

The impact of friends' social support on depression in young adults with visual impairments

Abstract

The aim of this study was to examine the association between social support from friends and depression in young adults with visual impairments. Forty young adults with visual impairments, ranging in age from 18 to 40 years, completed the 21-item Beck Depression Inventory (BDI-I) and a self-developed social support questionnaire. Significant individual predictors of depression were negative practical support and positive practical support. The respondents who received more positive practical social support from their friends reported fewer depressive symptoms. Furthermore, fewer depressive symptoms were also associated with receipt of less negative practical social support.

Keywords: visual impairments, positive social support, negative social support, depression, young adults

Introduction

Visual impairment can limit people's social contact with others, reduce their sense of independence and lead to low self-esteem, diminished emotional security and depression (Branch, Horowitz, & Carr, 1989; Van Huijgevoort, 2002). Adjusting to loss of vision, is a lifelong process that can be split into different phases, most or all of which may be experienced by individuals with severe visual impairment (Tuttle & Tuttle, 1996, 2004). The process of adjustment appears to differ in most of the cases for individuals with a congenital visual impairment, as they are less likely in comparison to individuals with an adventitious visual impairment, to feel fear, anger or depression due to their visual loss, since they have never experienced vision before (Dickerson, Smith, & Moore, 1997, p. 16).

Visual impairment and depression

Researchers and rehabilitation professionals have investigated the relationship between depression and visual impairment. Several studies indicate that individuals with visual impairments are at greater risk for depression than their sighted peers (Branch et al., 1989; Burmedi, Becker, Heyl, Wahl, & Himmelsbach, 2002; Carabellese et al., 1993; Verbrugge & Patrick, 1995), as they have lower psychological well-being scores (Pinquart & Pfeiffer, 2011). Rehabilitation professionals working with individuals with visual impairments frequently encounter clients who display symptoms of depression (Stewart, Reilly, & Sachidanadam, 1998).

Depression is common amongst older adults with visual impairments (Evans, Fletcher, & Wormald, 2007; Hayman et al., 2007; Horowitz & Reinhardt, 2000; Horowitz, Reinhardt, Boerner, & Travis, 2003; O'Donnell, 2005). Burmedi et al. (2002, p. 51) described depression as the 'most obvious clinical syndrome' that follows visual loss especially in the older age. In their study of older adults with visual impairments

Hayman et al. (2007) distinguished between visual function and visual acuity and found that only visual function was associated with depression. According to Tolman, Hill, Kleinschmidt and Gregg (2005), poor psychosocial adjustment to visual loss is positively associated with depressive symptoms in older adults with blindness, whilst Evans et al. (2007) found that depression was more prevalent in older adults with visual impairments than in sighted adults. It should be noted, however, that depression often goes undetected and untreated in people with visual impairments and it may be hard to distinguish chronic depression from the normal grieving process associated with visual loss (Rovner, Casten, Hegel, Leiby, & Tasman, 2007).

The relationship between visual loss and depression could be due to the wider functional consequences of loss of vision as well as being directly related to loss of sight (Zhang et al., 2013). According to Bookwala and Lawson (2011), self-reported poor visual capacity in older adults is indirectly correlated with depression because it increases physical limitations and social isolation, which ultimately leads to an increase in depressive symptoms. That way it is more likely that depression is directly related to problems with functioning as a result of visual loss (Evans et al., 2007). Depression is also closely associated with functional loss and social isolation in patients with late-life visual loss (O'Donnell, 2005).

It is not clear how the severity of visual impairment influences the association between visual impairment and depression. Some researchers report that there is no association between the degree of visual acuity and depression (Hayman et al., 2007), whereas others have found that people with less severe visual loss display fewer depressive symptoms (Reinhardt, 2001). The picture is mixed, but longitudinal research indicates that visual loss is a robust predictor of both the onset and persistence of depression, even beyond dual sensory loss (Chou, 2008).

There has been scant research on how personal factors moderate the relationships between depression and visual impairment. Guerette and Smedema (2011) found that age was positively associated with depressive symptoms in adults with visual impairments. Evans et al. (2007) found that depression in adults with visual impairments worsens with age. Akhtar-Danesh and Landeen (2007) concluded that the 12-month prevalence of depression was two to three times higher in women than men, but that this gender difference diminishes with age and is not present in people aged 75 years or older.

The relationship between depression and recent onset of visual impairment is also interesting. Roy and MacKay (2002) and Tuttle (1984) have argued that it is easier to adjust to a visual impairment that is identified during the infancy or early childhood rather than one that is identified during adolescence or adulthood. Tuttle and Tuttle (2004) pointed out that people, whose visual impairment is identified during the infancy, grow up with it and so they do not have to adjust to sudden loss of vision, whereas older people, who become visually impaired, have to learn new skills and behaviors and deal with the 'trauma of blindness' (p. 166), which makes the process of adjustment more difficult, especially if they become visually impaired whilst they are of working age. Carrière et al. (2013) suggested that a recent decline in vision might be more strongly correlated with depression than a temporally stable visual impairment and Hayman et al. (2007) noted that depressive symptoms may be more common at the onset of the loss of vision. Horowitz (2003) suggested that higher levels of depression are associated with recent onset of a visual impairment. It is worth mentioning, however, that other researchers who have studied depression in older people with visual impairment have not replicated Horowitz's findings (Rovner, Zisselman, & Shmueli-Dulitzki, 1996).

Social support and health outcomes

Social support is assistance or help available to individuals from those around them (Papakonstantinou & Papadopoulos, 2010). In this study we assessed people's perceptions of the emotional and practical support available to them. Practical support was defined as informational support or provision of services and materials (Chang & Schaller, 2000) and tangible resources, such as physical aids and transportation. Emotional support included expressions of concern (Brough & Pears, 2004; Chang & Schaller, 2000) or support that made the individual feel accepted, respected and included (Chang & Schaller, 2000).

In general there is a strong association between social support and health outcomes. Social support has been found to be an important resource for coping with stress (Hobfoll, 2001). Social support can enhance psychological well-being (Cimarolli & Wang, 2006; Gençöz & Özlale, 2004; Guerette & Smedema, 2011), self-esteem (Guerette & Smedema, 2011; Sarason, Levine, Basham, & Sarason, 1983) and sense of control (Cohen & Wills, 1985). It can also facilitate successful adjustment to changes in life, including loss of vision in adults, and it can enhance the satisfaction that adults with visual impairments feel with their activities (Van Zandt, Van Zandt, & Wang, 1994).

Social support can also have negative effects. So-called 'negative social support' can have a harmful impact on mental health (Reinhardt, 2001) and can be negatively correlated with quality of life and ability to cope with stressful situations (Oxman, Freeman, Manheimer, & Stukel, 1994; Wortman & Conway, 1985). Negative social support includes help that is offered inappropriately (Sarason, Sarason, Shearin, & Pierce, 1987), unwillingly or unnecessarily. Apart from the obvious negative forms of behavior such as criticism, anger and hostility, negative social support may also

manifest as insensitivity, overprotection (Chang & Schaller, 2000; Cimarolli & Boerner, 2005), underestimating or overrating of the person's capabilities and a number of other behaviors. It seems that negative social support affects the well-being of individuals with visual impairments. Moreover, negative social support is associated with depression (Cimarolli, 2006; Cimarolli & Boerner, 2005). Perceived overprotection seems to be associated with difficulty adjusting to visual impairment in older adults (Cimarolli, Reinhardt, & Horowitz, 2006).

Social support and depression

Previous studies with sighted participants have revealed that both perceived and received social support are indirectly related to depression. For example, sighted adults who feel that there are people available to help them or that they are already being cared for report fewer depressive symptomatology than those who perceive less social support (Gençöz & Özlale, 2004). Moreover, it has been established that satisfaction with perceived support is negatively related to depression (Sarason et al., 1983; Sarason et al., 1987).

There has been relatively little research specifically assessing the relationship between social support and depression in adults with visual impairments. Social support appears to act as a buffer against the negative consequences of visual loss, such as depression (Burmedi et al., 2002). According to Horowitz, Reinhardt, Boerner, and Travis (2003), the receipt of emotional support is negatively related to symptoms of depression in adults with visual impairments, whereas according to Papadopoulos, Papakonstantinou, Montgomery, and Solomou (2014), negative emotional support is significantly associated with depressive symptoms in adults with visual impairments. Additionally, according to Hersen et al. (1995), social support and depression are negatively correlated in adults with visual impairments regardless of personal

characteristics, gender, type and duration of visual impairment, and age at onset of impairment. In particular it has been shown (Cimarolli & Boerner, 2005) that adults with visual impairments who receive no support are more likely to report depressive symptoms followed by adults who receive only negative support, whereas adults with visual impairments who experience only positive support report the lowest levels of depressive symptoms followed by adults who receive both negative and positive support (Cimarolli & Boerner, 2005). Cimarolli and Wang (2006) noted that employed adults with visual impairments report more positive than negative social support and have greater life satisfaction than unemployed adults with visual impairments, suggesting that employment is crucial to well-being in this population (Cimarolli & Wang, 2006).

Friends are important components of social networks (Liebler & Sandefur, 2002), typically making up almost half an individual's social network (Wellman, 1992). A number of studies (Carbery & Buhrmester, 1998; Hartup & Stevens, 1999; Liebler & Sandefur, 2002; Nicolaisen & Thorsen, 2016; Wellman, 1992; Wellman & Wortley, 1990) have focused on the importance of friendship to a person's life. Strong friendships appear to be a person's most important source of companionship, being more important even than strong kinships (Wellman & Wortley, 1990). Friendship is connected with supportive behavior. According to Wellman (1992), half an individual's sources of social support are friends, acting in many cases as intimate kin regarding the provision of social support. Even the aspirations of social contacts for adults can have a significant effect against loneliness and subsequently to well-being (Nicolaisen & Thorsen, 2016). According to Miller and Ingham (1976), lack of an intimate confidant can lead to severe psychological symptoms, including depression, especially in the case of women. If people do not feel they can ask their friends for support or feel their friends

are no longer supportive the friendships often come to an end (Wellman, 1992).

Friends are an important source of social support for young adults with visual impairments. Having the support of friends in addition to family support has been shown to enhance sense of belonging in people with chronic diseases and to act as a buffer against loneliness (Bisschop, Kriegsman, Beekman, & Deeg, 2004). Friendship stability has also been shown to predict reduction in depression over time in older adults with visual impairments (Horowitz et al., 2003). The important role of friends due to their voluntary and affective base is also noted by Reinhardt (1996) for older adults with visual impairments. Friendships appear to facilitate adaptation to chronic visual impairment (Horowitz et al., 2003; McIlvane & Reinhardt, 2001; Reinhardt, 1996, 2001), and it has been reported that support from friends is positively associated with adaptation to visual loss (Reinhardt, Boerner, & Horowitz, 2009). Leaving aside from the research discussed above, there has been a dearth of research specifically examining the relationship between social support from friends and depression in young adults with visual impairments.

A recent study of social support and depression in adults with visual impairments (Papadopoulos et al., 2014), examined the association between social networks, social support and depression among adults (age 18-56 years) with visual impairments. Depression was correlated with more negative practical and emotional support and less positive practical support. This study is a follow-up study to our previous study (Papadopoulos et al., 2014), but has different aims and the sample (target group) is drawn from a different population. The present study focuses only on friends and not on other members of each individual's social network and explores only the social support provided by them. Additionally, this study focuses only on young adults (age 18-40 years) with visual impairments and the impact of the above mentioned social

support on them in association with depression. We hypothesized that depression would be positively correlated with negative social support from friends and negatively correlated with their positive social support.

Method

Participants

Forty young adults with visual impairments (25 men and 15 women) were selected from the membership of the Panhellenic Association of the Blind (Greece). Respondents were aged 18-40 years ($M = 27.63$, $SD = 6.24$). Twenty-one (52.5%) were blind (visual acuity $< 1/20$) and 19 (47.5%) had low vision ($1/10 > \text{visual acuity} > 1/20$). Fifteen (37.5%) participants had a congenital and 25 (62.5%) an adventitious visual impairment. In four cases (10%) the visual impairment had been identified within the last 5 years, in three cases (7.5%) the impairment had been identified 6-10 years ago and in 33 cases (82.5%) the impairment had been identified more than 10 years ago.

Three participants (7.5%) were high school (gymnasium) graduates, 14 (35%) were high school (lyceum) graduates, 8 (20%) were higher education students and 15 (37.5%) had a higher education diploma. Twenty participants (50%) got about with assistance from a sighted guide, 19 (47.5%) reported that they sometimes got about independently and sometimes relied on assistance from a sighted guide and 1 (2.5%) stated that he got about independently, without any assistance.

Instruments and Procedure

The 21-item Beck Depression Inventory (BDI-I; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and a self-developed social support questionnaire were employed in the research. The BDI-I has been validated for use in Greece and used many times with Greek samples. The Greek translation of the BDI-I that we used is valid, reliable and suitable for clinical and research purposes (Fountoulakis et al., 2003).

We developed questionnaire to measure perceived social support from friends. We decided to develop our own questionnaire because forms, sources, levels and meanings of social support have been found to vary according to ethnicity (Almeida, Molnar, Kawachi, & Subramanian, 2009; Cohen, Underwood, & Gottlieb, 2000, p. 204; Vaux, 1985) and there has been limited research on adults with visual impairments, little of which was conducted in Greece. In previous studies, we used a self-developed questionnaire to assess the social network of Greek adults with visual impairments, their social support and their satisfaction with support (Papakonstantinou & Papadopoulos, 2009; Papadopoulos et al., 2014; Papadopoulos, Papakonstantinou, Koutsoklenis, Koustriava, & Kouderi, 2015). A modified version of that questionnaire was used in this study. Modification was necessary because this study concerns only the friend component of respondents' social network and the social support respondents receive from their friends. Both questionnaires are based on the Social Support Questionnaire (SSQ; Sarason et al., 1987), the Social Network Map and the Social Network Grid (Tracy & Whittaker, 1990).

The social support questionnaire consisted of four closed questions. The first question asked the respondent to rate the amount of *positive practical support* he or she received from friends or would expect to receive if required, using a scale ranging from 0 (none) to 10 (a lot). The remaining questions asked about *positive emotional support*, *negative practical support*, and *negative emotional support* using the same question format and response scale. Before the respondents gave their ratings the researcher read out texts defining positive and negative practical support, and positive and negative emotional support and provided some examples of each type of support. The texts were based on findings from previous studies (Chang & Schaller, 2000; Cimarolli & Wang, 2006; Papakonstantinou & Papadopoulos, 2010).

We also collected demographic and personal data (gender, visual status, age, age at loss of sight, recency of visual loss, educational level, self-management, independence in mobility), and information about number of friends. Independent mobility has been defined as the ability to travel safely, comfortably, and independently through the environment (Foulke, 1971). Our approach to self-management is rooted in the definition of Lorig and Holman (2003), who defined self-management as the taking an active role in decisions that affect one's health and assuming responsibility for the day-to-day management of one's life.

Self-management was assessed using a single question – *'To what extent, can you self-manage your own life?'* - to which responses were given using an eleven-point scale (0 = not at all, 10 = completely). The question came with a text, which defined self-management and gave examples. Independence in mobility was also assess with a single question - *"how often do you get about independently, i.e. without the help of a sighted guide, in an outdoor space?"* - to which responses were given a five-point scale ('never'; 'occasionally'; 'sometimes'; 'most of the time'; 'always').

Reliability

Ten-day test-retest reliability coefficients were as follows, positive practical: $r = .897$; positive emotional support: $r = .944$; negative practical support: $r = .854$; negative emotional support: $r = .863$. Cronbach's alpha coefficient for the BDI-I was .80.

Results

Two analyses were performed to identify predictors of depression. First, we calculated Pearson's product-moment correlation coefficients (r) for the relationships between depression (BDI-I score) and social support, demographic variables and personal variables. Then the variables that showed statistically significant correlations

with the depression score were used as possible predictors in a linear multiple regression analysis, in order to identify predictors of depression.

Table 1 presents values of Pearson's r for the relationships between BDI-I score and gender, visual status (blindness vs. low vision), age, age at loss of sight (congenital vs. adventitious), recency of visual loss, educational level, independence in mobility, self-management, number of friends, positive practical support, positive emotional support, negative practical support, and negative emotional support.

[Insert Table 1 around here]

Variables that were correlated with BDI-I score were included in two linear multiple regression analyses to predict the depression (see Tables 2 and 3). These variables were positive practical support, negative practical support, and negative emotional support. The high correlation between negative practical support and negative emotional support meant it was advisable to carry out two separate regressions, the first included negative practical support and the other negative emotional support. The first analysis yielded an adjusted R^2 of .217 ($F = 6.406, p < .01$). Significant individual predictors of depression were negative practical support ($\beta = .359, p < .05$), and positive practical support ($\beta = -.307, p < .05$). The second analysis yielded an adjusted R^2 of .164 ($F = 4.826, p < .05$). Significant individual predictor of depression was positive practical support ($\beta = -.318, p < .05$).

[Table 2 around here]

[Table 3 around here]

Conclusion

This study examined the association between social support from friends and depression in young adults with visual impairments. The findings reveal that support from friends is associated with depression in adults with visual impairments. Both

negative and positive practical support from friends were found to predict depression. Respondents who received more positive practical social support from their friends reported fewer depressive symptoms. Furthermore, fewer depressive symptoms were also associated with receipt of less negative practical social support. These findings confirm the research hypothesis. They are also consistent with previous research on sighted older adults (Bisschop et al., 2004; Oxman et al., 1994; Penning & Strain, 1994), which suggests that practical support can lead to lack of reciprocity in relationships and an unbalanced exchange between the provider and recipient (Oxman et al., 1994); it can also disrupt the recipient's sense of control (Bisschop et al., 2004) and ability to cope with stressful situations (Oxman et al., 1994) and increase his or her feeling of dependency (Penning & Strain, 1994).

The other variables investigated in this study ('gender', 'visual status', 'age at loss of sight', 'recency of visual loss', 'age', 'educational level', 'independence in mobility', 'self-management' and 'number of friends'), do not appear to be significant individual predictors of depression in young adults with visual impairments. Our findings on the lack of relationship between gender and depression are consistent with the findings of Papadopoulos et al. (2014), who reported that depressive symptoms were not related to gender in adults with visual impairments. The diminished gender differences in regard to depression could be attributed to the common barriers and challenges faced by both women and men with visual impairments.

Our findings regarding the variable 'visual status' are consistent with research by Hayman et al. (2007) in a sample of older adults with visual impairments and by Papadopoulos et al. (2014) in a sample of adults with visual impairments, indicating that severity of visual impairment is not related to depression. They are inconsistent with the findings of Reinhardt (2001) from a sample of elderly people with age-related

visual loss and those of Chou (2008) from a sample of older adults, both of whom found that severity of impairment was related to depression. Brody et al. (2001) and Rovner, Casten, and Tasman (2002) reported that in older adults with age-related macular degeneration, loss of visual acuity was associated with an increase in depression, whereas Bookwala and Lawson (2011) found no direct significant relationship between self-reported vision (visual acuity) and depressive symptoms in older adults.

The variables 'age at loss of sight' and 'recent onset of a visual impairment' were not significant individual predictors of depression in our study. Papadopoulos, Paralikas, Barouti and Chronopoulou (2014) supported that age of visual loss was positively related to incidence of depression in adults with visual impairments. In a study of older adults with visual impairments Upton, Bush, and Taylor (1998) showed that depressive symptoms were positively associated with recent onset of visual impairment. The different age of the samples in the above mentioned studies may account for the difference in findings regarding the connections between age at loss of sight, recency of visual impairment and depression.

In this study age was also not a significant individual predictor of depression. Papadopoulos et al. (2014) found that age moderated the relationship between depression and self-management, and between depression and negative emotional support. Additionally, Guerette and Smedema (2011) found that age was significantly associated with depressive symptoms in adults with visual impairments. Our findings come from a younger sample (age 18-40 years). In adults with disabilities depression increases with age (Evans et al., 2007), so the youth of our participants and the relatively narrow age range of our sample might account for this difference in results.

The findings of this study relating to level of education are consistent with the findings of Papadopoulos et al. (2014), as both studies found that depression is not

significantly correlated with educational level in adults with visual impairments. Research in the sighted population suggests that higher educational level protects young adults against depression (Bjelland et al., 2008); one study reported that symptoms of depression were at their lowest level in sighted individuals (age 15-65+ years) without secondary education and at their highest level in individuals with post-secondary education (Akhtar-Danesh & Landeen, 2007).

The variables of 'independence in mobility' and 'self-management' are connected in that independent mobility could be considered a prerequisite for self-management. The findings of our study do not reveal any significant association between 'self-management' and depression. That finding is inconsistent with the results of Papadopoulos et al. (2014), who found that perceived low self-management was the most robust predictor of depression. Additionally, Tolman, Hill, Kleinschmidt and Gregg (2005) reported that the visual impairment of older adults with age-related macular degeneration, affected their ability to perform activities of daily living and caused mobility problems, potentially leading to loss of control, social isolation and ultimately depressive symptoms. The findings of the present study could be attributed to the possible better self-management that participants could have due to their younger age.

The variable 'number of friends' could be related to the size of the individuals' social network, as it has been reported that friends account for nearly half an individual's social network (Wellman, 1992). Research on samples drawn from the general population has provided evidence that network size is related to depression (George, Blazer, Hughes, & Fowler, 1989) and also the opposite (Bisschop et al., 2004; Han, Kim, Lee, Pistulka, & Kim, 2007). Despite the different views, it is noted the importance of the existence of a good confidant/ partner and his/her association with

less depressive symptoms (Bisschop et al., 2004). It is possible, therefore, that in the case of young adults with visual impairments it is not the number of friends that counts when it comes to risk of depression, but the quality of friendships. This issue could be examined further in the future.

Self-developed questionnaires were used in this research and such instruments have disadvantages in terms of reliability and validity. Moreover, we assessed symptoms of depression using the original BDI and some researchers advocate the use of the revised version (BDI-II). We opted to use the BDI-I because it has been validated for use in Greece and has been used many times in Greek samples.

In future research, it would be useful to examine the forms of positive and negative social support that individuals with visual impairments receive from their friends, as there are relatively few studies describing this support (Cimarolli & Wang, 2006; Papakonstantinou & Papadopoulos, 2009).

The findings of this study along with the findings of Papadopoulos et al. (2014) can provide a complete and detailed picture of social support and depression in adults with visual impairments. Particularly, the findings of this study could help rehabilitation specialists to identify the impact of received and perceived social support on psychosocial adjustment of young individuals with visual impairments. The findings may also help professionals to assist them in identifying friends as significant sources of that support. Professionals' knowledge about how to find a good balance between care and flexible support, and between independence and receipt of support, could be helpful to individuals with visual impairments, and the other members of their social and occupational or educational networks (Kef, 2002).

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Table 1

Values of Pearson's (r) for the relationships between BDI-O score and various variables

	Depressive Symptoms
Gender	.113
Visual status	-.181
Age	-.024
Age of visual loss	-.188
Recency of visual loss	.038
Education level	-.029
Independence in mobility	.127
Self-management	-.171
Number of friends	-.039
Positive-practical	-.363*
Positive-emotional	-.165
Negative-practical	.406**
Negative-emotional	.329*

** $p < .01$, * $p < .05$

Table 2

Multiple regression for variables as predictors of depression

Variable	B	Std. Error	Beta	t	p
Positive practical support	-.608	.284	-.307	-2.143	.039
Negative practical support	1.270	.508	.359	2.501	.017

Note. Adjusted $R^2 = .217, p < .01$

Table 3

Multiple regression for variables as predictors of depression

Variable	B	Std. Error	Beta	t	p
Positive practical support	-.629	.293	-	-2.145	.039
Negative emotional support	.868	.464	.278	1.873	.069

Note. Adjusted $R^2 = .164, p < .05$