

Morality as a predictor of loneliness: a cross-cultural study

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Abstract

Loneliness is currently regarded as one of the most common and prevalent problems experienced by adolescents, and it is also observed as a painful, unpleasant and negative experience. South African adolescents also have to face and cope with this predicament daily. The main objective of this study was to establish the perception of adolescents of different cultures regarding loneliness and morality and to investigate the relationship between them. It was also determined which of the independent variables, namely morality, gender, age, mother tongue and ethnicity, contributed significantly to the prediction of loneliness.

A total of 714 adolescents from three different secondary schools in the greater Bloemfontein area between the ages of 13 and 17 were selected. Adolescents were used because they are increasingly being confronted with moral issues and because loneliness occurs more commonly during adolescence. The focus was on three ethnic groups, namely Coloured, black and white. Three different questionnaires, namely the Le Roux Loneliness Scale, the Morally Debatable Behaviours Scale and a biographical questionnaire were completed to obtain the necessary data.

A significant inverse correlation between loneliness and morality was determined, while morality was identified as the best predictor of loneliness.

Opsomming

Eensaamheid word tans as een van die mees algemene en wydverspreide probleme beskou, terwyl dit ook as 'n pynlike, onaangename en negatiewe ervaring waargeneem word wat meer algemeen tydens adolessensie voorkom. Selfs Suid-Afrikaanse adolessente moet daaglik hierdie konfrontasie in die gesig staar en hanteer. Die hoofdoelwit van die studie was derhalwe om adolessente van verskillende kulture se persepsies van hul eensaamheid en moraliteit te meet en om die verband tussen eensaamheid en moraliteit te ondersoek. Daar is ook vasgestel watter van die voorspeller veranderlikes, naamlik moraliteit, geslag, ouderdom, moedertaal en etnisiteit, betekenisvol tot die voorspelling van eensaamheid bydra.

Vanuit drie verskillende sekondêre skole in die groter Bloemfontein was 714 adolessente tussen die ouderdomme van 13 en 17 jaar betrek. Adolessente was gebruik, omdat hulle toenemend gekonfronteer word met morele sake en omdat eensaamheid meer algemeen tydens adolessensie voorkom. Daar is op drie etniese groepe, naamlik Kleurling, swart en wit adolessente gefokus. Drie verskillende vraelyste, naamlik Die Le Roux Eensaamheidskaal, "Morally Debatable Behaviors Scale" en 'n Biografiese vraelys is op die proefpersone toegepas, ten einde die nodige data te bekom.

'n Beduidende omgekeerde verband is tussen eensaamheid en moraliteit gevind, terwyl moraliteit as die beste voorspeller van adolessente se eensaamheid geïdentifiseer is.

Loneliness is a good place to visit, but a poor place to stay - Billing

Introduction

Loneliness is currently considered one of the most common and prevalent problems (Demir & Fisiloglu, 1999:230; Neto & Barros, 2000:503; Rokach, 2001:278), and it is also observed as a painful, unpleasant and negative experience (Demir & Tarhan, 2001:116; Le Roux, 2002:320, 1992; Nurmi, Toivonen, Salmela-Aro, & Eronen, 1997:764). The term loneliness is inclined to elicit thoughts of the aged, who are

alone and isolated (Demir & Tarhan, 2001:113), but it is worrying that this complex phenomenon generally occurs during adolescence (Le Roux, 1992; Weiss, 1982:71). This could be because adolescence is a developmental period of transition between childhood and adulthood that requires social changes, such as leaving home, living alone, going to university or starting a first full-time job (Demir & Tarhan, 2001:114; Taylor, Peplau & Sears, 2000:237).

Loneliness

What is regarded as "loneliness"? Numerous researchers

and theoreticians have promulgated various definitions and descriptions of loneliness. Taylor et al. (2000:236) are of the opinion that loneliness refers to subjective feelings of discomfort that people experience when their relationships lack an important characteristic. According to Weiss (1989:1) loneliness is an unpleasant experience that occurs when a person's network of relationships is deficient in terms of quality or quantity. Weiss (1973:3) also considers loneliness to be a response to a lack of associations that provide care, warmth, attachment and closeness, which are crucial for survival. Loneliness also occurs when a social group does not satisfy an individual's needs (Le Roux, 1998:174). According to Peplau and Perlman (1982:1) loneliness may result from an uncontrollable conflict between desired and actual levels of intimacy and social interaction, with the desired level being higher than the actual level. Loneliness is also described by Wintrob (1989:77) as a feeling that there is no-one with whom one can share painful or personal aspects of his or her life.

According to Spitzburg and Hurt (1989:160) loneliness is a clinically meaningful phenomenon and it is an affective, negative, painful, unpleasant experience. Le Roux (1992) regards loneliness as a painful emotional condition that cannot be ascribed to a lack of friends or satisfying social contacts only. She feels that the core of the psychological pain lies in a deep longing for love and acceptance by others.

It is thus clear that the most accepted definitions of loneliness include the following three characteristics, namely, (a) it results from a perceived lack of a relationship in the person's social life, (b) it is a subjective experience that is not synonymous with social isolation, and (c) it is an unpleasant, fearful and painful experience (Demir & Fisiloglu, 1999:230).

From various definitions different types of loneliness can be identified, namely emotional, social, chronic, short-lived and situational loneliness. According to Weiss (1989:3, 1982:71, 1973:2) emotional loneliness occurs as a result of the absence of an intimate figure of attachment, such as a beloved, parent, sibling or child. Social loneliness occurs when a person has a lack of a sense of social integration or community involvement, which might be provided by a network of friends, colleagues, or neighbours (Weiss, 1989:3, 1982:71, 1973:3). Stroebe, Stroebe, Abakoumkin and Schut (1996:1241) allege that emotional loneliness can be remedied by forming another emotional attachment or renewing a lost emotional attachment. They also believe that social loneliness can be remedied by means of social support (Stroebe et al., 1996:1241).

According to Demir and Fisiloglu (1999:233) and Neto and Barros (2000:507) chronic loneliness occurs when individuals feel lonely for many years without any dramatic change in lifestyle or specific stressors. Short-lived loneliness lasts for a short while and passes, for example, when you hear a tune or a saying that reminds you of someone you love (Demir & Fisiloglu, 1999:232; Jones, 1989:28). Situational loneliness occurs as a result of a sudden loss or house

move (Demir & Fisiloglu, 1999:233). Sobosan (in Le Roux, 1992) is of the opinion that religious loneliness also occurs, which means that the person feels abandoned by God and humanity.

It is important not to associate loneliness with being alone. These are not the same phenomena. Loneliness is felt internally by a person and cannot be observed by others. Aloneness is an objective condition of being apart from others. Thus people can be alone without feeling lonely, while they can feel lonely within a group (Cruz, 1983:15; Neto & Barros, 2000:511; Peplau & Perlman, 1982:2; Peplau, Micel & Morageh, 1982:135).

Loneliness and gender

There are conflicting opinions on whether there are gender differences as regards loneliness. Various researchers found no difference between men and women regarding loneliness (Demir & Fisiloglu, 1999:235; Demir & Tarhan, 2001:118; Le Roux & De Beer, 1994:65; Le Roux, 1992; Neto & Barros, 2000:505; Renshaw & Brown, 1992:546; Scholtz, 1995:45). Solano (1989:211), however, did indeed find differences in this regard between men and women. Loneliness amongst men is associated with a low desire for an internal locus of control, external attributions and a perceived lack of control, while loneliness amongst women is associated with a deep need for an internal locus of control, external attributions and a perceived lack of control (Solano, 1989:210). Weiss (1982:75), Brennan (1982:273), Medora and Woodward (1986:399), and Mullett (2002:87) found that women are more inclined to experience loneliness. In contrast, Joubert (1989:188), Pretorius (1993:234) and Le Roux and Connors (2001:47) allege that men are more inclined to feel lonely as a result of poorer social skills or involvement. Thus there is disagreement on this matter and this researcher shall attempt to broaden this knowledge by means of this study.

Loneliness and age

There are also conflicting research findings concerning loneliness and age. According to Taylor et al. (2000:237) loneliness generally occurs more during adolescence and less during old age, since older people's lives become more stable as they grow older. Age is also accompanied by greater social skills and more realistic expectations from social relationships (Taylor et al., 2000:237). Neto and Barros (2000:506) agree that adolescents are more inclined to feel lonely and they actually consider that loneliness decreases as a person ages. Le Roux (1992) claims that South African adolescents evince a low level of loneliness, while Scholtz (1995:37) found a low level of loneliness amongst black students from the Bloemfontein campus of Vista University. Medora and Woodward (1986:398) believe that loneliness occurs more generally during young adulthood. According to Mullett (2002:123) older adolescents are more inclined to feel lonely than young adolescents.

In addition Le Roux and De Beer (1994:86) found no differences in loneliness between the different ages in the developmental phase of early adulthood. Renshaw and Brown

(1992:546) allege that individuals in mid-childhood and pre-adolescence experience the same levels of loneliness.

Loneliness and ethnicity

Pretorius (1993:234) maintains that South African students are lonelier than their North American counterparts, but less lonely than Iranian and Puerto Rican students. Groenewald (1998:47) found that black adults tend to feel lonelier than white adults and Peplau and Perlman (1982:16) also found that blacks in general are more inclined to experience loneliness than whites. According to Mullett (2002:93) Coloured and black adolescents are lonelier than white adolescents. Although she found that Coloured adolescents are less lonely than black adolescents, the difference is not significant. Cultural background therefore plays an important role in the experience of loneliness (Le Roux & Connors, 2001:48; Mullett, 2002:93; Rokach & Brock, 1997:7).

Le Roux and Connors (2001:48) also found that students from Australia (CSU) are more inclined to feel lonely than students from South Africa (UFS). According to Renshaw and Brown (1992:546) adolescents from Australia and America do not differ in their experience of loneliness. Neto and Barros (2000:508) were also unable to find any difference between adolescents from Portugal and Cape Verde in terms of their experience of loneliness. According to Brennan (1982:276) there are also no differences between black American, Mexican-American and Anglo-American adolescents in their experience of loneliness.

Thus it is clear that loneliness is a very serious, complex phenomenon that generally occurs during adolescence and can give rise to various problems. However, the question the researchers wish to answer, is whether there is a connection between loneliness and morality.

Morality

Morality refers to a group of principles or ideals that enable individuals to distinguish between right and wrong according to the view of the group concerned, and to modify their behaviour accordingly (Lifton, 1985:306; Plug, Louw, Gouws, & Meyer, 1997:230). Most research, however, is conducted on moral development. Moral development refers to the process by which individuals acquire principles that enable them to judge certain behaviour as right and other behaviour as wrong. The individual is then in a position to conduct himself according to these principles (Bukatko & Daehler, 1998:15; Santrock, 1995:572).

Kohlberg's theory of moral development has already been researched and discussed by various researchers and theoreticians (Kail & Cavanaugh, 1996:320; Papalia & Olds, 1995:282; Santrock, 1998:406, Taylor et al., 2000:456), together with Erikson's psychosocial theory of personality and identity development (Gilligan, 1982:11; Meyer & Van Ede, 1998:51; Okun, 1997:117; Sternberg, 1997:450).

According to Kohlberg's theory, the development of morality, moral judgement and moral reasoning takes place on

three levels, with each level consisting of two stages. The levels of moral development are the pre-conventional level, the conventional level and the post-conventional level. Each of these levels consists of two stages and, according to Kohlberg, the sequence of the levels and stages is consecutive as it is dependent on the development of certain cognitive skills that develop consecutively. Each consecutive stage develops from and replaces the previous one. Thus it is impossible for a person to skip any level of moral development. According to Thom, Louw, Van Ede and Ferns (1998:465) Kohlberg claims that not everyone reaches the highest level of moral development. Most adolescents, however, ought to be in the conventional stage. Therefore rules are obeyed so as to gain acceptance and avoid rejection, and because it is necessary for the maintenance of law and order (Louw, 1998:484). Within the perspective of conventional moral reasoning, socially acceptable rules, roles and norms are used to make moral judgements (Glover, 1997:247). Adolescence is a stage during which individuals form their identity. It is also a stage during which adolescents develop a feeling of a moral self, in other words their self-concept and self-ideals (Higgins, 1991:121).

Erikson proposes eight stages of psychosocial development, of which adolescence is the fifth stage. The task of this stage is to develop a sense of self, to establish an identity to last through puberty, and to empower the adult's capacity to work and to love. The ideal solution of the identity crisis lies in a synthesis between the two poles of identity and confusion of identity, that Erikson calls confidence. This means that individuals must be certain of their identity, and at the same time, must be aware in an acceptable way of other identity choices they could have made, as well as other possibilities inherent in them (Okun, 1997:117; Sternberg, 1997:452).

Morality and gender

Conflicting results concerning morality and gender are encountered in the literature. Maqsood (1998:256) found in his research into adolescents in Botswana that boys and girls do not differ in terms of the moral principles of caring and justice. Bendixen et al. (1998:191), Batson, Thompson, Seufferling, Whitney and Strongman (1999:535), and Haidt, Koller and Dias (1993:620) could also find no differences between men and women in terms of moral convictions. However, their research conflicts with the results of other researchers like Gilligan (1982:66); Lifton (1985:306); Stimpson, Jensen and Neff (1992:317); Wojciszke (1994:227) and Coetzee (2003:15).

Gilligan (1982:66) stresses that men and women conceptualise the world differently and use different principles in their moral reasoning. According to Gilligan (1982:67), Lifton (1985:306) and Stimpson et al. (1992:317) women prefer the moral principle of caring, while men choose the moral principle of justice. They believe that there is a strong correlation between men's intrapersonal aspects of personality and morality, and between women's interpersonal aspects of personality and morality. Wojciszke (1994:227) found that women tend to interpret their behaviour in terms of moral-

ity, while men are more inclined to view their behaviour in terms of competence. Coetzee (2003:15) found recently that South African girls possess higher levels of moral reasoning than South African boys. According to Petrinovich, O'Neill and Jorgensen (1993:471) women are more likely to behave morally than men. Thus it would appear that there are indeed gender differences in respect of morality and moral development. Lifton (1985:321) believes that these differences in moral reasoning may be the result of the different social roles and expectations expected of each gender.

Morality and age

Morality and moral principles increase and deepen with age, because of the improvement in intellectual and emotional skills (Papalia & Olds, 1995:243). It would thus appear that moral skills advance with age, along with cognitive, intellectual and emotional proficiency. Research has already shown that there is a strong correlation between moral development and cognitive, emotional, intellectual and social development (Botha, Van Ede, Louw, Louw & Ferns, 1998:472).

Morality and ethnicity

According to Kohlberg's cognitive approach of moral development, the developmental pattern of moral reasoning and judgement is cross-culturally universal (Ferns & Thom, 2001:38). According to his approach the development of moral reasoning follows the same fixed stages in all cultures. Consequently, he does not support the idea of cultural relativity (Ferns & Thom, 2001:38). Various researchers have, however, indicated that Kohlberg's theory of moral development is not so universal (Coetzee, 2003:15; Ferns & Thom, 2001:38; Haidt et al., 1993:619; Jones, Parker, Joyner & Ulka-Steiner, 1999:201; Maqsood, 1998:255; Smith & Parekh, 1996:851; Snarey & Keljo, 1991:395). Tudin, Straker and Mendolsohn (1994:165) found that black students at the University of the Witwatersrand reach high levels of moral reasoning. Other researchers (Coetzee, 2003:15; Ferns & Thom, 2001:44; Jones et al., 1999:198; Smith & Parekh, 1996:856) found again that black adolescents reach low levels of moral reasoning, while white adolescents tend to reach higher levels of moral reasoning. Thus it would appear that one's moral reasoning reflects the focus of one's culture (Kail & Cavanaugh, 1996:334). Cultural differences in the order of the stages in which moral development occurs and the nature of the differences reached by cultural groups indicate therefore that the moral development of black and white adolescents is influenced by differences in their historical and cultural backgrounds. Moreover, white and black cultural dispensations in South Africa emphasise different aspects of morality that determine the nature of moral development (Ferns & Thom, 2001:46). Kohlberg's theory of the development of moral reasoning can therefore not be regarded as universal without taking cultural diversity into consideration. According to Ferns and Thom (2001:46), morality is not a product of a single psychological process. It is rather a complex, multi-dimensional phenomenon that requires the integration of different components of psychological development, such as the cogni-

tive, social and personality components of the person (Ferns & Thom, 2001:46).

The correlation between loneliness and morality

No empirical research could be found that confirms a correlation between loneliness and morality. However, Cruz (1983:16) philosophises that there is indeed a correlation between loneliness and immoral behaviour such as crime, alcoholism, psychological problems, drug dependence, divorce and suicide. Immoral behaviour can lead to loneliness or it can sustain loneliness, but the opposite is also true: loneliness can lead to immoral behaviour or sustain immoral behaviour (Cruz, 1983:16).

In the literature suggestions were also found of a possible correlation between loneliness and anti-social behaviour (Demir & Tarhan, 2001:114; Le Roux, 1996:25; Rokach, 2001:278; Rokach & Brock, 1996:11), as well as between morality and anti-social behaviour (Haidt et al., 1993:619). The fact that both loneliness and morality are linked to anti-social (immoral) behaviour, suggests the possibility of a link between loneliness and morality. Since no empirical research could be found on this subject, the present study may be regarded as pioneering work in this area.

Aim of the research

Adolescents face different conflicts every day. Each day they must make moral decisions: should they act according to their own ideals or should they compromise? Idealism in this sense means to act morally and not to yield to the temptation to do wrong things. Similarly, South African adolescents must fight the complex phenomenon of loneliness daily as it can lead to various detrimental consequences, such as, for example, social disadvantages (juvenile delinquency, social withdrawal, substance abuse, suicide), emotional disadvantages (depression, hostility, low self esteem, pessimism, rejection) and psychological disadvantages (separation anxiety, lack of control). Loneliness and morality are thus two important aspects of behaviour that manifest during adolescence. The question is, therefore, whether morality could not be a possible predictor of loneliness. Thus the researcher will determine whether there is a link between loneliness and morality, with a view to gaining a better understanding of loneliness.

In the light of the preceding discussion, the chief aim of this study is consequently to measure the perceptions of loneliness and morality of adolescents from different cultures, and to investigate the link between loneliness and morality. In addition, it will be established which of the predictor variables, namely, morality, gender, age, mother tongue and ethnicity, make a significant contribution to the prediction of loneliness.

Research method

Research hypothesis

The following hypothesis is formulated for the research:

TABLE 1: Frequency and percentages of all the predictor variables

	Variables	Frequency	Percentage
Gender	Male	332	46.5
	Female	382	53.5
Ethnic group	Coloured	188	26.3
	Black	331	46.4
	White	191	26.8
	Other	4	0.5
Mother tongue	Tswana	102	14.3
	Sotho	185	25.9
	English	6	0.8
	Afrikaans	385	53.9
	Other	36	5.1
Age (in years)	13	96	13.4
	14	171	23.9
	15	200	28.0
	16	136	19.0
	17	70	9.8
	Other	41	5.9

Hypothesis: The hypothesis is that there is a linear correlation between adolescents' loneliness and a number of predictor variables, namely, morality, gender, age, mother tongue and ethnic group.

The significance factor for the investigation is set at $p \leq 0.01$.

Research design

In order to achieve the above objectives, the researcher decided to use *ex post facto* research, and more specifically, a criterion group design. Before the start of the research, the research group will thus belong to the different levels of the independent variables (Huysamen, 1998:102). In this criterion group design it was attempted to draw test samples equally from the populations that represent the different levels of the independent variables. Thereafter the correlation that these variables can have on loneliness will be investigated. The students' morality and biographical details (gender, age, mother tongue and ethnic group) are the predictor variables, while their perceptions of loneliness are the criterion variables.

The sample

In this research, 714 adolescents between the ages of 13 and 17 years, from three different secondary urban schools in the greater Bloemfontein were involved. Adolescents in

this age group were used because they are increasingly being confronted with moral issues and because loneliness is experienced more generally during adolescence. The focus was on three ethnic groups, namely Coloured, black and white adolescents. These three ethnic groups were involved because they are the dominant cultural groups of South Africa. Both genders were focused on.

The procedure

Permission was obtained from the Free State Department of Education to use secondary school pupils in the research. The data were collected with the help of two psychometry students, who are currently fourth year psychology students at the University of the Free State. The researcher and these two students visited the selected schools by appointment during school hours in order to collect the data. Two classes were chosen from grades 8, 9 and 10 respectively at each secondary school in order to participate in

the research. The reason for this is that the pupils in these three grades belong to the age group on which the researcher wishes to focus.

The participants were informed of the nature and objectives of the research and they were shown how to complete the questionnaires. Thereafter the researcher and students distributed the measuring instruments to the research group. All the pupils who were available on the various days and were willing to participate in the research completed the questionnaires. Then the questionnaires were carefully coded by the two students before the information was analysed by an SPSS computer program.

The biographical details of the research group are given in Table 1.

From the above table it appears firstly that more girls participated in the investigation than boys. Altogether 382 (53.5%) girls and 332 (46.5%) boys made up the sample. As far as the ethnic group is concerned, Table 1 shows that the majority of the experimental group (46.4%) were black pupils. The white and Coloured experimental group constituted the rest of the sample and they were 26.8% and 26.3% respectively. Some of the experimental group did not fall in any one of the different subgroups and were entered in the category of "other". As a result thereof and also because the frequency was low, it was not considered to be statistically significant and was consequently ignored.

Five categories were created for the pupils' mother tongue, namely Tswana, Sotho, English, Afrikaans and "other". According to Table 1 the largest number of the research group (53.9%) appeared to be Afrikaans-speaking. Of the sample 25.9% were Sotho-speaking and 14.3% Tswana-speaking. A very small number of English-speaking pupils (0.8%) were part of the research group.

The ages of the research group ranged from 13 to 17 years. Most of the research group (28.0%) were 15 years old, while 23.9% were 14 years old. The other members of the research group fell mainly into one of the following categories, namely 13-year olds (13.4%), 16-year olds (19.0%) and 17-year olds (9.8%). When the statistics were collated, some of the categories were grouped together, so that only two levels of these variables occurred, namely 13 – 15 years (early adolescence) and 16 – 17 years (middle-adolescence).

The measuring instruments

Each person received the following measuring instruments to complete:

The Le Roux Loneliness Scale

This questionnaire consists of 30 items and has already been successfully used in other research studies (Le Roux, 2002:329, 1998:176, 1992; Mullett, 2002:73; Scholtz, 1995:45). Examples of items in the questionnaire are the following: "I grew up in a loving household" (Item 2), "I feel neglected" (Item 19), "My friends make me happy" (Item 24), and "Nobody loves me" (Item 28). The respondents had to indicate with a cross to what extent they agreed or not with the statement by marking one of the four responses that ranged from "always" to "never". The 15 negative items in the questionnaire had numerical values ranging from 4 to 1, while the positive items in the response categories were numbered from 1 to 4. Thus, if an individual obtained a high score, it indicated that this person was lonely. Individuals with low scores should not be considered lonely. The reliability of the questionnaire has been calculated in various studies by means of Cronbach's alpha-coefficient set at 0.88, 0.88, 0.88 and 0.87 (Le Roux, 2002:329, 1998:176, 1992; Scholtz, 1995:45), while the internal validity rendered a correlation of $r_{pn} = -0.6116$ between the positive and negative poles of the scale.

Morally Debatable Behaviors Scale

The morality scale applied was based on Harding and Phillips's "Morally Debatable Behaviors Scale" (in

Robinson, Shaver & Wrightman, 1991:58). This instrument determines whether behaviour justly reflects contemporary moral issues with which an individual is confronted in daily life, or on which they have an opinion. The scale consists of 25 types of moral behaviour. Each item is calculated on a 10-point scale that ranges from 1, which indicates that the behaviour is "never justified", to 10, which indicates that the behaviour is "always justified". This instrument measures three aspects of moral behaviour: (1) personal sexual morality (nine items), which focuses on issues such as life, death and sexual relationships, (2) self-interest morality (eight items), which consists of items regarding personal integrity and honour, and (3) licit-illicit morality (eight items), which consists of behaviour formally prescribed by law. Three items are general in terms of self-interest and licit-illicit morality.

Le Roux (2003:156) made a number of changes to Harding and Phillips's original questionnaire. They include the following:

- Firstly the number of response categories was reduced from 10 to four, as outstanding reliability was obtained with the latter, while it is very difficult to differentiate accurately among 10 categories;
- Secondly, the questionnaire was also translated into Afrikaans, in order to assist this cultural group with comprehension of the items.

The reliability of the amended questionnaire has been calculated in this study by means of Cronbach's alpha-coefficient. The reliability of this amended measuring instrument has previously been calculated by means of Cronbach's alpha-coefficient and determined as 0.82 (Le Roux, 2003:157).

Biographical questionnaire

The biographical questionnaire contains information on the experimental group's gender, age, mother tongue and ethnic group.

Statistical method

A hierarchical regression was carried out on the data in order to analyse the data statistically. Cohen's "d" was also applied in order to determine the practical significance of the results.

Hierarchical regression analysis

A multi-hierarchical regression analysis was used to investigate one of the aims of this research, namely the influence of certain independent variables (predictor variables) on the dependent variable (criterion variable). The predictor variables are morality, gender, age, mother tongue and ethnic group, while the criterion variable is loneliness.

A hierarchical regression analysis was also carried out because the researcher determined himself the sequence in which the predictors, namely morality, gender, age, ethnic group and mother tongue, should be added. The predictors were evaluated according to each one's unique contribution. Each predictor,

Table 2: The reliability coefficient of the measuring scales

Measuring scale	Alpha coefficient
The Le Roux Loneliness questionnaire	0.782
The Behaviour questionnaire	0.832

Table 3: Averages and standard deviations of the biographical variables with respect to loneliness amongst adolescents

Predictors		Average count	Standard deviation
Gender	Male	58.810	10.407
	Female	59.246	10.990
Ethnic group	Coloured	59.803	9.153
	Black	59.819	10.273
	White	56.764	12.428
Mother tongue	Tswana	58.843	9.743
	Sotho	60.065	10.048
	English	59.200	7.463
	Afrikaans	58.460	11.117
Age (in years)	13-15	58.101	10.777
	16-17	60.826	10.394
Total score		59.043	10.718

therefore, clarified the variance that it contributed when it was added to the comparison (Aron & Aron, 1994:506). In this way it can be determined what the correlation is of the first predictor variable with the dependent variable, and then how many are added to the general multivariate correlation when a second, third and fourth predictor variable are added. In the statistical computations of the problem of determining the influence of these independent variables on the dependent variables, a linear correlation between the predictor variables and the criterion variables was used, which is known as the plural regression comparison (Aron & Aron, 1994:506).

Cohen's "d" test

Cohen's technique was used for the determination of practical significance. Steyn (2000:1) recommends the use of the standardised difference. This is the difference between the two averages (or average from a given value) divided by the standard deviation (Steyn, 2000:1). Guidelines for the evaluation of the size of the effect are the following:

- [d] = 0.2: Small effect (results are insignificant)
- [d] = 0.5: Moderate effect (indicates possible significance)
- [d] = 0.8: Large effect (results are significant and of practical importance)

In this study notice will only be taken of the large effects.

Results

Test reliability

The reliability of The Le Roux Loneliness questionnaire and the amended "Morally Debatable Behaviors Scale" (The Behaviour questionnaire) was investigated in this study. The results were as follows:
From the above it appears that both the questionnaires had

a good reliability rating. The alpha-coefficient of The Le Roux Loneliness Questionnaire (0.782) was lower than that obtained in previous studies. The alpha coefficient of The Behaviour Questionnaire (0.832) correlates with the finding of Le Roux (2003:157), namely 0.82.

Averages and standard deviations of all the givens

According to Hypothesis 1 (see 6.1) there is a correlation between an adolescent's loneliness and the predictor variables. The averages and standard deviations that precede the correlation are depicted in table 3.

According to Table 3 the average for the total group on the loneliness questionnaire is 59.043 with a standard deviation of 10.718. All the averages obtained were under the theoretical average of 75. Thus it would appear that as a group the scholars did not experience much loneliness.

As far as gender is concerned the female adolescents had a higher average loneliness score than the male adolescents, which could possibly indicate that they are more inclined to be lonely.

Table 3 shows further that the black adolescents obtained the highest average score (59.819), which indicates that they tend more towards loneliness than white and Coloured adolescents. The Coloured and white adolescents' average scores were 59.803 and 56.764 respectively. This indicates that white adolescents are less inclined towards loneliness than black and Coloured adolescents.

With respect to mother tongue, the Sotho-speaking adolescents obtained the highest average score (60.065), which indicates that they are lonelier than the Afrikaans- and Tswana-speaking adolescents. The Tswana- and Afrikaans-speaking adolescents' average scores were 58.843 and 58.460 respectively. Thus Afrikaans-speaking adolescents experience the least loneliness. The English-speaking adolescents obtained an average of 59.200, but this score was omitted from the calculations because there were only six (N=6) adolescents who indicated that their mother tongue was English.

Lastly Table 3 shows that older adolescents (16-17 years) tend more towards loneliness than younger adolescents (13-15 years). The former group's average was 60.826, while the latter group's was 58.101. The averages and standard deviations obtained on The Behaviour Questionnaire are given in Table 4.

Table 4: Averages and standard deviations of the biographical variables with respect to morality amongst adolescents

Predictors		Average	Standard deviation
Gender	Male	72.732	9.676
	Female	77.217	8.519
Ethnic group	Coloured	74.580	8.427
	Black	75.257	9.973
	White	75.869	8.236
Mother tongue	Tswana	76.745	9.309
	Sotho	74.368	10.570
	English	72.000	2.828
	Afrikaans	75.101	8.680
Age (in years)	13-15	75.874	8.788
	16-17	73.729	10.178
Total		75.132	9.341

According to Table 4 the average for morality obtained on The Behaviour Questionnaire was 75.132 with a standard deviation of 9.341. The average is higher than the theoretical average of 55 throughout. It would thus appear that the adolescents as a group possess good moral values.

It appears that the female adolescents have higher moral values (77.217) than the male adolescents (72.732). As far as ethnic group is concerned, the white adolescents obtained a higher average (75.869) than the black adolescents (75.257) and Coloured adolescents (74.580). It would thus seem that white adolescents evince higher moral values than black and Coloured adolescents.

With regard to mother tongue, the Tswana-speaking adolescents obtained the highest average, which indicates that they have higher moral values than the Afrikaans- and Sotho-speaking adolescents, whose averages were 75.101 and 74.368 respectively. The English-speaking adolescents (N=6) were left out of the calculations as only six adolescents indicated that their mother tongue was English.

Table 4 shows further that the younger adolescents's average was 75.874, while the older adolescents's average was 73.729. Thus it would appear that younger adolescents are more inclined to have higher moral values than older adolescents.

Inter-correlation matrix

In Table 5 the results of the correlation between loneliness and morality, as well as the biographical variables are given in an inter-correlation matrix. The matrix contains the correlation coefficient as well as the level of significance. The variables that correlate with the 1%-mark of significance will be discussed subsequently.

According to Table 5 morality shows the strongest correlation with loneliness, namely -0.202 , which is an inverse and highly significant correlation ($p=0.000$). This inverse correlation means that those who have low moral values tend more towards loneliness, while those who have higher moral values are less inclined towards loneliness.

The next-highest predictor of loneliness was age. This positive correlation of 0.121 between loneliness and age is also highly significant ($p=0.001$). The older the scholars, the more they were inclined to experience loneliness.

A strong inverse correlation also occurred between loneliness and ethnic group with a significance of $p=0.009$. This therefore indicates that ethnic group could possibly also be a good predictor of loneliness.

As far as morality is concerned, gender had the strongest correlation with morality, namely 0.240 with a significance of $p=0.000$. In the statistical processing of the data male was coded 1 and female 2. From this it appears that female adolescents have higher moral standards than male adolescents.

The next highest predictor of morality was age. There was an inverse correlation of -0.109 between morality and age which was also statistically significant ($p=0.003$). This indicates that the older the scholars the more they are inclined to have lower moral values, while younger adolescents tend towards higher moral values.

Hierarchical regression analysis

The table below (Table 6) contains the results of a hierarchical regression analysis carried out to investigate the main research hypothesis and sub-hypothesis. It contains details of the variables entered consecutively, the multiple correlations (R), the proportional variance that is explained (R^2), the standard estimate errors and the F-values for the determination of the significances.

Table 6 shows that morality could only account significantly for 0.043 of the variance of loneliness ($p=0.000$), while the contribution of age was 0.013 ($p=0.003$). Neither gender, mother tongue nor ethnic group could make a significant contribution to the prediction of loneliness. Thus morality appears to be the best predictor of loneliness, followed by age.

In Table 7 the proportions and percentages of the variance (R^2) explained by all the predictors is given.

According to Table 7 it is clear that the predictor variables can only explain 6.7% of the variance of the scholars' loneliness. Morality explains the largest percentage of the vari-

Table 5: Inter-correlation matrix of all the predictor variables

	Loneliness	Morality	Ethnic group	Gender	Age	Mother tongue
Loneliness	1.000					
Morality	-0.202** p = 0.000	1.000				
Ethnic group	-0.098** p = 0.009	0.025 p = 0.507	1.000			
Gender	0.020 p = 0.588	0.240** p = 0.000	0.066 p = 0.079	1.000		
Age	0.121** p = 0.001	-0.109** p = 0.003	-0.066 p = 0.079	-0.060 p = 0.110	1.000	
Mother tongue	-0.026 p = 0.491	-0.023 p = 0.537	0.028 p = 0.676	0.028 p = 0.451	-0.004 p = 0.922	1.000

**p ≤ 0.01

ance of the adolescents' loneliness, namely 4.3%. Then come age, gender and ethnic group, which account for 1.3%, 0.8% and 0.8% of the variance of the criterion variable respectively. Mother tongue accounts for the smallest percentage of the variance of the adolescents' loneliness, namely 0.1%.

In order to determine whether the differences between the white and Coloured, as well as the white and black adolescents' loneliness figures were real and of practical significance, Cohen's "d" test was carried out. The results are shown in Table 8.

According to Table 8 it is clear that the effect for black adolescents ("d" = 0.8) is large compared to that of the Coloured ("d" = 0.4) and white adolescents ("d" = 0.2), which are small. According to Cohen, this means that the differences between the propositions concerning black and white adolescents' loneliness are real differences. Black adolescents are lonelier than white adolescents, but the effects for the Coloured and white adolescents are small and insignificant.

Table 6: Contributions of the different variables to R² with regard to loneliness

	Variables	R	R ²	Standard error	F	p
1	Morality	-0.207	0.043	0.043	-5.487	0.000**
2	Gender	0.088	0.008	0.809	2.335	0.020
3	Age	0.112	0.013	0.288	3.023	0.003*
4	Mother tongue	-0.025	0.001	0.312	-0.689	0.491
5	Ethnic group	-0.089	0.008	0.531	-2.435	0.015

**p ≤ 0.01

nificant.

Discussion

The results obtained in the research are discussed below. In Hypothesis 1, it was postulated that there is a linear relationship between adolescents' loneliness and a number of predictor variables, namely morality, gender, age, mother tongue and ethnic group.

The correlation between loneliness and morality

The findings show that morality is the best predictor of adolescents' loneliness. In addition, morality also accounts significantly for the largest percentage of the variance of loneliness. A highly significant inverse correlation was found between morality as predictor variable and the criterion variable. This means that adolescents who have lower moral values are more inclined towards loneliness, while those with higher moral values are less inclined towards loneliness.

The main research hypothesis is thus herewith confirmed.

These results are in agreement with the philosophy of Cruz (1983:16), namely that there is indeed a correlation between loneliness and morality. He is also of the opinion that immoral behaviour can give rise to or foster loneliness, and vice versa (Cruz, 1983:16). This is a new finding, as no empirical results occur in the existing literature.

Table 7: The proportions and percentages of the variance explained by all the predictors

Predictor variables	Proportion of unique variance (R ²)	Percentage of unique variance (R ²)
Morality	0.043	4.300
Gender	0.008	0.800
Age	0.013	1.300
Mother tongue	0.001	0.100
Ethnic group	0.008	0.800
Variables jointly	0.067	6.700

The correlation between loneliness and age

It was also found that age is the next best predictor of loneliness. Age accounts very significantly for the second largest percentage of the variance of loneliness. A highly significant positive correlation was found between age as predictor variable and loneliness. This suggests that the older the scholars, the more likely they are to experience loneliness.

These results appear to agree with those of Mullett (2002:123), who also found that older adolescents were more likely to feel lonely than younger adolescents. Neto and Barros (2000:503) and Taylor et al. (2000:237) also feel that adolescents are more inclined to experience loneliness, but that loneliness decreases with age. Thus age goes hand-in-hand with greater social skills and more realistic expectations from social relationships (Taylor et al., 2000:237).

The correlation between loneliness and ethnic group

A strong inverse connection was found between loneliness and ethnic group, but the latter did not succeed in making a significant contribution to the prediction of loneliness.

Mullett (2002:93) found in her study that Coloured and black

adolescents tend more to loneliness than white adolescents. Although the Coloured adolescents in her investigation were also less lonely than the black adolescents,

Table 8: The effect of ethnic differences with respect to loneliness

Variable	Loneliness
Ethnic : Coloured	0.4
Black	0.8**
White	0.2

** Large effect

this difference was also not significant. Peplau and Perlman (1982:5) are also of the opinion that black people are generally more inclined to experience loneliness than white persons. The results in this study appear to agree with this where black adolescents tend more towards loneliness, followed by Coloured and white adolescents.

The correlation between loneliness and gender

The results show no correlation between loneliness and gender. In 2.1 it was shown that various researchers obtained similar results (Demir & Fisiloglu, 1999:235; Demir & Tarhan, 2001:118; Le Roux & De Beer, 1994:65; Le Roux, 1992; Neto & Barros,

2000:505; Renshaw & Brown, 1992:546; Scholtz, 1995:45).

The correlation between loneliness and mother tongue

The results show that there is no correlation between loneliness and mother tongue. No literature could be found on this.

According to the preceding discussion, Hypothesis 1, namely that there is a correlation between loneliness and a number of predictor variables, may be partially accepted. Only gender and mother tongue show no correlation with the criterion variable.

Conclusion

The most important finding of this investigation is that there is a significant inverse correlation between loneliness and morality and that morality is the best predictor of adolescents' loneliness. Accordingly, adolescents who gained low moral counts are lonelier than adolescents who possess high moral values. This is a new finding and should be investigated further.

In addition it was also established that age and ethnic group are important variables in the study of loneliness. Older adolescents are more inclined to experience loneliness, while younger adolescents incline less towards loneliness. The results of this study also proceed from previous research, which found that culture is an important variable in the study of loneliness. Black adolescents are significantly more inclined towards loneliness than white and Coloured adolescents.

Loneliness therefore remains a worrying, complex phenomenon that more generally occurs during adolescence. Various reasons for this have already been advanced, but according to Demir and Tarhan (2001:113) and Taylor et al. (2000:237) the most cogent reason is that adolescence is a developmental period of transition between childhood and adulthood. According to them this causes more social changes, such as leaving home, living on their own, going

to university or starting a full-time job (Demir & Tarhan, 2001:113; Taylor et al., 2000:237).

Loneliness amongst adolescents must not be treated lightly as it can lead to various unpleasant experiences, dangers or negative effects. It is therefore important that as much information as possible should be gained on loneliness, so that it can be successfully tackled and solved. The researchers trust therefore that the results of this investigation can be advantageously used for combatting loneliness.

Review and recommendation

Arising from this study, the following points of review and concomitant recommendations are made:

- This research was carried out only on scholars from three different secondary schools in the larger Bloemfontein area. Consequently, the research results cannot be extrapolated to all learner populations in South Africa. Equally the results cannot be applied to other non-schoolgoing adolescents. It is recommended that similar research be carried out on scholars in other secondary schools as well as non-schoolgoing adolescents from all the other provinces.
- As only six (N=6) adolescents indicated that their mother tongue was English, the impact of English as a mother tongue on both loneliness and morality could not be effectively determined. It is recommended that in similar future studies provision is made to ensure that sufficient information is obtained for each category.
- The researcher recommends that the results concerning morality as a variable (see Table 5) be investigated in a follow-up study, as they were not proposed as objectives of this study.

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