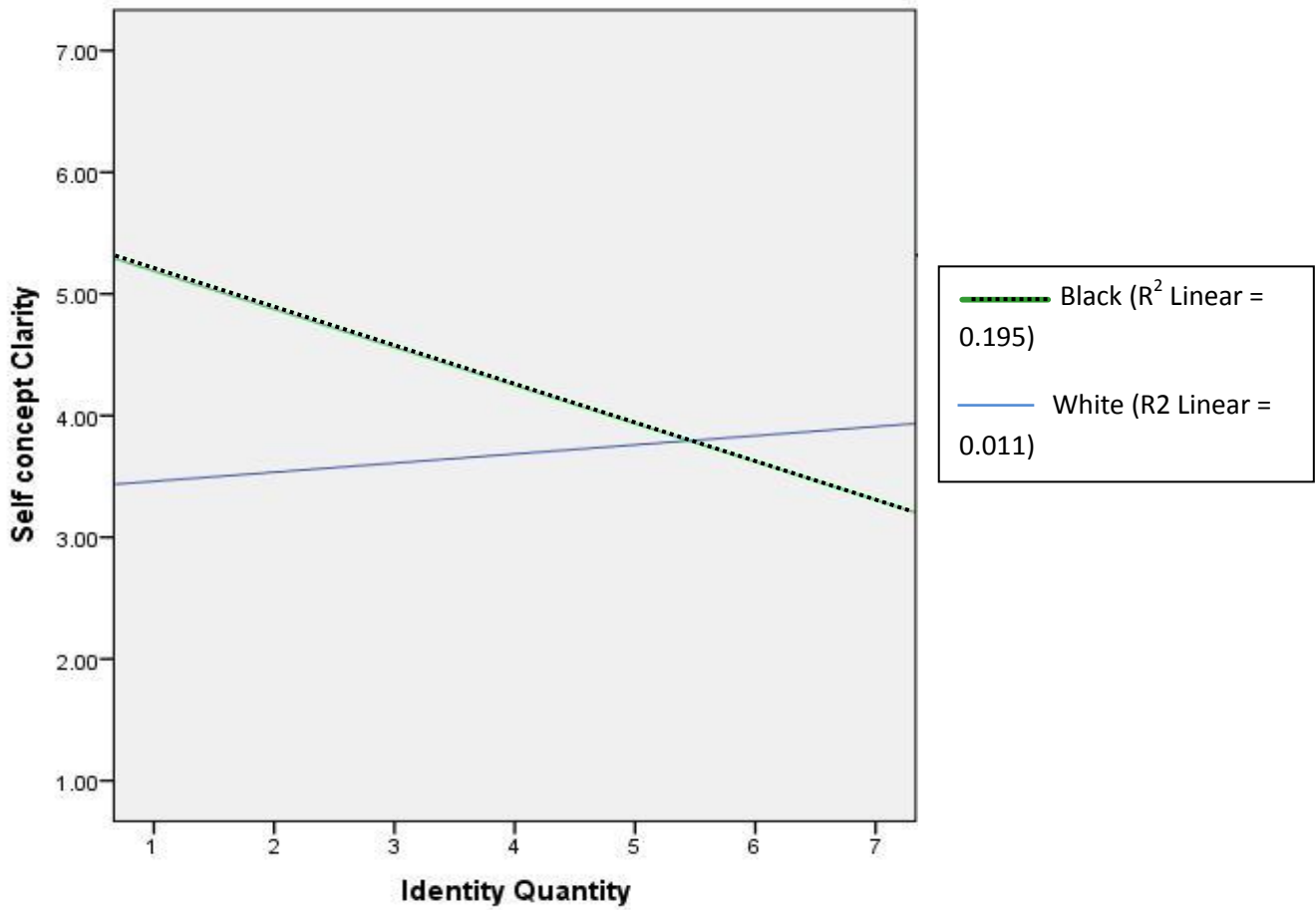
Figure 5: Opposite relationships between identity quantity and self concept clarity for Black and White participants

Mediation analyses. To further ascertain the role of ethnicity, the data was split by ethnicity and further mediation analysis was conducted to determine the nature of the relationship between identity quantity and well-being between White and Black participants. SPSS PROCESS Hayes (2012) was used to estimate direct and indirect effects of identity quantity on the four well-being variables (life satisfaction, resilience, anxiety and depression) with self-concept clarity and overlap as mediating variables. For white participants, there was a significant positive association between identity quantity and self-concept clarity (β=.075 t$_{(365)}$ = 2.01, p=.046). The higher the White participants rated their identity quantity, the higher their sense of self-concept clarity. Bootstrap estimate of the indirect effect at 95% confidence interval indicates that self-concept clarity mediated the effect of higher identity quantity on life satisfaction β=.037, [.0023, .0799], resilience β=.023, [.0010,.0468], anxiety β= -.39, [-.0795, -.0024] and depression β=-.012 [-.0257, -.0008] in White participants. All the effect size measures have confidence intervals that do not include zero suggesting that there is a genuine indirect effect from which we can infer that there is mediation (Preacher & Hayes, 2008). No mediating effect of overlap was found. Hence in White participants, high identity quantity was associated with high self concept clarity which was also associated with better psychological well-being. (See Table 7 & Figure 6.).

Figure 6: Relationship between identity quantity and well-being (life satisfaction & resilience) as mediated by self-concept clarity in White participants (* = statistically significant)
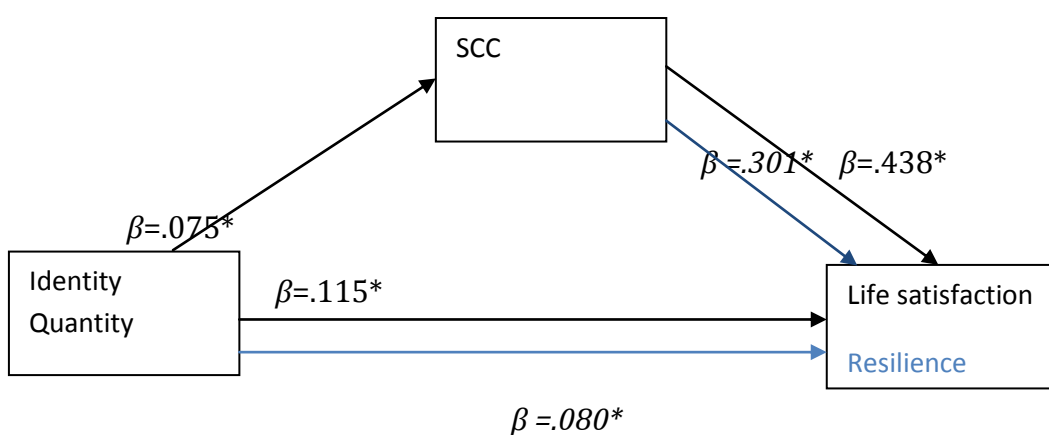
Table 7:

Indirect effect of identity quantity on well-being via self-concept clarity (mediator) in White participants

IV	DV	Effect	Boot SE	Boot CI (95%) low	Boot CI (95%) high
Identity quantity	Life satisfaction	.0368	.0190	.0023	.0799
	Resilience	.0226	.0117	.0010	.0468
	Anxiety	-.0389	.0198	-.0795	-.0024
	Depression	-.0116	.0062	-.0257	-.0008

Note 1000 Bootstrap samples

In Black Participants, a negative association was found between identity quantity and self-concept clarity (β= -.442 t $_{(27)}$ = -2.558, *p*=.016), overlap (β= -.397 t $_{(27)}$ = -2.249, *p*=.033), and life satisfaction (β= -.400 t $_{(27)}$ = -2.070, *p*=.049) (Figure 7). No association was found with the other well-being measures. The higher the participants rated their identity quantity, the lower their life satisfaction, the lower their sense of self-concept clarity and the less overlap they perceived among the groups of which they were simultaneously a member. However, no mediation effect of self-concept clarity (β=.122 t $_{(28)}$ = .652, *p*=.520) nor overlap (β=.232 t $_{(28)}$ = 1.497, *p*=.146) was found in the relationship between identity quantity and life satisfaction. In both ethnicities, identity quantity was a significant predictor of life satisfaction although in opposing directions. However in White participants this relationship was mediated by self-concept clarity. There was no association between self-concept clarity and life satisfaction in Black participants.

Figure 7: Negative association between identity quantity, overlap, self-concept clarity and life satisfaction in Black participants. (*=Significant)
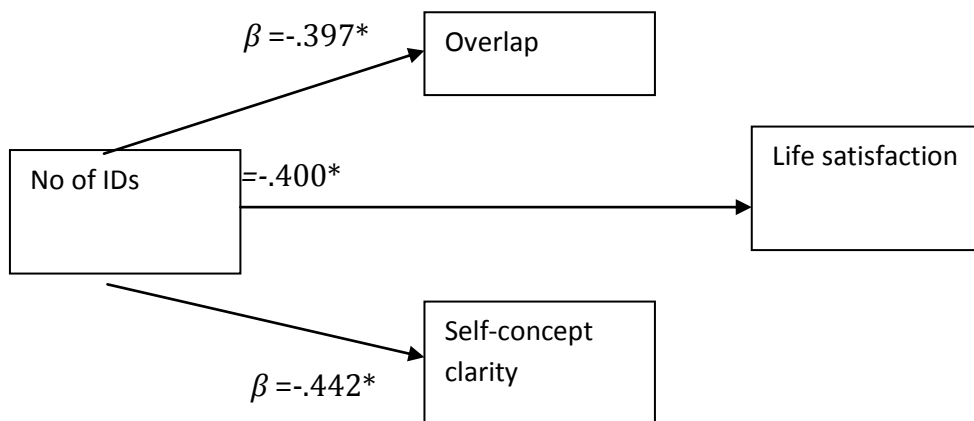
Mediated moderation. The pattern in the result whereby there was an indirect effect of identity quantity on well-being via self-concept clarity in White but not Black participants suggests a conditional indirect effect (Preacher, Rucker & Hayes, 2007) or a mediated moderation (Muller, Judd & Yzerbyt, 2005). This mediated moderated hypothesis was tested following the steps and equations utilised by Bucy & Tao (2007, see Appendix 5 for detailed calculations).

First, a statistically significant overall moderation of ethnicity in the relationship between identity quantity and life satisfaction was noted (β_{43}= -.441, t=-2.99, p=.003). Second, the path from identity quantity to self concept clarity was moderated by ethnicity (β_{53} = -.388, t=-2.90, *p*=.004). Third, the effect of self-concept clarity on life satisfaction when identity quantity is controlled is significant *(β_{64} = .490, t=9.40, p=.001).* Finally, the existence of mediated moderation is indicated if the multiplication of β_{53} *by*

B64 does not equal zero *(β_{64}× β_{53}≠0)*. All criteria were met in the current study thus confirming mediated

moderation. The moderating role of ethnicity on life satisfaction is partially mediated by self-concept

clarity. Figure 8 shows the conceptual diagram while directions of the experienced relationships for

White and Black participants are illustrated in figure 8a and 8b respectively.
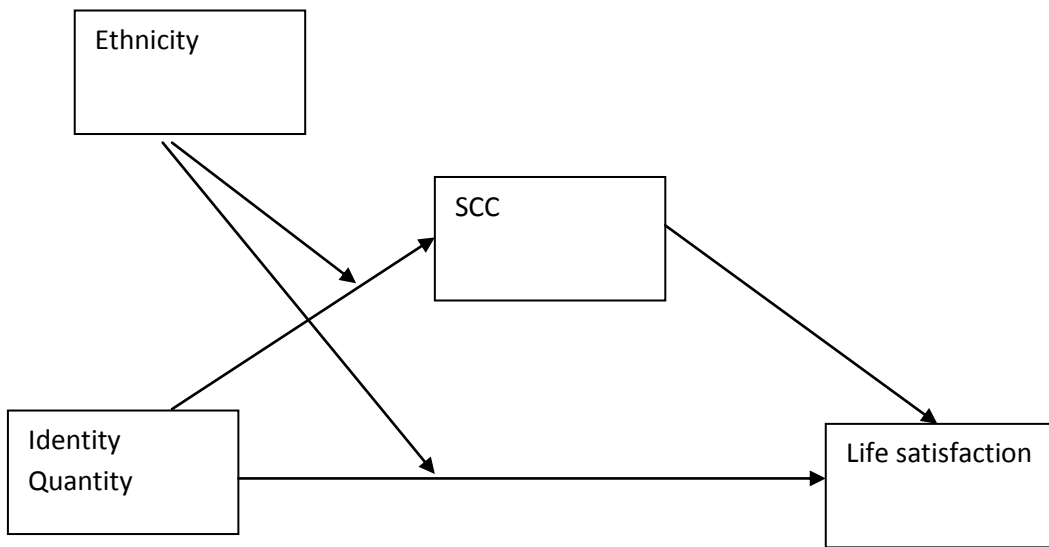

Figure 8: The mediated moderated model of ethnicity on identity quantity, as related to self-concept

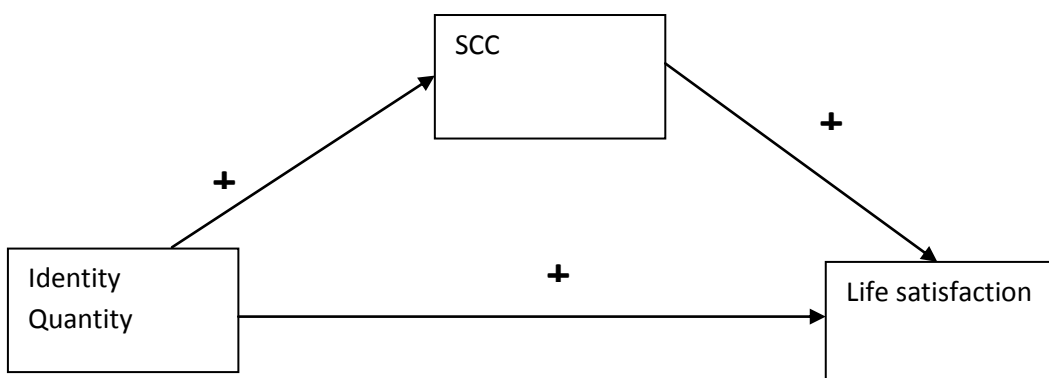clarity and life satisfaction (conceptual diagram)

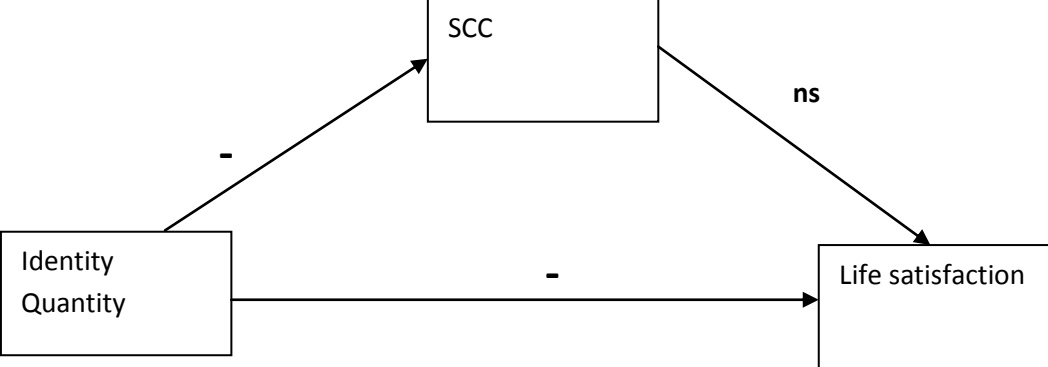*Figure 8a*: The mediation model for White participants

Figure 8b: The mediation model for Black participants

Discussion

The aim of the present study was to explore the interrelationship between identity-complexity and psychological well-being in young persons. The primary interest was to investigate whether belonging to more groups equated with an improved well-being as suggested by Linville's (1987) self-complexity theory. The study was also interested in exploring the role of perceived incompatibility among individual's social identities, stigma and self-concept clarity in determining the relationship between identity quantity and well-being.

Consistent with hypotheses, higher number of group membership (identity quantity) was associated with better outcomes on well-being as seen in higher resilience and life satisfaction and lower anxiety and depression (H1) However, the self-complexity theory did not hold for members of stigmatised groups such that Black participants reported lower levels of well-being as identity quantity increased (H5). Individuals with stigmatised identities and incompatible identities reported lower psychological well-being (H2 & H3) and these relationships were mediated by self-concept clarity (H4). Self-concept clarity was not found to be a mediator in Black participants.

Identity Quantity and Compatibility

In White participants, individuals who belonged to more groups reported better mental health and well-being. This is consistent with literature which posits that higher identity quantity provides more ways for individuals to self affirm and gives individuals access to more resources thus leading to better well-being (Koch & Sheppherd, 2004). Path analysis showed that the relationship between identity quantity and psychological well-being was mediated by self-concept clarity. A higher multiplicity of self was related to a clearer sense of self-concept which positively correlated with well-being. However this additive model of multiple identities as social capital was only applicable to White participants and the reverse was found in Black participants where higher group membership was associated with lower self-concept clarity and lower well-being. This relationship is discussed further below.

Also consistent with previous research, the more compatibility (i.e. less conflict) individuals perceived among identities that were highly important to them, the better their well-being. This was consistent with Brook and colleague's (2008) and Settles, Sellers, & Damas (2002) findings that having facilitating and compatible identities predicts higher well-being than having conflicting identities. However, the present study adds to these previous studies by demonstrating a mechanism through which this relationship occurs. That is; the relationship between compatible identities and higher well-being was mediated by self-concept clarity. More compatibility among an individual's multiple identities is associated with mental health by perhaps increasing an individual's self-concept clarity. Stigma was also found to be related to well-being. Individuals who had higher experience of stigma reported less well-being and this relationship was also mediated by self-concept clarity. It appeared that experiences of stigma were negatively associated with well-being, and this association was explained, in part, by a reduction in self-concept clarity.

Self-Concept Clarity and Ethnicity

The literature posits that self-concept clarity, the extent to which beliefs about the self are clearly and confidently defined, is an important contributor to psychological well-being (Campbell, 1990). The current study found an association between higher identity quantity and higher self-concept clarity in White participants with high status and harmonious identities. However, in Black participants with low status identity, the higher their identity quantity the lower their self-concept clarity and the lower their psychological well-being. It appears that the difference between Black and White participants in the association between number of identities and life satisfaction could be partly explained by differences in self-concept clarity. While higher identity quantity was associated with high self-concept clarity in White participants, the reverse was the case for Black participants who saw a reduction in self-concept clarity as identity quantity increased. It appeared that the moderating role of ethnicity on well-being was partially mediated by self-concept clarity. Furthermore it appeared that identity-conflict and stigma may impact well-being through a change in self-concept clarity. According to Erikson (1968) knowing oneself and experiencing oneself as possessing continuity is essential for an individual's experience of well-

being. For Black participants, the more groups they belonged to, the less continuity they felt and the less overlap they reported to exist among their identities. High overlap was significantly correlated with more resilience and less anxiety however, as identity quantity increased overlap declined which resulted in psychological costs in Black participants. This highlights the role of ethnic identity in the relationship between people's self-concept and well-being.

Possible explanations for the conflicting findings between Black and White participants could be to do with the salience and content of ethnic identity among ethnic minority groups which can be attributed to discrimination and differentiation often experienced by these groups (Tajfel & Turner, 1986). As Phinney (2000) noted, ethnic identity is a central defining characteristic of many individuals, particularly those who are members of minority groups. This was evident in the present study where 59% of the Black participants listed their ethnic or racial identity as one of the four identities that most defined them as compared to 25% of the White participants. Moreover, because of social dynamics relevant to majority versus minority status (Tajfel & Turner, 1978), there are reasons to suspect that ethnic identity may serve different psychological functions for White people than for other minority groups (Smith & Silva, 2011). The stigma and prejudice often associated with Black identity has been well documented (e.g. McCoy & Major, 2003). While the rejection-identification model (Branscombe et al., 1999) posits that members of low-status social groups may maintain psychological well-being in the face of discrimination by becoming more highly identified with their socially devalued in-group and rejecting the negative evaluations of high-status out-group members (Cross & Cross, 2008; Tajfel & Turner, 1986), one could argue that a strong ethnic identity could also highlight and exacerbate incompatibility among the individual's other identities. This may offer a view on why the present study found that self-concept clarity and well-being reduced as identity quantity increased in Black participants who identified with their ethnicity. According to social identity theory, recognising that the powerful majority is prejudiced and discriminates against one's ingroup will lead to increased identification with the ingroup (Tajfel & Turner, 1986). However, this may make individuals with strong ethnic identity who also have many non overlapping identities more likely to attend to more interethnic

dynamics, more likely to report experiences of discrimination and experience distress as a result of discrimination (Syued & Azmitia, 2008, Smith & Silva, 2010).

These findings highlight the importance of overlapping characteristics among groups particularly for members of stigmatised groups. Although a mediating effect of overlap was not found in the relationship between identity quantity and well-being for Black participants in this study, overlap was found to be negatively related to identity quantity and positively related to resilience. The higher their identity quantity, the less overlap they perceived among the groups they belonged to. This suggests that for members of stigmatised groups, overlap among the identities is particularly important when considering the relationship between multiple identities and psychological well-being. This is consistent with Roccas and Brewer's (2002) notion of social identity-complexity which equated overlap among the groups to which a person is simultaneously a member with improved well-being.

Interestingly, this study found that Black participants reported a higher sense of self-concept clarity than White participants but less life satisfaction than White participants; this is despite the fact that there was no significant difference between the groups in number of identities. This further suggests that there are different processes affecting self-concept clarity and well-being in young persons from different ethnic groups.

Implications

The findings from this study have several implications which add to the growing body of research into identity and psychological well-being in adolescence. This study provides evidence for the importance of identity compatibility, overlap, stigma and cultural difference in the understanding of social identity-complexity and its association with psychological well-being. Increasing our knowledge through research into the interrelationships among young people's multiple identities and well-being could inform the design of better and more adjusted prevention programs for people of these ages.

The finding from the present study also highlights the need to further study identity development and compatibility in Black adolescents. The work of Erikson (1968) outlines the goal of adolescence is to

begin to investigate and develop one's identity by answering the question of "Who am I?" Similarly, Tatum (2003) reasons that Black adolescents must answer the questions of "Who am I racially?" and "What does it mean to be Black?"In light of the results of the current study, one could add another question of "How does my Black identity fit with other parts of me?" Research is needed to further understand life span negotiation of both positive and negative emotional experiences of race that impact ethnic identity development (Smith & Silva, 2011).

Furthermore, it also highlights the mediating role of self-concept clarity and its importance for anxiety, depression, resilience, and life satisfaction. Self-concept clarity may be related to Beck's (1983) postulation of sociotropy as a vulnerability factor for depression and anxiety. According to Beck, the sociotropic personality orientation places a high value on having close interpersonal relations, with a strong emphasis on being loved and accepted by others. Sociotropic or socially dependent individuals try to satisfy their needs for security and self worth by pleasing others and avoiding other's disapproval by maintaining close interpersonal attachments (Beck, 1983, Salkovskis, 1996). It could be argued that individuals with a clear and consistent sense of self, hence high self-concept clarity may not be as socially dependent on others for security and self worth. However, more empirical research is needed to ascertain this link. In the present study, self-concept clarity was found to be significantly related to anxiety, depression, resilience and life satisfaction. Present findings could inform current psychosocial approaches to assessment, formulation and intervention with clients presenting with depression and anxiety. Clinicians could routinely assess self-concept clarity, incorporate psycho educational elements and collaboratively explore interventions that could positively impact a person's self-concept clarity.

Results from this area of research could also inform Department of Health policies on a national level in light of the ever changing demographics of the modern society. According to Office for National Statistic (ONS) 2008-based Principal Projection, the ethnic minority populations (including the 'Other White') in the UK would increase from 13% of the population in 2006 to 27 % by 2031 and to 43% by 2056. As the diversity of the population continues to grow, cultural competency in psychology and other caring professions has never been more acute. Making sure that the health care provided to this

increasingly diverse population takes account of their linguistic and cultural needs constitutes a major challenge for health systems and policy makers (Brach & Fraserirector, 2000). Some of these challenges may be abated by further research into stigma, overlap and self-concept clarity and by taking into consideration the importance of ethnic identification and of facilitating compatibility with other identities that young people may have. Mediational analyses revealed that higher identity quantity was associated with stronger self-concept clarity, and this in turn predicted higher levels of life satisfaction in White participants. The fact that the reverse was found in Black participants highlights the need for further research to clarify this relationship. Particularly as research has often assumed that coping effectively with stress or having improved mental well-being is an implicit consequence of greater self-complexity (Koch & Shepperd, 2004). While this may be true for some, this study has shown that this relationship is not universal and that belonging to multiple groups have different impact on people from different ethnic backgrounds.

Limitations and Directions for Future Research

It is important that the results of the present study are evaluated in light of several limitations. First is the fact that it is correlational and thus unable to make firm statements about causality. Because this study was cross sectional and non-experimental, one cannot rule out other possible explanations for associations among variables. For example, significant correlations and path coefficients between scores on identity conflict and depression do not necessarily indicate that conflict causes depression. It is also possible that feeling depressed makes people less likely to perceive their identities as compatible and therefore engage in less social activities; or that other variables predict or influence both depression and perceived compatibility among identities. Similarly, the present study found that self-concept clarity was a mediator in the relationship between number of identities and life satisfaction in White participants. While this path has clear theoretical support, it is equally possible that the mediation could be the other way around with life satisfaction mediating the association between number of identities and self-

concept clarity, although this seems theoretically less likely and the path was not tested in the current study.

Secondly, as aforementioned the number of Black participants was relatively low compared to the White participants. It is therefore difficult to generalise from the findings. Low number of other ethnic minorities (i.e. Asian, Mixed, Chinese, Arab & other) also meant that it was not possible to include their data in the inferential analyses due to low power. A further limitation is the gender imbalance in the sample with there being significantly more female than male. As no predictions were made about gender in the present study it was not considered to be a significant confound, though it is conceivable that gender may well influence quantity of, type of and identification with social groups participants belonged to.

Future research should therefore aim to recruit a higher number of Black and minority ethnic participants as well as more male participants to aid better comparison of results. Furthermore, it would be interesting for future research to explore if young people's identification with identities is affected by how visible the identities are and how much the person feels in control of choosing that identity e.g. disability & age versus basketball team and friendship groups. Future research could adopt a more qualitative approach to explore individual's identification with their identities and gain a more in-depth knowledge of how identity-complexity and self-concept clarity affects psychological well-being on a more personal level. It may also be interesting to explore the impact of acculturalisation within ethnic groups and to decipher if being a first, second or third generation migrant reveals different processes (Berry, 1990; Kimbro, 2009). An investigation into the cultural identity and well-being issues experienced by groups emerging from a history of colonisation has recently been argued to be a particularly important research avenue (Okazaki, David, & Abelmann, 2008). Future research could also explore cultural identity clarity, the extent to which beliefs about one's cultural group are clearly and confidently defined (Usborne & Taylor, 2010) as this has been shown to be positively related to self-concept clarity and to self-esteem and other markers of psychological well-being.

Conclusions

Despite the limitations, the present study extends previous research linking identity quantity and self-complexity with mental health and psychological well-being by identifying self-concept clarity as a mediator in the relationship between: identity quantity and well-being, identity compatibility and well-being, and between stigma and well-being. The current research also reveals the moderating effects of ethnicity on the relationship between identity quantity and well being and identity quantity and self-concept clarity. This research has demonstrated the important role of identity-complexity in understanding anxiety, depression, resilience and life satisfaction in young persons from diverse racial and ethnic backgrounds. The results from this research, along with future research that further illuminates the relations among identity quantity, overlap, stigma and self-concept may serve to improve the psychological well-being in adolescents and emerging adults by helping professionals working with young persons to tailor interventions and develop more adaptive prevention programs in managing mental health and well-being.

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Appendix

Appendix 1: Literature Review Search Strategy

Search Strategy for the Identification of Relevant Studies

Standard methods were used to locate relevant research. Computer-based searches of ISI Web of Knowledge (Web of Science), PsycINFO and MEDLINE PubMed, were conducted, using the following phrases (See Table 1 for results):

1. Self-complexity AND (well-being or health)

2. Self-complexity AND well-being AND health

3. Self-complexity AND well-being

4. Social identity-complexity AND well-being

Including "well-being OR health" in the search term returned too many hits. The search was narrowed by using the AND function (i.e. Well-being AND Health). However, this greatly narrowed the search. "Health" was therefore removed. It was noted that search term 3 (i.e self-complexity AND well-being) yielded duplicates of search term 2 as well as other articles.

5. Multiple identit* AND well-being

6. Identit* AND stigma

7. Identit* AND stigma AND well-being

8. Multiple identit* AND conflict AND well-being

9. Self-concept AND well-being

10. Self-complexity AND adolescent Identity AND well-being

11. "Multiple identit* AND adolescent identity AND well-being

Organisation of the Review

Table 1 shows an outline of the number of papers found as a result of the search of the databases.

Table 1:

Number of Papers found during Literature Search

Search term	No. of papers founds			Total no. of Relevant articles
	PsycINFO	Web of science	Pub Med	(including duplications)
Self-complexity AND (well-being or health)	639,849	4,693,960	2,439,906	__
Self-complexity AND well-being AND health	2	5	6	5
Self-complexity AND well-being	16	15	11	10
Social identity-complexity AND well-being	1	0	1	1
Multiple identit* AND well-being"	76	177	31	13
Identity AND stigma	1,051	1,206	408	_

Identity AND stigma AND well-being	61	69	252	11
Multiple identi* AND conflict AND well-being	11	56	2	4
Self-concept clarity AND well-being	13	21	119	4
Self-complexity AND adolescent Identity AND well-being	1206	1	1	1
Multiple identit* AND adolescent identity AND well-being	6	44	4	5

Inclusion/Exclusion Criteria

Titles were scanned to select relevant articles and their abstracts read. From these, relevant full texts were selected and read and a final selection of studies for the review was made. Relevant articles included those that were theoretical and/or empirical and included one or more constructs from the proposed model. The reference lists of articles were also examined to identify relevant journals. In addition, relevant articles which had been previously identified by the authors of the study were also included. Selection of search terms involved reading these previously identified articles and determining from them which terms gave enough relevant and not too many irrelevant hits. Unfortunately it was not possible to access all articles in full text and so not all relevant studies could be reviewed; this is likely to add a bias to the review..

Articles not written in English were excluded.

Appendix 2 - Author Guidelines

The *European Journal of Social Psychology* welcomes the following submissions:
Original Research Articles: Up to a <u>maximum of 10,000</u> words in length, including abstract and keywords. These articles may be empirical, meta-analytical or theoretical and must provide a significant contribution to the understanding of social phenomena. We also welcome major reviews of research on specific areas of presentation or statements of original theoretical positions. All original articles will be peer reviewed. **Abstracts** must end with a **Key Message,**emphasisng the research outcome or contribution of the article. This will assist the reader community and promote the search engine ranking of your article.
Fast Track Reports: Up to a <u>maximum of 4,000</u> words in length, with an abstract of no more than 150 words. These articles must report on cutting edge research, of significant and broad importance to the field. If selected to be of broad importance by the editorial team, the report will receive peer review within one month of submission and if accepted will be published online swiftly. Please note that authors will receive minimal feedback on submissions and in most cases this will be reduced to a simple "acceptance" vs. "rejection" decision. Fast Track Reports will only be accepted if the report does not require major revision.
All submissions must include keywords, following the abstract.
Manuscript submission. The *European Journal of Social Psychology* operates an online submission and peer review system that allows authors to submit articles online and track their progress via a web interface. Please read the remainder of these instructions to authors and then click http://mc.manuscriptcentral.com/ejsp to navigate to the *European Journal of Social Psychology* online submission site. **All papers must be submitted via the online system.**
Ethical guidelines: The Journal and editors adhere to and uphold the ethics of scientific publication as detailed in the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2010, www.apa.org) and follow the code of conduct of the Committee on Publication Ethics (COPE, www.publicationethics.org). We ask authors to adhere to the APA code as well as their national ethics guidelines. Important principles for authors include: (a) Research was conducted ethically, responsibly, and legally. (b) Results are reported clearly, honestly, and without fabrication, falsification or inappropriate data manipulation. (c) New findings are presented in the context of previous research, which is accurately represented. (d) Researchers are willing to make their data available to the editor when requested. (e) Methods are described clearly and unambiguously. (f) Submitted work is original, not (self-)plagiarised, and has not been published elsewhere. (g) Authorship accurately reflects individuals' contributions. And (h) funding sources and conflicts of interest are disclosed. COPE guidelines are pursued where misconduct is suspected or alleged. For more information, see APA code and COPE's international standards for authors.
Optimise your article: Many students and researchers looking for information online will use search engines. By optimising your title, abstract and article for search engines, you will increase the chance of someone finding it. Visit our guidelines for further information.
File types. Preferred formats for the text and tables of your manuscript are .doc, .rtf, .ppt, .xls.**LaTeX** files may be submitted provided that an .eps or .pdf file is provided **in addition** to the source files. Figures may be provided in .tiff or .eps format.
Important information for authors using LaTeX. If you have used LaTeX to prepare your manuscript you should observe the following instructions:

Initial submission: For reviewing purposes you should upload either an .eps, .pdf or .rtf created from your source files.

Submission of a revised manuscript: When submitting your revision you must still upload an .eps, .pdf or .rtf for reviewing purposes. In **addition** you must upload your LaTeX source files. If your manuscript is accepted for publication we will use the files you upload to typeset your article within a totally digital workflow.

Authors **must only** supply by postal mail to the Editorial Office:

- a Copyright Transfer Agreement with original signature(s) - without this we are unable to accept the submission, and
- permission grants - if the manuscript contains extracts, including illustrations, from other copyright works (including material from on-line or intranet sources) it is the author's responsibility to obtain written permission from the owners of the publishing rights to reproduce such extracts using the Wiley Permission Request Form .

The Copyright Transfer Form and the Permissions Form should be sent to the editorial office that has received the submitted manuscript. The forms must be sent immediately following the online submission of your article. To enable the publisher to disseminate the author's work to the fullest extent, the author must sign to transfer copyright in the article from the author to the publisher, and submit the original signed agreement with the article presented for publication. Copies can be downloaded here or obtained from the journal editorial office, following submission.

Submission of a manuscript will be held to imply that it contains original unpublished work and is not being submitted for publication elsewhere at the same time. Submitted material will not be returned to the author, unless specifically requested.

Manuscript style. The language of the journal is English. All submissions must have a title, and have a margin of 3cm all round. Illustrations and tables must be on separate sheets, and not be incorporated into the text.

- The **title page** must list the full title, and names and affiliations of all authors. Give the full address, including email, telephone and fax, of the author who is to check the proofs.
- Include the name(s) of any **sponsor(s)** of the research contained in the paper, along with**grant number(s)** .
- Supply an **abstract** of up to 200 words for all articles. An abstract is a concise summary of the whole paper, not just the conclusions, and is understandable without reference to the rest of the paper. It should contain no citation to other published work.

Reference style. The *European Journal of Social Psychology* uses the APA system of citing sources as follows:

Journal Article

Gardikiotis, A., Martin, R., & Hewstone, M. (2004). The representation of majorities and minorities in the British press: A content analytic approach. *European Journal of Social Psychology, 34* , 637-646. DOI: 10.1002/ejsp.221

Book

Paloutzian, R. F. (1996). *Invitation to the psychology of religion* (2nd ed.). Boston: Allyn and Bacon.

Book with More than One Author

Natarajan, R., & Chaturvedi, R. (1983). *Geology of the Indian Ocean* . Hartford, CT: University of Hartford Press.

Hesen, J., Carpenter, K., Moriber, H., & Milsop, A. (1983). *Computers in the business world* . Hartford, CT: Capital Press.

and so on. The abbreviation *et al.* is not used in the reference list, regardless of the number of authors, although it can be used in the text citation of material with three to five authors (after the inital citation, when all are listed) and in all parenthetical citations of material with six or more authors.

Web Document on University Program or Department Web Site

Degelman, D., & Harris, M. L. (2000). *APA style essentials* . Retrieved May 18, 2000, from Vanguard University, Department of Psychology Website:

http://www.vanguard.edu/faculty/ddegelman/index.cfm?doc_id=796

Stand-alone Web Document (no date)

Nielsen, M. E. (n.d.). *Notable people in psychology of religion* . Retrieved August 3, 2001, from http://www.psywww.com/psyrelig/psyrelpr.htm

Journal Article from Database

Hien, D., & Honeyman, T. (2000). A closer look at the drug abuse-maternal aggression link.*Journal of Interpersonal Violence, 15* , 503-522. Retrieved May 20, 2000, from ProQuest database.

Abstract from Secondary Database

Garrity, K., & Degelman, D. (1990). Effect of server introduction on restaurant tipping. *Journal of Applied Social Psychology, 20* , 168-172. Abstract retrieved July 23, 2001, from PsycINFO database.

Article or Chapter in an Edited Book

Shea, J. D. (1992). Religion and sexual adjustment. In J. F. Schumaker (Ed.), *Religion and mental health* (pp. 70-84). New York: Oxford University Press.

All references must be complete and accurate. Where possible the DOI for the reference should be included at the end of the reference. Online citations should include date of access. If necessary, cite unpublished or personal work in the text but do not include it in the reference list.

Illustrations. Upload each figure as a separate file in either .tiff or .eps format, the figure number and the top of the figure indicated. Compound figures e.g. 1a, b, c should be uploaded as one figure. Tints are not acceptable. Lettering must be of a reasonable size that would still be clearly legible upon reduction, and consistent within each figure and set of figures. Where a key to symbols is required, please include this in the artwork itself, not in the figure legend. All illustrations must be supplied at the correct resolution:

- Black and white and colour photos - 300 dpi
- Graphs, drawings, etc - 800 dpi preferred; 600 dpi minimum
- Combinations of photos and drawings (black and white and colour) - 500 dpi

Tables should be part of the main document and should be placed after the references. If the table is created in excel the file should be uploaded separately. The cost of printing **colour**illustrations in the journal will be charged to the author. Online only colour is free of charge. If colour illustrations are supplied electronically in either TIFF or EPS format, they **may** be used in the PDF of the article at no cost to the author, even if this illustration was printed in black and white in the journal.

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Appendix 3 - Information, consent and debrief

UNIVERSITY OF
EXETER

What is the purpose of this study?

The purpose of this study is to understand how young people differentiate the different groups they belong to and how belonging to these groups impacts their sense of wellbeing and how they feel about themselves.

What will I be doing?

You will be asked about the groups to which you belong and you will be given a series of statements. Please state how much you agree or disagree with the statements. There are no right or wrong answers; we are just interested in what you think about the statements. We expect your participation to take about fifteen to twenty minutes of your time.

Do I have to take part?

Please understand that participation in this study is completely voluntary. Your decision whether or not to participate will in no way affect you now or in the future. You have the right to withdraw from the research at any time without penalty.

What about confidentiality?

Your individual privacy will be maintained in all publications or presentations resulting from this study. No identifying information will be collected during the study and all information collected will be used for the sole purpose of data analysis and not shared with anyone outside of the research team. In order to preserve the confidentiality of your responses, we have not asked for your name or any other possible identifying information about yourself on the survey to ensure confidentiality.

Are there any risks or benefits?

There may be minor discomfort associated with answering questions related to how you feel about yourself. You are free to withdraw at any time. We expect this research to benefit the field of psychology by advancing knowledge and to benefit the NHS and other health organisations working with young people in understanding how our identities affect our wellbeing.

Amazon or iTunes vouchers!

All participants who complete the study can enter a draw to win a choice of an Amazon or iTune voucher. There will be <u>one £50, two £20 and one £10 voucher available</u>. At the end of the study you will be asked to enter your email address if you wish to enter the draw, this is voluntary. Your email address will be separated from your other responses and used only for the draw. If successful, you will be notified by email the value of the voucher you have won after which you can specify whether you would like an Amazon or iTune voucher.

Who has reviewed this study?

The study has been reviewed and approved by the School of Psychology Ethics Committee at the University of Exeter, reference number 2012/136

UNIVERSITY OF
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Participant Consent Form

Name of researcher: Paul Beckley

I confirm that I have read and understood the information sheet for the above study

I understand that my personal details will be kept secure and no identifiable details will be used as part of the research results.

I understand that my participation is voluntary and that I am free to withdraw at any time.

I agree to take part in the study.

Young person's name: _____

Signature:_____

Date_____

Please note that the consent form will be kept separate from the rest of the questionnaire.

Raffle draw for Amazon or iTune vouchers.

If you would like to be entered into a draw to win an Amazon or iTune voucher please enter your email address here. There are several vouchers including: one £50, two £20 and one £10 voucher up for grabs!

Your email address will be kept separate from your response and it will be deleted after the draw.

Email address...

Many thanks

Debrief form:

Dear Participant,

Thank you very much for your participation in this research.

The aim of this research was to investigate how the different groups young people feel they belong to affect their sense of well-being. It is generally assumed that belonging to groups is good for people and that the more groups they belong to the better for their well-being. However recent research suggests that this might not be the case for everyone. When a person feels that there is disharmony or conflicts among the groups that they belong to or if they experience stigma because of belonging to a group, then their sense of well-being might be negatively affected – even if they belong to many groups.

The purpose of this study was to test what psychologists call "social identity complexity"(which is the degree of overlap that exists between groups that a person is simultaneously a member) and how it relates to well-being. This study aims to understand how young people (16 -25 years) differentiate the different groups they belong to. It also aims to understand how belonging to these groups impacts their sense of wellbeing and how they feel about themselves.

Gaining an understanding of the groups young people say they belong to and how they label these provides us with key building blocks for structures around these unique groups. This can aid resilience and prevention programmes as we are better able to enhance aspects the young person define as helpful and minimise those they see as inhibiting their sense of wellnesss.

If you have any further questions about the research, please feel free to contact the researcher via email, details of which are below. If you would like to receive a summary of the results of this research please email the researcher.

If participating in this survey has raised any issues for you or has caused you distress which you want to talk about, please call Childline or Samaritans (who are available for confidential emotional support 24hrs a day) on the numbers I have included below.

ChildLine	**Samaritans**
0800 1111 *www.**childline**.org.uk/*	08457 909090 www.samaritans.org

Thank you once again for your participation in this survey

<u>Contact details of the researcher</u>
Name: Paul Beckley
Email: pib201@exeter.ac.uk

Clinical Psychologist in training

Appendix 4 – Research Questionnaire

UNIVERSITY OF
EXETER

<u>**Section A: The groups you belong to**</u>

To begin, we would like you to think about the groups you belong to. We know that people belong to many different groups: e.g. race, nationality, country of origin, sports teams, ethnicity, religion, church, mosque, family, school, school clubs, gender, sexuality, youth group/club, scouts/cubs, friendship groups etc.

We would like to get a sense of how many groups you feel you belong to. We are not asking you to count how many groups you belong to because that would be difficult. What we are interested in is whether you feel you belong to lots of groups or not many groups. Please tick to tell us how close you feel you belonging to lots of groups or to not many groups.

**Not many
groups**   **Average**   **Lots of
groups**

We'd like you to think about the groups you belong to and choose the four that most defines you. Please write these four groups in the space below

Group 1: _____

Group 2: _____

Group 3: _____

Group 4: _____

We would now like to ask you a few questions about each of the groups you've chosen.

At the top of each of the following pages please **write down one of the groups** – and then answer the questions that follow **with that group in mind**.

Group 1_____

We would now like to ask you some questions about your thoughts and feelings relating to the **first group** you have chosen. Using the scale below, please indicate the extent to which you disagree or agree with each of the following statements by **writing the appropriate number in the box**.

1	2	3	4	5	6	7
= strongly disagree	= disagree	= slightly disagree	= neither agree nor disagree	= slightly agree	= agree	= strongly agree

1. I often think about being a member of this group

2. I don't feel a strong sense of being connected to members of this group

3. Generally I feel good when I think of myself as a member of this group

4. I have a lot in common with other members of this group.

5. In general I'm glad to be a member of this group

6. I don't feel good about being a member of this group

7. I feel strong ties to other members of this group

8. Being a member of this group is an important part of my self image.

9. The fact I am a member of this group rarely enters my mind

10. I feel that this identity is quite different from other parts of me

11. People look down me because I belong to this group

12. This group is valued by society

13. I am valued by society because I belong to this group

14. I feel that this identity is compatible with other parts of me.

15. People look down on this group

Group 2_____

We would now like to ask you the same questions about your thoughts and feelings relating to the **SECOND GROUP** you have chosen. Using the scale below, please indicate the extent to which you disagree or agree with each of the following statements by **writing the appropriate number in the box**.

1	2	3	4	5	6	7
= strongly disagree	= disagree	= slightly disagree	= neither agree nor disagree	= slightly agree	= agree	= strongly agree

1. I often think about being a member of this group

2. I don't feel a strong sense of being connected to members of this group

3. Generally I feel good when I think of myself as a member of this group

4. I have a lot in common with other members of this group.

5. In general I'm glad to be a member of this group

6. I don't feel good about being a member of this group

7. I feel strong ties to other members of this group

8. Being a member of this group is an important part of my self image.

9. The fact I am a member of this group rarely enters my mind

10. I feel that this identity is quite different from other parts of me

11. People look down me because I belong to this group

12. This group is valued by society

13. I am valued by society because I belong to this group

14. I feel that this identity is compatible with other parts of me.

15. People look down on this group

Group 3_____

Here are the same questions again. But this time, they are related to your thoughts and feelings about the **THIRD GROUP** you have chosen. Using the scale below, please indicate the extent to which you disagree or agree with each of the following statements **writing the appropriate number in the box**

1	2	3	4	5	6	7
= strongly disagree	= disagree	= slightly disagree	= neither agree nor disagree	= slightly agree	= agree	= strongly agree

1. I often think about being a member of this group

2. I don't feel a strong sense of being connected to members of this group

3. Generally I feel good when I think of myself as a member of this group

4. I have a lot in common with other members of this group.

5. In general I'm glad to be a member of this group

6. I don't feel good about being a member of this group

7. I feel strong ties to other members of this group

8. Being a member of this group is an important part of my self image.

9. The fact I am a member of this group rarely enters my mind

10. I feel that this identity is quite different from other parts of me

11. People look down me because I belong to this group

12. This group is valued by society

13. I am valued by society because I belong to this group

14. I feel that this identity is compatible with other parts of me.

15. People look down on this group

Group 4_____

We know it is getting repetitive but please answer the same questions about your thoughts and feelings relating to the **FOURTH GROUP** you have chosen. Using the scale below, please indicate the extent to which you disagree or agree with each of the following statements by **writing the appropriate number in the box**.

1	2	3	4	5	6	7
= strongly disagree	= disagree	= slightly disagree	= neither agree nor disagree	= slightly agree	= agree	= strongly agree

1. I often think about being a member of this group

2. I don't feel a strong sense of being connected to members of this group

3. Generally I feel good when I think of myself as a member of this group

4. I have a lot in common with other members of this group.

5. In general I'm glad to be a member of this group

6. I don't feel good about being a member of this group

7. I feel strong ties to other members of this group

8. Being a member of this group is an important part of my self image.

9. The fact I am a member of this group rarely enters my mind

10. I feel that this identity is quite different from other parts of me

11. People look down me because I belong to this group

12. This group is valued by society

13. I am valued by society because I belong to this group

14. I feel that this identity is compatible with other parts of me.

15. People look down on this group

Section B: How you feel the groups you belong to relate to each other

Great! Now the following part asks you about how you feel the groups you belong to relate to each other.

Thinking about the four groups you've mentioned, and yourself in general, please indicate the extent to which you agree or disagree with each of the following statements by writing the appropriate number in the box.

1	2	3	4	5	6	7
= strongly disagree	= disagree	= slightly disagree	= neither agree nor disagree	= slightly agree	= agree	= strongly agree

1. **Many of my friends belong to all four groups**

2. **It feels like the different groups I belong to do not go together.**

3. **Who I am as a person is very straightforward and uncomplicated**

4. **I find it hard to fulfil the expectations of one group because I belong to another.**

5. **My beliefs about myself often conflict with one another.**

6. **On one day I might have one opinion of myself and on another day I might have a different opinion.**

7. **I spend a lot of time wondering about what kind of person I really am.**

8. **Sometimes I feel that I am not really the person that I appear to be.**

9. **When I think about the kind of person I have been in the past, I'm not sure what I was really like.**

10. **I seldom experience conflict between the different aspects of my personality.**

11. **Sometimes I think I know other people better than I know myself.**

12. **My beliefs about myself seem to change very frequently.**

13. **If I were asked to describe my personality, my description might end up being different from one day to another day.**

14. **Even if I wanted to, I don't think I could tell someone what I'm really like.**

15. **In general, I have a clear sense of who I am and what I am.**

16. **It is often hard for me to make up my mind about things because I don't really know what I want.**

Section C: Life satisfaction & Resilience

Keep going you're getting close to finishing!

The following part explores your satisfaction with life and how you cope in difficult times.

Thinking about yourself in general, please indicate the extent to which you agree or disagree with each of the following statements by ticking the appropriate box

1	2	3	4	5	6	7
= strongly disagree	= disagree	= slightly disagree	= neither agree nor disagree	= slightly agree	= agree	= strongly agree

1. **In most ways my life is close to my ideal**

2. **I am satisfied with life**

3. **If I could live my life over, I would change almost nothing**

4. **So far I have gotten the important things I want in life.**

5. **The conditions of my life are excellent**

6. **I usually manage one way or another.**

7. **I feel proud that I have accomplished things in life.**

8. **I usually take things in stride.**

9. **I am friends with myself.**

10. **I feel that I can handle many things at a time.**

11. **I am determined.**

12. **I can get through difficult times because I've experienced difficulty before.**

13. **I have self-discipline.**

14. **I maintain interest in things I start for reasonable periods**

15. **I can usually find something to laugh about.**

16. **My self-belief gets me through hard times.**

17. **In an emergency, I'm someone people can generally rely on.**

18. **My life has meaning**

19. **When I'm in a difficult situation, I can usually find my way out of it.**

Section D: Well-being

This part looks at how you have been feeling **over the last two weeks**.

Please read each statement and tick the box which indicates how much the statement applied to you *over the past two weeks*. There are no right or wrong answers. Do not spend too much time on any statement

I feel tense or 'wound up'	Most of the time	A lot of the time	From time to time, occasionally	Not at all

I still enjoy the things I used to enjoy	Definitely as much	Not quite so much	Only a little	Hardly at all

I get a sort of frightened feeling as if something awful is about to happen	Very definitely and quite badly	Yes, but not too badly	A little, but it doesn't worry me	Not at all

I can laugh and see the funny side of things	As much as I always could	Not quite so much now	Definitely not so much now	Not at all

Worrying thoughts go through my mind	A great deal of the time	A lot of the time	From time to time but not too often	Only occasionally

I feel cheerful	Not at all	Not often	Sometimes	Most of the time

I can sit at ease and feel relaxed	Definitely	Usually	Not often	Not at all

I feel as if I am slowed down	Nearly all the time	Very often	Sometimes	Not at all

I get a sort of frightened feeling like 'butterflies' in the stomach.	Not at all	Occasionally	Quite often	Very often

I have lost interest in my appearance	Definitely	I don't take as much care as I should	I may not take quite as much care	I take just as much care as ever

I feel restless as if I have to be on the move	Very much indeed	Quite a lot	Not very much	Not at all

I get sudden feelings of panic	Very much indeed	Quite a lot	Not very much	Not at all

I look forward with enjoyment to things	As much as I ever did	Rather less than I used to	Definitely less than I used to	Hardly at all

I can enjoy a good book or radio or TV programme	Often	Sometimes	Not often	Very seldom

Section E: Demographic information

1. **Age**_____

2. **Gender**:   Female   ☐   Male   ☐   (please tick box that applies)

3. **Ethnicity:** What is your ethnic group? Please tick the box that most applies

WHITE	BLACK or BLACK BRITISH	ASIAN or ASIAN
☐ British ☐ Irish ☐ Scottish ☐ Welsh ☐ Any other White background *please write in below* ……………………………….........................…	☐ Caribbean ☐ African ☐ Any other Black background *please write in below* …………………………………..........................	☐ Indian ☐ Pakistani ☐ Bangladeshi ☐ Any other Asian b *please write in bel* ……………………………
MIXED ☐ White and Black Caribbean ☐ White and Black African ☐ White and Asian ☐ Any other Mixed background *please write in below* ……………………………….........................…	**CHINESE or OTHER ETHNIC GROUP** ☐ Chinese ☐ Any other ethnic group *please write in below* …………………………………..........................	

4. **Postcode:** (please only write the first part of your post code) **e.g. B6, BS5, EX4, GL1 etc** _____

5. **Religion:** What is your religion? Please tick the box that most applies

☐	None	☐	Buddhist	☐	Any other religion (*please write in below*
☐	Church of England	☐	Sikh		
☐	Roman Catholic	☐	Jewish		
☐	Other Christian	☐	Hindu		
☐	Muslim	☐	Pagan		…………………………………..........................

6. **Education:** What is the highest level of education of your parents/guardian? Please tick the box that most applies

☐	School	☐	College	☐	University	Other (Please state) _

All done now! Please return the questionnaire to the administrator or continue to the next page if you would like to be entered into a raffle draw. Thank you very much for taking part!

Appendix 5 –Extended Results.

Mediated moderation.

According to Muller, Judd & Yzerbyt (2005), moderation may also involve a mediator variable. In this case, the interaction effect of the independent and moderator variables on the dependent variable is transmitted through the mediator variable (Bucy & Tao, 2007). A prerequisite of mediated moderation is the occurrence of overall moderation between the initial and outcome variables (Baron & Kenny, 1986). The effect of the independent variable on the dependent variable must depend on the moderator variable. There are at least three different types of mediated moderation: between the initial and mediator variables, between the mediator and outcome variables, or both (see Muller et al., 2005). Mediated moderation can be used to explain the causal relationship between four variables. Steps used by Bucy & Tao (2007) were followed:

Equation (1) $Y_i = \beta_{40} + \beta_{41}X + \beta_{42}Mo + \beta_{43}XMo + \varepsilon_4$

Equation (2) $Me = \beta_{50} + \beta_{51}X + \beta_{52}Mo + \beta_{53}XMo + \varepsilon_2$

Equation (3) $Y_i = \beta_{60} + \beta_{61}X + \beta_{62}Mo + \beta_{63}XMo + \beta_{64}Me + \beta_{65}MeMo + \varepsilon_3$

(X = Independent variable, Y= Dependent variable, Mo = Moderator variable, Me = Mediator variable, *β = unstandardized regression coefficient, * = significant, ID quant =Identity quantity)*

In addition, the existence of mediated moderation and moderated mediation is assessed by the following equation (Muller et al.,2005):

Equation (4) $\beta_{43} - \beta_{63} = \beta_{64\,x}\;\beta_{53} + \beta_{65\,x}\,\beta_{51}$

That is, either $\beta 43 - \beta 63 \neq 0$ or $\beta 64 \times \beta 53 + \beta 65 \times \beta 51 \neq 0$. This condition was met in the current study. According to Bucy & Tao, (2007) to demonstrate mediated moderation, three criteria must be met to make Eq. (4) significantly different from zero. First, moderation between X and Y must occur. That is, $\beta 43$ in Equation 1 must be statistically significant. Next, either or both of the following two conditions

must exist: (a) moderation between X (identity quantity) and Me (Self-concept clarity) must occur (β53

is statistically significant) and there must be an effect of Me on Y (life satisfaction) when X is controlled

(β64 is significant); and (b) moderation between Me and Y must occur (β65 is statistically significant)

and there must be an effect of X on Me (β51 is statistically significant). Finally, the moderation of the

direct effect (β63) must be reduced in magnitude or even non significant compared to the moderation of

the total effect (β43). First, β 43 must be statistically significant to indicate overall moderation between

identity quantity and life satisfaction measures. Second, β 53must be statistically significant to indicate

that the path from identity quantity to self concept clarity is moderated by ethnicity. Third, b64 must be

statistically significant to indicate the existence of mediated moderation (β 64× β 53≠0). Fourth, β 63

must be reduced or even non-significant compared to β 43 to indicate the existence of a mediation

process (Muller et al., 2005; Bucy & Tao, 2007). All criteria were met in the current study and condition

(a) was significant in criteria 1. The moderating role of ethnicity on life satisfaction is partially mediated

by self-concept clarity. Therefore, establishing the mediated moderation model requires the evaluation of

four unstandardized regression coefficients (see Table 8)

Table 8: Regression Results for the Mediated Moderation Model

Predictors	Equation 1	Equation 2	Equation 3
	Y = life satisfaction	Y = Self concept clarity	Y = life satisfaction
X = Identity quantity	$\beta 41 = .129^*$	$\beta 51 = .075^*$	$\beta 61 = .092^*$
Mo = Ethnicity	$\beta 42 = -.673^*$	$\beta 52 = .489^*$	$\beta 62 = -.751^*$
XMo = ID quant x Ethnicity	$\beta 43 = -.441^*$	$\beta 53 = -.388^*$	$\beta 63 = -.366^*$
Me = Self-concept Clarity			$\beta 64 = .490^*$
MeMo = Self-concept Clarity x Ethnicity			$\beta 65 = -.369$

X = Independent variable, Y= Dependent variable, Mo = Moderator variable, Me = Mediator variable, *β = unstandardized regression coefficient, * = significant, ID quant =Identity quantity*
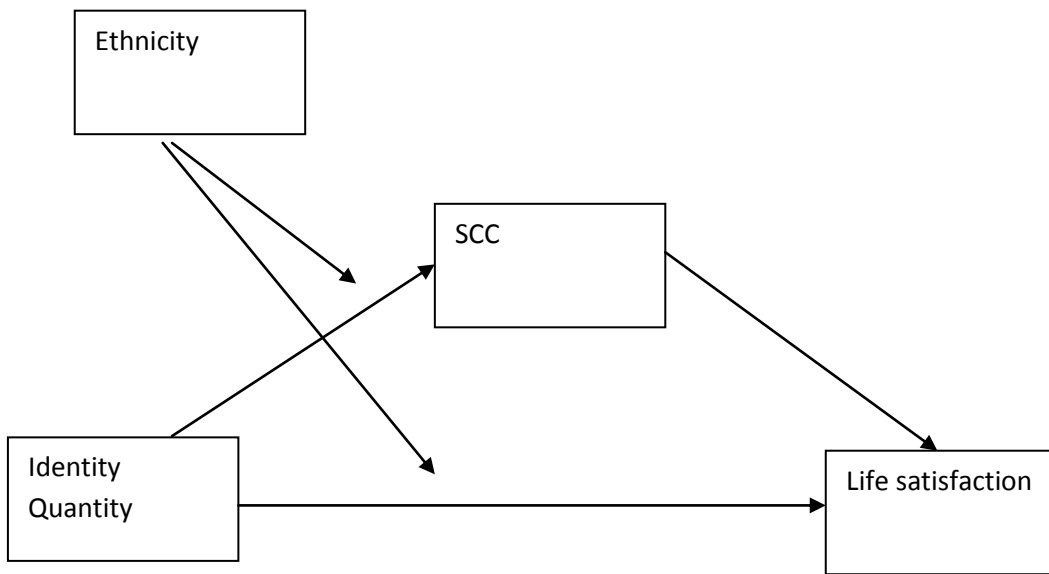
Figure 9: The mediated moderated model of ethnicity on identity quantity, as related to self-concept

clarity and life satisfaction (conceptual diagram)

Appendix - 6 -Ethical Approval

From: Burgess, Cris
Sent: 12 March 2012 10:29
To: Beckley, Paul
Cc: Salway, David
Subject: Ethics application 2012/136

Hi Paul,

Dave Salway tells me that you've been enquiring as to the progress of your Ethics application 2012/136. I've now investigated and I approved the application on 20th January, in response to the further information you supplied us with. The application's status, 'accepted', actually means that the PREC have reviewed and discussed it and that the application is approved.

If you visit the Online Ethics site and scroll down the list of Reviewer's Comments, you'll see that I signed it off on 20/01/12. I don't understand why you did not receive an email notification of the approval at that point, but I will ask the programmer to investigate and resolve any errors in the system.

I hope that this unfortunate delay has not caused you too much inconvenience.

Best regards,
Cris.

Dr Cris Burgess
Senior Lecturer

Education Manager, Undergraduate Psychology
Programme Director, BSc Psychology/BA Psychology
Chair, Psychology Research Ethics Committee
Exams Officer and Chair, Psychology Board of Examiners

T: 01392 724627

Appendix 7 - Dissemination Statement

In order to benefit a wide audience of service users, mental health professionals, academics and the general public, the intended dissemination of the research includes:

- Submission for publication to the 'European Journal of Social Psychology", which is a high-impact journal, publishing a range of research in this area. This journal has a target audience of identity and wellbeing researchers, psychologists, psychiatrists, and other mental health professionals.

- Submission to further journals will be made, as necessary.

- Presentation at a BPS conference.

- A summary of the findings will be offered to any participants who request to be informed. This summary will contain a reference to any publications resulting from the study.

- A presentation to trainee clinical psychologists.