

Depression Among Muslim Arab Students: The Contribution of Spiritual, Social, and Cognitive Factors

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This study examines the correlation among a number of personal and environmental variables that can be related to decrease in depression. These are: religiosity, social support, and self-control. The participants in the study consisted of 280 Arab Muslims students from teacher training colleges in Israel. The findings indicate that all the resources that were examined related to decrease in depression, in other words, significant negative correlations were found between the level of religiosity, social support, and self-control on the one hand, and the level of depression on the other. These findings are consistent with those of other studies conducted elsewhere in the world on different populations (Christian and Jewish, as well as Muslim). The findings were discussed in accordance with a number of different theories.

Keywords: Muslim Arab adolescents, depression, religiosity, social support, self-control

Introduction

This study examines the contribution of number of personal and environmental resources in reducing depression. Depression in the various forms that it can take is considered one of the most prevalent mental disorders of the 21st century. Clinically, depression is a syndrome that includes: marked affective liability; marked irritability; markedly depressed mood, feelings of hopelessness, or self-deprecating thoughts; marked anxiety; decreased interest in usual activities; subjective sense of difficulty in concentration; marked lack of energy; marked change in appetite; hypersomnia or insomnia; a subjective sense of being overwhelmed or out of control and other physical symptoms such as breast tenderness or swelling, joint or muscle pain, a sensation of “bloating”, weight gain (DSM-V, 2013).

A great number of studies that examined depression and its various forms in different Western societies show that 15% of adults (12% among men and 25% among women) suffered from depression at least once in their lives (Kaplan, Sadock, & Grebb, 1994).

Other studies (Steffens et al., 2000) found higher percentages (between nine and 20), claiming that many people simply did not access treatment. The present study focuses on depression among Muslim Arab students in Israel. According to a survey by the World Health Organization, about 40% of Israeli youth reported being very happy, but the percentages rise with increased age. In this respect, no difference was found between Jews and Arabs. However, only 2% of Jewish students reported that they were not at all happy, in contrast to 7% of Arab students (6% among boys and 8% among girls). About one-fourth of youths in Israel (Jews and Arabs) reported that the security situation has an adverse effect on their concentration (Kaplan et al., 2010). Some 21%

of Israeli youth reported that they experience mental symptoms (such as anger, nervousness, and bad mood) almost every day; the percentage among Arab students was much higher than among Jewish students (about 35% versus about 17%, respectively) (Kaplan et al., 2010). About 10% of students report feeling lonely, Jewish students less so than Arab students (about 9% versus 17%, respectively).

In recent decades, a great number of variables that may have the potential to reduce the severity of depression or to give immunity from it have been proposed. The present study will focus on the possible contribution of religiosity, self-control and social support to moderating depression among Muslim Arab adolescents.

Religiosity

In recent years, we are witnessing a resurgence of the effect of religiosity and spirituality on human behavior. Psychologists are beginning to recognize the role that faith and spirituality can play in ameliorating mental welfare. Traditionally psychology has taken a negative view of spirituality. From Freud to Ellis, some psychologists and psychiatrists have viewed religion as “irrational” and as “a mechanism for people who cannot cope with life” (Clay, 1996, p. 1).

Studies on religiosity and depression support the conclusion that certain aspects involving religiosity correlate with less depression. People who are frequently active in the religious community and attach great importance to their faith may be less at risk of falling into depression. Even when such people do experience depression, the study indicates that they can recuperate from it faster than people who are not religious. Religious involvement thus plays an important role in helping people cope with the effects of the pressures of life (Koeing, McCullough, & Larson, 2001).

Many studies show a negative correlation between religiosity, depression (Davis, Kerr, & Robinson-Kurpius, 2003) and anxiety (Harris & Molock, 2000), and positive correlations with satisfaction with life (Diener & Clifton, 2002; Fife, 2005), emotional adaptation, self-esteem, control and coping (Levin & Chatters, 1998). On the other hand, some studies have shown a positive correlation between lack of spirituality and some negative mental states, including depression (Wright, Frost, & Wisecarver, 1993), drug abuse (Maton & Zimmerman, 1992), suicide and anxiety (Baker & Gorsuch, 1982; Gartner, Larson, & Allen, 1991).

Ellison (1991) tried to explain how spirituality and religiosity can promote happiness and mental welfare in terms of enhanced integration and social support as a result of observance of religious ritual (for example, attending church services). The development of a profound belief in God may also promote happiness by reducing stress and improving coping strategies. Religiosity and spirituality may also provide meaning, cohesion and a sense of purpose in life.

It should be noted that the overwhelming majority of these studies were carried out in the West, on Christian and Jewish subjects. No studies at all have examined this correlation among Palestinian Arabs living in Israel. The present study thus presents pioneering research on the Muslim Arab population in the State of Israel.

Many studies have found a negative correlation between religiosity and depression and anxiety (Amrai, Zalani, Arfai, & Sharifian, 2011; Khodayarifard, Yeylagh, Movahhed, & Shokrkon, 2002).

There is a consensus among researchers today that social support networks are an essential part of environmental resources serving the individual (Lazarus & Folkman, 1984). These networks refer to all people with which the individual has personal, social, and familial relationships (B. R. Sarason, I. G. Sarason, & Pierce, 1990). One question in this connection is what is the contribution of environmental resources to the reduction of depression levels.

Social Support

Social support is considered a significant variable in improving positive affect and happiness (Fredrickson, 2009). In the literature, it has been described as an environmental coping resource (Cohen & Wills, 1985). An individual's system of social support consists of all the people with whom that individual has personal, social and/or family relations (Sarason et al., 1990) and consists of four main types of support: informative, instrumental, emotional and companionship (Cohen & Wills, 1985). These types of support help the individual cope with sources of stress (House, 1981).

In the literature, two main ways are presented in which social support affects mental welfare. One of these, the main effect, has a direct positive influence on an individual's mental welfare irrespective of situations of stress. The basic claim is that such support can develop and enhance feelings of ability, self-esteem, or self-capability. Such feelings make it possible for the individual to cope successfully with life's challenges. The other way is the buffer effect, according to which social support has an indirect effect on an individual's mental welfare, by reducing negative implications of the response to feelings of pressure (Antonucci & Akiyama, 1994; Cohen & Wills, 1985). In this way support constitutes a coping strategy (Antonucci & Akiyama, 1994).

Support by friends and teachers has an ameliorating effect on the psychological difficulties caused by war (Klingman, 2001; Klingman, Sagi, & Raviv, 1993; Swenson & Klingman, 1993). Greenbaum, Erlich, and Toubiana (1993), who examined the sources of support among children in the Gulf War, found that parents and friends were sought as sources of support relatively more frequently than school and hot lines.

During childhood family support is very important, but in the course of adolescence, friends and other people outside the family become a more significant source of support (Cotterel, 1994). Most adolescents turn to their friends rather than their parents for purposes of joint leisure activities, friendship and understanding (Blyth, Hill, & Thiel, 1982), as well as for feedback, practical information, and emotional support (Jaffe, 1998). The peer group serves as a powerful source of social compensation, including prestige, acceptance, status and popularity, all of which promote an adolescent's self-esteem (Bishop & Inderbitzen, 1995). Relations with the peer group are characterized by greater intimacy and support than in early childhood (Jaffe, 1998); they play a crucial role in promoting normal mental development (Steinberg, 2002) and also constitute a defense mechanism in times of stress (Montemayor & Van Komen, 1980).

Most findings in studies that examined the correlation between social support and mental health have consistently supported the conclusion that social support contributes positively to improvement in mental health and reduction of depression levels (Irwin, LaGory, Ritchey, & Fitzpatrick, 2008; Marroquín, 2011). Conversely, low levels of social support are considered a risk factor for depression. Social support includes sympathy, encouragement and support by colleagues, teachers, friends, and family members (Kim, 2001; Olsson, 1998). High levels of family support have been found to correlate with low levels of depression and reduced levels of suicidal thoughts (Galambos, Barker, & Krahn, 2006; Stice, Ragan, & Randall, 2004; Travis, Lyness, Shields, King, & Cox, 2004). Social support and self-esteem have been shown to correlated negatively with depression among Iranian students (Talaie, Fayyazi, & Ardani, 2009).

Studies have shown that personal resources are important for an individual's ability to cope with stressful situation (for example, Gyurak & Ayduk, 2008; Ronen & Seeman, 2007; Weisbrod, 2007). In the present study, we focus on self-control as a variable representing an adolescent's personal resource for reducing stress.

Self-Control

The concept of self-control refers to behaviors that individuals carry out of their own free choice, at the expense of a more attractive behavior, and in favor of one that is considered more desirable (Thoresen & Manhoney, 1974). This definition contains two elements: one of these is free choice, that is, a behavior which a person chooses because he or she realizes that this behavior is important. Such a choice is not the result of pressure from one's environment or out of necessity. The second element is choosing between mutually contradictory behaviors, among which the individual has to choose either one that is more important (or efficient) for them or the one that is more desirable at that moment (Ronen, 1997).

In the present study, the term "self-control" refers to the activation of a set of skills in order to reach a desirable goal. This set includes cognition and self-instructions for coping with various emotional and physiological responses, the use of problem-solving strategies, the ability to postpone gratification, and a belief in one's ability to control oneself in internal events (Rosenbaum, 1980).

In a number of studies on children and adolescents, it was found that subjects who possessed such self-control skills as gratification postponement, problem-solving, and cognitive structuring evinced less aggressive behavior (Blair, Denham, Kochanoff, & Whipple, 2004; Gyurak & Ayduk, 2008; Weisbrod, 2007). It was also found that high levels of self-control are associated with greater success in forming social ties, more adaptive emotional responses to stressful situation, and fewer reports of psychopathology (Tangney, Baumeister, & Boone, 2004).

Agbaria, Ronen, and Hamama (2012) examined the correlation between self-control and the frequency of psychopathological symptoms in the wake of exposure to war events among adolescents. The findings pointed to a moderating influence by self-control skills, which tended to reduce depression, anxiety, and other psychopathological symptoms.

In a study that observed the relationship between self-control and anxiety and loneliness among siblings of children with cancer. Siblings who reported higher levels of self-control had lower levels of anxiety and loneliness (Hamama, Ronen, & Feigin, 2009). Another study, that examined the moderating effect of self-control skills among women with a history of physical, sexual or emotional abuse who suffered from post-traumatic symptoms, found that women who possessed a high degree of self-control reported weaker post-traumatic symptoms than women with low self-control (Walter, Gunstad, & Hobfoll, 2010).

The findings of the above-mentioned studies lead to the supposition that self-control is associated with lower levels of psychopathology.

Research Hypotheses

There are three hypotheses in this research:

- H1: There is a negative correlation between self-control and depression;
- H2: There is a negative correlation between social support and depression;
- H3: There is a negative correlation between religiosity and depression.

Method

Participants

The study population consisted of 280 Arab students at Arab teachers' colleges. They were chosen in a convenience sampling of students at colleges that are representative of students of teaching in the Northern and

Southern Triangle regions. The students in these colleges are Muslims from an average socio-economic background.

13.8% are boys and 86.2% are girls; first year students constitute 45.6%, second year students 23.8% and third year students 30.6% (Age: $M = 20$, $SD = 4.22$). The distribution is quite even (with a range of between 13 and 18%) among the various disciplines.

Research Tools

Adolescents completed five self-report questionnaires. All the instruments were previously adapted to Arabic using back-and-forth translation from English/Hebrew by bilingual professionals.

Personal details questionnaire. This questionnaire elicits personal information about the subject and his family: gender, year of birth, academic year and field of specialization.

Position on religion questionnaire. This questionnaire, which was developed by Kendler, Gardner, McCullough, Larson, and Prescott (2003), was translated into Arabic and adapted to an Arab-speaking Muslim population. Five items were deleted from the original questionnaire and 12 were added. The questionnaire's validity was tested by five referees and it was subsequently corrected until it attained its final form. In addition, factor analysis was used, and the items were with a charge level over 0.40. The Cronbach alpha values for the various dimensions were high, ranging between $\alpha = 0.86$ and 0.93.

The questionnaire elicits positions on various aspects of religion. It consists of 63 items that express five dimensions: religiosity in general, social religiosity, forgiveness, God as judge, and lack of a desire for revenge.

The subject is asked to assess each item on a scale of five points (1 = "Never", 2 = "Rarely", 3 = "Occasionally", 4 = "Often", 5 = "Always"). Of the five dimensions, the present study made use of only one, the first, with thirty-one items that reflect components of spirituality and understanding their place in the universe, in addition to the connection to God as expressed in everyday activity and in times of crisis.

Adolescence self-control scale. This questionnaire was originally developed by Rosenbaum (1980) for the purpose of assessing individual differences in self-control skills. It examines self reports on the use of cognitions (such as instructions to oneself) and the application of problem-solving strategies in order to cope with emotional and physiological responses.. The subject is asked to assess each item on a six-point Likert scale (from 1 = "Very untypical of me" to 6 = "Very typical of me"). The questionnaire was checked according to a scale from -3 to 3 points, according to the extent to which the subject assesses the item as being typical of him. The questionnaire contains nine inverse items.

In reliability tests of the questionnaire among adults and adolescents (Rosenbaum, 1980) relatively high Cronbach alpha values were found (0.87). The measure had used in previous studies with Arab students with high Cronbach alpha value (0.79) (Agbaria et al., 2014).

Social support questionnaire. Social support was measured by using ISEL (Interpersonal Support Evaluation List) developed by Cohen, Mermelstrin, Kamarck, and Hoberman (1985), concerning the perceived availability of potential social resources. The original scale consists 40 items, with four subscales (appraisal, belonging, tangible support, and self-esteem support). The reliability of the ISEL is $\alpha = 0.90$. In this study, we administered a short version of this scale (12 items) including the first three subscales mentioned above, with four items in each, for example: "I feel that there is no one I can share my most private worries and fears with". The items were rated on a 4-point scale ranging from "Definitely false" (1) to "Definitely true" (4). Higher score reflects greater perceived support.

BDI (Beck Depression Inventory). This consists of 21 items, each with four response options, and has a reading level of approximately fifth grade. The scale is intended to rate severity of depression in individuals age 13 years and older. Internal consistency of the scale is high (0.86 to 0.88 among psychiatric patients and 0.81 with non-psychiatric subjects). There is ample evidence of construct and concurrent validity; BDI and clinical ratings of depression among psychiatric samples were highly correlated in meta-analyses.

The Research Procedure

The questionnaires were approved by the head scientist of the Ministry of Education. After approval was given, the questionnaires were distributed in the colleges. After the colleges gave their approval, a letter was sent to the students in which the purpose of the study was explained. They were asked whether or not they agreed to take part in filling in the questionnaires. In the final stage, the first researcher came to the colleges for a day. He entered the classrooms and explained the purpose of the questionnaires to the students. He stressed that the questionnaires would remain anonymous and that the findings would be used only for the study. The level of cooperation was very high; about 90% of the students who received the letter inviting them to participate, present at the lectures agreed to fill in the questionnaires. They were distributed in Arabic, a language into which they had already been translated before for use in previous studies.

The Findings

Table 1

Means, Standard Deviation, Range and Reliability of Research Measurements (n = 280)

Variable	Mean	SD	Median	Range	Reliability
Self-control	4.09	0.58	4.26	3.22	0.78
Social support	3.17	0.68	3.23	2.99	0.76
Depression	0.65	0.59	0.47	2.11	0.90
Religiosity	4.02	0.98	4.42	4.44	0.89

Statistical analyses were conducted in order to check correlations among the study's variables and to test the research hypotheses. Table 2 describes the connections between the variables, based on Pearson correlations.

Table 2

Pearson Correlations Between the Study Variables

	Age 1	Sex 2	Self-control 3	Religiosity 4	Depression 5	Social Support 6
1	-					
2	-0.31**	-				
3	0.018	0.087	-			
4	0.010	0.184*	0.26**	-		
5	-0.024	-0.156	-0.381**	-0.681**	-	
6	0.067	0.135*	0.212**	0.552**	-0.513**	-

Notes. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

As Table 2 shows, significant negative correlations were found between depression and the other variables (self-control, religiosity, and social support): for example, a significant negative correlation between self-control and depression ($r = -0.381$, $p < 0.01$) as well as between social support and depression ($r = -0.513$, $p < 0.01$).

In order to test the research hypotheses, Pearson coefficients were computed and hierarchical regression analyses were carried out. Multicollinearity test was conducted, and indicated the VIF (Variance Inflation Factor) values close to one.

H1 focused on the connection between self-control and depression. Here, too, hierarchical regression analyses were carried out. In the hierarchical regression that tested depression as a dependent variable demographic variables (age and gender) were entered in the first step. In the second step, self-control, religiosity, and social support were entered. In this analysis, it was found that gender and self-control contribute to explaining the variance in depression; the contribution of gender was significant (see Table 3) (BETA = -0.13, $p < 0.05$): among girls depression was found to be greater than among boys. Self-control, too, was found to contribute significantly to explaining the variance in depression (BETA = -0.14, $p < 0.05$), thus confirming the first hypothesis.

Table 3

Regression Analysis of the Student Depression

	Beta	Adjusted
<i>R</i> -square		
Step 1		0.02
Sex	0.13*	
Age	0.008	
Step 2		0.55
Self-control	-0.14*	
Social support	-0.18**	
Religiosity	-0.54**	

Notes. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

H2 focused on the connection between religiosity and depression. Table 2 shows a significant negative correlation between the two.

A hierarchical regression analysis on depression as a dependent variable (see Table 3) found a significant negative correlation between religiosity and depression (BETA = -0.54, $p < 0.001$), thus confirming the second hypothesis.

The third hypothesis concerned the connection between social support and depression. Table 2 (correlations) shows that there is a significant negative correlation between social support and depression. Regression analysis shows that social support contributes significantly to explaining the variance in depression (BETA = -0.18, $p < 0.05$), giving confirmation to the third hypothesis.

Discussion

The study was conducted among Arab students of teaching in Israel; it addressed, for the first time, the issue of depression among Arab students with reference to the variables of social support, religiosity and self-control. All the research hypotheses may be said to have been confirmed. The findings in the present study are consistent with and reinforce those of previous studies conducted on other populations, in Israel and elsewhere (for example, Agbaria et al., 2012; Amrai, Zalani, Arfai, & Sharifian, 2011; Hamama et al., 2009; Irwin, LaGory, Ritchey, & Fitzpatrick, 2008; Marroquín, 2011).

Self-Control

The study's results point to a significant negative correlation between self-control skills and depression. As already noted, it was found that adolescents who possessed self-control skills had lower levels of depression. This finding is consistent with other studies which showed a correlation between depression low self-control (Agbaria et al., 2012; Hamama et al., 2009).

A possible explanation of this finding may lie in the manner in which self-control skills are applied. In other words, an adolescent's ability to identify automatic thoughts, to use diversion and alternative thinking and to find alternative solutions in the form of self-control skills, will lead him or her to choose a more adaptive behavior that may attract reinforcements of various kinds and so lead to an improvement in mood.

The study's findings showed that the more self-control an adolescent has the lower the level of depression he reports. The correlation found here is supported by previous studies (Hamama, Ronen, & Feigin, 2000; Hamama et al., 2009). A possible explanation for this correlation is based on the model of Lazarus and Folkman (1984), according to which a situation of stress is accompanied by three processes: preliminary evaluation, secondary evaluation, and coping. Coping is influenced by the characteristic of the stressing event and the internal and environmental resources available to the individual. Coping is what the individual thinks or does in a given context and not what he says he would do in such a context, or what usually happens in general contexts.

According to the model of Lazarus and Folkman (1984), self-control is thus the resource of coping. Therefore, adolescents with high self-control skills showed fewer symptoms than those characterized by low self-control skills.

Another explanation for the finding is related to the way self-control skills are used. In other words, an adolescent's ability to identify automatic thoughts, to use diversion and alternative thinking, and to find alternative solutions that are self-control skills, will lead him to choose a controlled, planned, adaptive and less symptomatic behavior.

Religiosity

The results of this study indicate that there is a significant negative correlation between religiosity (or religious inclination) and depression and anxiety. The results of this study concur with the findings of many other investigators (for example, Amrai, Zalani, Arfai, & Sharifian, 2011; Koeing, McCullough, & Larson, 2001; Shehni, Movahhed, & Shokrkon, 2002; Thoresen & Harris, 2002).

The connection between religiosity and depression can be explained in terms of various different behavioral and cognitive approaches. According to one approach, the individual's behavior results from interpretations which he or she gives to experienced events; every event thus receives an interpretation that evokes different feelings, and these lead to behavior (Beck, 1995). From this explanation we may deduce that religious people preserve beliefs and schemata that provide them with important meanings in life, which make it easier for them to give interpretations that promote satisfaction and happiness. The schemata with which they are provided help them obtain self-control and improve their mental welfare. In a preliminary qualitative study on religious adolescents the following schemata were found (Agbaria & Watad, 2011): "In the end God will help me", "I refrain from behavior that would anger God", "Acceptance and patience in the face of crises will result in greater divine compensations for me", as well as schemata that are based on Quranic verses or quotes from the words of the Prophet, such as: "Seek seventy excuses for your brother before you judge him", "The

strong is not the powerful but he who restrains himself when angry”, “God’s decrees must be accepted”.

Eventually such schemata become an integral part of a believing person’s cognitive-behavioral repertory and may affect and direct his or her behavior in various situations. Furthermore, the physical acts of religious observance such as prayer, pilgrimage, religious rites, almsgiving and participation in group activities, as well as the social support generated by these activities, can improve one’s mood, enhance one’s feeling of belonging, and give meaning to one’s life.

Social Support

The study’s findings point to a negative correlation between social support and depression. This is consistent with the results of previous studies, most of which report that social support contribute positively to mental health and reduction of levels of depression (Irwin, LaGory, Ritchey, & Fitzpatrick, 2008; Marroquín, 2011) and suicidal tendencies (Galambos, Barker, & Krahn, 2006; Stice, Ragan, & Randall, 2004; Talaei, Fayyazi, & Ardani, 2009; Travis, Lyness, Shields, King, & Cox, 2004).

Social support is associated with an increased sense of belonging; it can alleviate an individual’s feeling of stress by answering the need for ties with others, diverting attention away from worries about the situation and improving one’s mood (Cohen & Wills, 1985).

In the literature, two main ways are presented in which social support affects mental welfare. One of these, the main effect, has a direct positive influence on an individual’s mental welfare irrespective of situations of stress. The basic claim is that such support can develop and enhance feelings of ability, self-esteem or self-capability. Such feelings make it possible for the individual to cope successfully with life’s challenges. The other way is the buffer effect, according to which social support has an indirect effect on an individual’s mental welfare, by reducing negative implications of the response to feelings of pressure (Antonucci & Akiyama, 1994; Cohen & Wills, 1985). In this way support constitutes a coping strategy (Antonucci & Akiyama, 1994).

Social support can reduce stress by affecting an event’s primary or secondary assessment (Cohen & Edwards, 1989). When an individual perceives a support network as available, this may depress assessments of potential threat deriving from the event, encourage the individual to believe in his or her ability to cope with the event, and/or encourage the use of adaptive coping strategies such as problem-solving and positive reevaluation (Cohen & Edwards, 1989; Cohen & McKay, 1984). Thus, according to the model proposed by Lazarus and Folkman (1984), social support is perceived as an environmental resource that can help one cope with pressures and severe events.

Conclusion

To conclude, the study’s findings indicate that a number of resources related to a reduction of depression among Arab students. The study sheds light on the importance of personal resources such as self-control, religiosity, as well as of environmental resources such as social support, in reducing depression levels. The findings in this study add to previously accumulated theoretical knowledge on depression among adolescents and college students. It also has a potential practical application, in helping develop programs for training and implementation of skills that stress the importance of enhanced self-control and for developing means for obtaining social support. It also shows the importance of imparting religious values in order to improve social behavior and reduce the tendency to fall into depression.

A number of factors place limits on the generalizing the conclusions from this study. One of these is the

sample. The present study is based on a “convenience sample” which is not probabilistic, consisting of Muslim students only from the Triangle region of Israel, in which about twenty percent of the country’s Arab population lives. Since the sample contained only Muslims, there was no representation of Christian, Druze, and Bedouin Arabs. We therefore recommend that the study be repeated with a representative sample. In addition, the present study was based on self-reporting questionnaires, which reflect the perspectives of the students; however, other elements, such as the peer group or the parents, may give different information.

Follow-up research could put some of the findings of the present study in sharper focus and also shed light on issues that are relevant to the topic, such as the effects of one’s personal status (bachelor, married, widowed, etc.), economic situation and place of residence.

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