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RESEARCH PAPER

The contribution of perceived health and economic status to well-being: The mediating role of psychosocial resources

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Abstract

Aims: The study aimed to assess the associations of well-being indicators with perceived health and economic status, and with psychosocial resources; and to test psychosocial resources as mediators of perceived health and economic status effects on well-being. **Methods:** A sample of 177 university students (51.4% women; mean age=26.33, SD=4.38, Range=18–42) completed questionnaires assessing life satisfaction and positive and negative affect (well-being indicators), perceived health and economic status, and four psychosocial resources: dispositional optimism, sense of mastery, self-esteem, and social support. **Results:** Perceived health status was positively associated with total resources score, and both were positively associated with life satisfaction and positive affect, and negatively associated with negative affect. In contrast, perceived economic status was related positively only to perceived health status and life satisfaction. Using Structural Equation Modeling (SEM), the model with the best-fit indices, was the one in which resources mediated the effects of perceived health on well-being. **Discussion:** In conclusion, perceived health status is more effective than economic status in its contribution to well-being among students. Furthermore, psychosocial resources are strong mediators of the effects of perceived health on well-being. **Conclusions:** Interventions are recommended to improve young people's well-being, by promoting their health and enhance their psychosocial resources.

Keywords: economic status, health status, life satisfaction, negative affect, positive affect, psychosocial resources

Abstrait

Objectifs: *L'étude visait à évaluer les associations d'indicateurs de bien-être avec la santé perçue et le statut économique, et avec les ressources psychosociales; et tester les ressources psychosociales en tant que médiateurs des effets perçus sur la santé et la situation économique sur le bien-être.* ***Méthodes:*** *Un échantillon de 177 étudiants universitaires (51,4% de femmes; âge moyen = 26,33, ET = 4,38, intervalle = 18–42) a rempli des questionnaires évaluant la satisfaction à l'égard de la vie et les effets positifs et négatifs (indicateurs de bien-être), la santé perçue et la situation économique , et quatre ressources psychosociales: l'optimisme dispositionnel, le sentiment de maîtrise, l'estime de soi et le soutien social.* ***Résultats:*** *l'état de santé perçu était positivement associé au score total des ressources, et les deux étaient positivement associés à la satisfaction à l'égard de la vie et à l'affect positif, et négativement associés à l'affect négatif. En revanche, le statut économique perçu n'était positivement lié qu'à l'état de santé perçu et à la satisfaction à l'égard de la vie. À l'aide de la modélisation par équation structurelle (SEM), le modèle avec les meilleurs indices d'ajustement, était celui dans lequel les ressources médiatisent les effets de la santé perçue sur le bien-être.* ***Discussion:*** *En conclusion, l'état de santé perçu est plus efficace que le statut économique dans sa contribution au bien-être des élèves. De plus, les ressources psychosociales sont de puissants médiateurs des effets de la santé perçue sur le bien-être.* ***Conclusions:*** *Des interventions sont recommandées pour améliorer le bien-être des jeunes, en favorisant leur santé et en améliorant leurs ressources psychosociales.*

Mots-clés: *situation économique, état de santé, satisfaction à l'égard de la vie, affect négatif, affect positif, ressources psychosociales*

INTRODUCTION

The term *Well-being* includes a wide range of concepts and definitions, and is assessed by objective indicators and/or subjective assessments. We shall define it here as a subjective global state of satisfaction and positive mental health, which is composed of affective and cognitive components (Kim-Prieto, Diener, Tamir, Scollon, & Deiner, 2005), with the main components being affect (or happiness) and life satisfaction (Diener & Fujita, 1995; Steel, Taras, Uggerslev, & Bosco, 2018). The *life satisfaction component* of well-being has both cognitive and affective aspects, and it is customary to measure it using a single dimension of general satisfaction with life. Two dimensions of emotional experience, termed positive affect (PA) and negative affect (NA), represent the *affective component* (Watson, Clark, & Telegen, 1988). NA describes subjective distress and dissatisfaction, and includes negative emotional states such as anger, fear, and disgust, and is related to stress and health complaints. PA, in contrast, reflects the co-occurrence of positive emotional states, such as joy, interest, and alertness, and is associated with social activity and satisfaction. These three components are relatively independent, but modestly correlated, and represent the multidimensional construct of well-being (Albuquerque, Lima, Figueiredo, & Matos, 2012).

The aim of the study was twofold: a) to assess the extent to which well-being indicators are associated with perceived health status and economic status, and with psychosocial resources; and b) to test a model in which psychosocial resources mediate the effects of perceived health and economic status on well-being.

Health and economic status and well-being

Resources refer to those things that people value or that help them attain centrally-valued ends (e.g., money, social support; Hobfoll, 2001). They include objects (e.g., a car, a house), personal characteristics (e.g., optimism, self-esteem), conditions (e.g., marriage, seniority), and energy (e.g., time, knowledge). Such resources have been accorded a central role in all contemporary models of stress (e.g., Hobfoll, 2001; Lazarus & Folkman, 1984; Moos & Schaefer, 1993).

The individual's health and financial assets are important personal resources (Hobfoll, 2001), and constitute some of the factors that help people cope with stressful encounters, as well as lead them to experience higher levels of well-being in everyday life. Perceived poor health status was found to be correlated with emotional distress (Lange & Piette, 2005) and depression (Krokavcova et al., 2009); lower socio-economic status (SES) was related to negative outcomes of stressful events, such as high levels of posttraumatic stress (Yablon, Itzhaky, & Pagorek-Eshel, 2011), and anxiety and depression (Andrykowski et al., 2013).

Health associations with positive affect and negative affect showed that people with flourishing mental health during daily life had the highest levels of positive affect (see Diehl, Hay, & Berg, 2011), and that general health was related positively to positive affect and negatively to negative affect (Green et al., 2012). In a longitudinal study conducted among students (Finch, Baranik, Liu, & West, 2012), it was shown that physical health predicted positive affect, but not vice versa. Furthermore, subjective health was found to correlate positively with life satisfaction among adolescents (Moksnes & Espnes, 2013). Recent studies also showed associations between higher SES and positive affect in young white males (Barden, Barry, Khalifian, & Bates, 2016), while higher early-life SES was related to positive affect among adults in a viral challenge study (Murdock, LeRoy, & Fagundes, 2017). Hence, we propose the following hypothesis: (H1) Perceived health status and economic status will be positively associated with life satisfaction and positive affect, and negatively associated with negative affect.

Psychosocial resources and well-being

Psychological characteristics and social support are considered important resources, contributing to successful coping during stressful life events, as well as to subjective well-being and positive adjustment in everyday life (e.g., Lazarus & Folkman, 1984; Moos & Schaefer, 1993). The present study assessed the associations of well-being with four psychosocial resources: dispositional optimism; sense of mastery; self-esteem; and perceived social support. *Optimism* is defined as the generalized expectancy that good outcomes will occur when confronting major problems (Scheier & Carver, 1985). *Mastery* refers to the extent to which a person perceives having control over his/her life events (Pearlin & Schooler, 1978). *Self-esteem* is defined as "the level of global regard that one has for the self as a person" (Harter, 1993, p. 88). *Social support* can be defined in many ways, according to the person's perceptions of support and/or the size of his/her social network, and is seen as an important buffer between stress and health (House, 1987).

One or more of these resources were found to be related to lower levels of posttraumatic symptoms (PTSS; Ben-Zur, 2008), and to lower distress (Arnberg, Hultman, Michel, & Lundin,

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2012). In addition, these resources were found to contribute to adaptation to cancer (Dagan et al., 2011; Henselmans et al., 2010), and to coping with stressful life events (Lo, 2002; Martyn-Nemeth, Penckofer, Gulanick, Velsor-Friedrich, & Bryant, 2009) and psychological stress (Kim, Sherman, & Taylor, 2008).

Possessing high levels of resources also has the potential to contribute to well-being in everyday life. Ben-Zur (2003) showed mastery and optimism to be related to lower negative affect and higher positive affect and life satisfaction in the everyday life of both adolescents and adults. Other studies showed that mastery and self-esteem contributed to life satisfaction among Turkish students and academic staff (Yetim, 2003). Moreover, studies also found that mastery, optimism and social support were positively related to life satisfaction among Israeli Jewish and Arab students (Zeidner & Ben-Zur, 2013). High self-esteem was positively correlated with high levels of life satisfaction (e.g., Judge, Bono, Erez, & Locke, 2005; Moksnes & Espnes, 2013), and with low negative affect and high positive affect in the everyday life of community residents (e.g., Ben-Zur, 2002) and among people with chronic illness (Juth, Smyth, & Santuzzi, 2008). Green, Decourville and Sadava (2012) showed social support satisfaction or network size to be negatively related to NA and positively related to PA. In sum, psychosocial resources are related to higher levels of well-being in everyday life. We therefore propose the second hypothesis: (H2) Psychosocial resources will be positively associated with well-being indicators, i.e., life satisfaction and positive affect, and negatively associated with negative affect.

Health, economic status, and psychosocial resources

The research reviewed above dealt with the effects of psychosocial resources, health, and economic status on well-being. Furthermore, health and economic status are shown to correlate positively with psychosocial resources, although research findings vary as to the direction of causality. According to one approach, psychosocial resources contribute to people's health and economic status. For example, Steptoe and Wardle (2017) showed life skills (including optimism and sense of control) to be predictors of health and economic situations in a longitudinal study. According to another approach, health and economic status contribute to psychosocial resources which, in turn, contribute to outcomes. Hobfoll, Johnson, Ennis, and Jackson (2003) showed that changes in material loss predicted changes in mastery and social support among American inner-city women. These changes were, in turn, associated with emotional distress. Similar findings were reported for economic losses having a detrimental effect on mastery, which was found to lead to distress levels among Russian women (Shteyn, Schumm,Vodopianova, Hobfoll, & Lilly, 2003). Similarly, Gadalla (2009) reports that in big community samples, mastery was found to partially mediate the effects of poor health and unfavorable SES on distress. Other studies showed that more health problems and limited activity meant less optimism among older adults (Paul, Ayis, & Ebrahim, 2007), and that recipients with renal transplants, who had high perceived health status, tended to be more optimistic (Kamran & Schaw, 2017). These findings suggest the following hypothesis: (H3) Psychosocial resources will mediate the effects of perceived health and economic status on well-being.

METHOD

Sample and procedure

The sample was composed of 177 students enrolled at a large research university in northern Israel. Respondents were about evenly divided by gender (51.4% females), with a mean age of 26.33 (SD=4.38, range=18–42). The assessment packets were distributed by graduate students based on a quota convenience sampling of equal numbers of men and women. The respondents were volunteers and were informed that the questionnaires included items related to individual differences in attitudes, feelings, and cognitions. The questionnaires were completed anonymously and the students were assured that their responses would be coded anonymously. The research was approved by the human-subject review committee of the university.

Inventories

Background information included gender, age, number of years of father's formal education, family status and origin.

Perceived health and economic status were assessed by one item each, rated on a 5-point Likert scale and reversed, so that 1='very bad' and 5='very good'. Table 1 presents the means and *SD*s of the two scales.

Dispositional optimism was assessed by the Life Orientation Test (LOT) constructed by Scheier and Carver (1985). The scale measures expectations that good things will happen and contains eight items (e.g., *"In uncertain times, I usually expect the best"*), rated on a 5-point Likert scale (1='strongly agree'; 5='strongly disagree'), with a high mean score indicating an optimistic tendency (after a score reversal of four items). The

Table 1. *Descriptive Statistics for Study Variables*

Variable	Mean	SD	Alpha
Perceived health status	4.30	0.77	-
Perceived economic status	3.12	0.98	-
Dispositional optimism	3.80	0.60	.75
Sense of mastery	5.21	0.92	.76
Self-esteem	3.29	0.38	.75
Social support	5.83	0.90	.90
Positive affect	3.73	0.54	.79
Negative affect	2.28	0.66	.86
Life satisfaction	3.92	0.63	.83
Social desirability	1.54	0.25	.59
Total resources score	.00	0.74	.73

Note: Total resources score is based on standard scores

internal and test-retest reliability of the original version were satisfactory (α=.76, test-retest=.79; Scheier & Carver, 1985), and satisfactory values were obtained with the Hebrew version (Ben-Zur, 2012; α=.84). Table 1 presents means, SDs, and alpha levels of dispositional optimism and the following scales.

Sense of mastery (Pearlin & Schooler, 1978) was translated into Hebrew by Hobfoll and Walfisch (1984). It consists of seven items rated on a 7-point Likert scale (1='not at all characteristic of me'; 7='very characteristic of me'). The scale contains two "positive" items denoting high mastery and five "negative" items suggesting low mastery (e.g., *"I have little control over the things that happen to me"*). A high mean score for the seven items (after reversing the negative items) indicates a high level of mastery. Hobfoll and Walfisch (1984) reported a test-retest reliability of r_{tt} = .85, with reasonable internal reliability (α=.75), of the Hebrew version.

Self-esteem (Rosenberg, 1965). The Hebrew version of the scale (Hofman, Beit-Hallahmi, & Hertz-Lazarowitz, 1982) included 10 items rated on a 4-point scale (1='strongly disagree'; 4='strongly agree'), with a high mean score (after a score reversal for five of the items) indicating high self-esteem. Rosenberg reported an internal reliability level of .92 for this scale, and a prior Israeli study showed reasonable internal reliability levels (.79, see Ben-Zur, 2002) for the Hebrew version.

Social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988), a 12-item scale that measures perceived support from family, friends, and significant others. Respondents rate the items on a 7-point Likert scale (1='very strongly disagree'; 7='very strongly agree'). A high mean score for the 12 items reflects high levels of perceived support. Ben-Zur and Michael (2019) reported a high internal reliability value (α=.94) for the Hebrew version.

Positive and negative affect were based on the Positive Affect Negative Affect Schedule (PANAS; Watson et al., 1988), using the Hebrew version of the PANAS (Ben-Zur, 2002), containing 20 adjectives depicting various moods and affective states (e.g., enthusiastic, hostile). Respondents were asked to read each adjective and rate their feelings in general on a 5-point Likert scale (1='not at all'; 5='very much'). A confirmatory factor analysis yielded two factors on the basis of which two scales were created, namely PA and NA scales. Each scale was based on the mean of 10 items. In the past, the two scales showed high internal reliability (.84–.90) and high concurrent validity tested by associations with anxiety and depression (Watson et al., 1988). Satisfactory internal reliabilities were observed for the Hebrew version α=.82 and .86 for PA and NA, respectively (Ben-Zur, 2009).

Life satisfaction was assessed using the Life Satisfaction Scale (Ben-Zur, 2003), original Hebrew version, assessing general satisfaction with life (e.g., "Generally speaking, I am satisfied with my life"). Respondents rated the extent to which each item describes their general outlook on life along a 5-point scale (1='not at all', 5='to a great extent'). Psychometric evidence in support of this brief 3-item scale may be found in Ben-Zur (2003; α=.90-.92).

Social desirability. The Hebrew adaptation (Ben-Zur, 2002) of the 8-item Social Desirability Questionnaire (Crowne & Marlowe, 1964) was employed to control for potential social desirability in responding to the self-reported personal measures. Each item is marked as true or untrue and the scale score is the total count of answers denoting high social desirability. The scale showed satisfactory reliability values among Israelis (α=.71, Ben-Zur, 2012). A high score reflects higher levels of social desirability.

Data analysis. We used IBM-SPSS (version 25) to conduct Pearson correlations and multiple regressions to examine

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psychosocial resources and perceived health and economic status effects on the outcomes of well-being indicators. Amos software (version 25) was used to conduct path analyses and calculate mediated (indirect) effects.

RESULTS

The correlations among perceived health and economic status, psychosocial resources, affects, and life satisfaction are presented in Table 2. Perceived health status is positively associated with all four resources, and with PA and life satisfaction, and negatively associated with NA; perceived economic status is associated with perceived health status and life satisfaction. As can be seen in the table, all four resources are significantly and positively correlated with PA and with life satisfaction, and negatively correlated with NA (except for social support).

Age was not associated with any of the resources or outcomes, gender was associated significantly with only social support (r=.16, p<.05), and father's education was significantly associated with optimism, mastery and positive affect (rs=.26, .25, and .18, respectively, p<.05).

The four resources were highly inter-correlated (see Table 2) and factor analysis resulted in one factor with all four resources loaded highly on that factor. Therefore, a combined resources score was created by averaging the standard scores of the four resources, following other studies (Goldfarb & Ben-Zur, 2017; Helgeson, 1999; Siu, 2013). As can be seen in Table 2, the total resources score was highly and positively associated with all four resources, and with PA and life satisfaction, and negatively associated with NA. Perceived health status, but not perceived economic status, was positively associated with the total resources score.

Regression analyses that included gender, father's education, and social desirability as covariates were applied to NA, PA, and life satisfaction, using perceived health and economic status and psychosocial resources as the predictors. The results are presented in Table 3 (*page 6*), showing that perceived health status was associated with the three outcomes, but not perceived economic status, thus partially confirming H1 after controlling for demographics and social desirability. The effects of psychosocial resources were substantial for NA, PA and life satisfaction, thus confirming H2 after controlling for demographics and social desirability.

Table 2. *Pearson Correlations among Study Variables*

Variable	2	3	4	5	6	7	8	9	10	11
1. Perceived health status	.24**	.28**	.24**	.23**	.16*	.23**	-.21**	.34**	.07	.31**
2. Perceived economic status		.06	.07	.05	-.02	.14	-.01	.15*	.09	.06
3. Dispositional optimism			.53**	.55**	.25**	.44**	-.40**	.48**	.11	.78**
4. Sense of mastery				.54**	.26**	.44**	-.40**	.44**	.09	.78**
5. Self-esteem					.30**	.48**	-.49**	.45**	.14	.80**
6. Social support						.27**	-.07	.41**	.07	.61**
7. Positive affect							-.21**	.47**	.15*	.55**
8. Negative affect								-.25**	-.27**	-.46**
9. Life satisfaction									.06	.60**
10. Social desirability										.14
11. Total resources score										–

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

Table 3: *Positive and Negative Affect and Life Satisfaction (Well-being Indicators) Regressed on Perceived Health and Economic Status, Psychosocial Resources, and Demographics*

Variable	Positive affect		Negative affect		Life satisfaction	
Step	I	II	I	II	I	II
Gender	.07	.09	.18*	.17*	.03	.05
Father's education	.12	-.01	-.11	-.02	.13	.00
Social desirability	.14	.06	-.29***	-.24**	.04	-.04
Perceived health status	.18*	.02	-.23**	-.12	.31***	.15*
Perceived economic status	.08	.11	.11	.09	.05	.09
Total resources score		.53***		-.37***		.55***
R^2	.09	.33	.16	.28	.14	.39
F(5, 166)	3.43**		6.52***		5.46***	
F(6, 165)		13.43***		10.61***		17.88***

Note. Gender: 1=man, 2=woman

* p<.05, **p<.01, ***p<.001

The mediation hypothesis (H3), was tested using a path model, in which psychosocial resources mediated the effects of perceived health and economic status on well-being indicators, namely life satisfaction, NA and PA. The model had good fit indices [Chi-square (8) = 13.899, *p*=.08; *NFI*=.94, *IFI*=.97, *CFI*=.97, *RMSEA*=.06]. An alternative model in which perceived health and economic status mediated the effects of resources on well-being was much worse in terms of fit indices [Chi-square (5) =126.21, *p*<.000; *NFI*=.45, *IFI*=.46, *CFI*=.44, *RMSEA*=.37].

Mediation effects were tested by computing indirect effects using Structural Equation Modelling (SEM) analysis, with a bootstrapping procedure (n=500) and Confidence Intervals (CI)=95%. The indirect effects of perceived health status on PA, NA, and life satisfaction were substantial (β=.168, -.141, and .185, respectively). Hence, psychosocial resources mediated the association of perceived health with PA [*B*(*SE*)=.117(.030), LLCI–ULCI=.065–.189], NA [*B*(*SE*)=-.120(.035), LLCI–ULCI=-.209–-.067], and life satisfaction [*B*(*SE*)=.151(.039), LLCI–ULCI=.088–.261]. The total indirect effects of perceived economic status on well-being indicators were not significant. These results partially confirm H3.

DISCUSSION

High levels of health and economic status are resources that can be regarded as necessary antecedents of optimal everyday functioning, as well as contributors to people's well-being. In the present study, perceived health status proved to be an effective variable, correlating positively with well-being, as was also found in a recently conducted review and meta-analysis (Ngamaba, Panagioti, & Armitage, 2017), and showing stronger associations with well-being indicators than perceived

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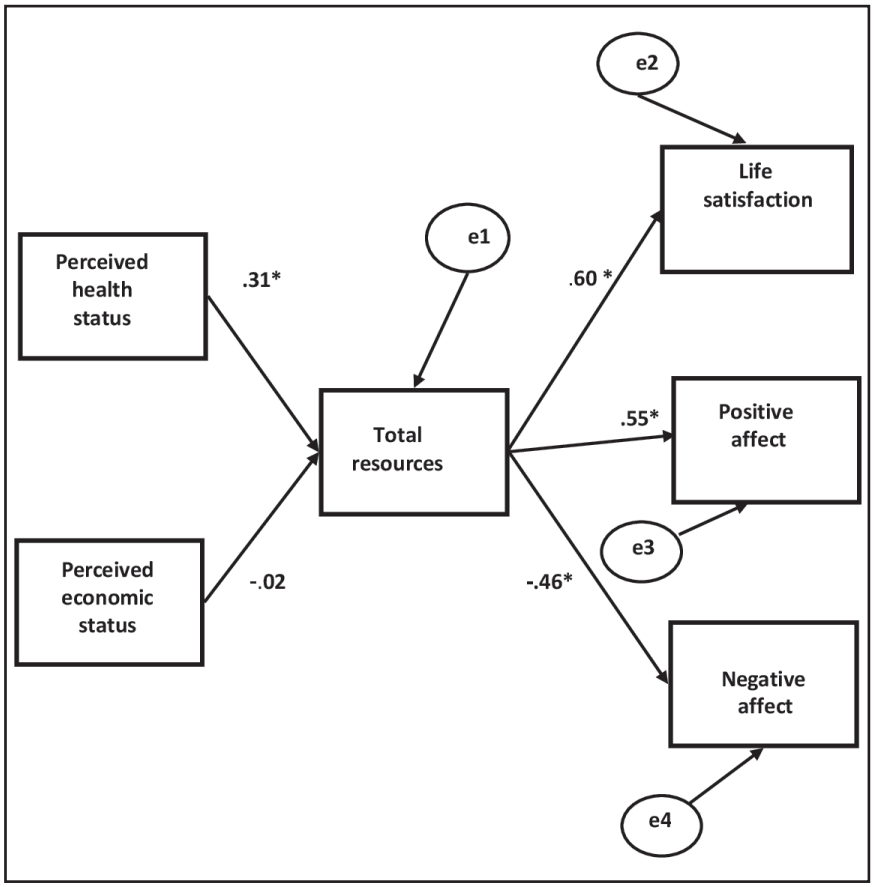
economic status. Perceived Health status was also more prominent in its association with psychosocial resources than either perceived economic status or background variables such as age, gender and father's education. It could be argued that this result is specific to the student population, but this trend (although less pronounced) was also observed in other studies among community residents (Ben-Zur & Michael, 2019). The fact that perceived economic status is weakly related to well-being is surprising, in light of the claims that a higher income is associated with many positive aspects in life; however, it is in accord with the findings that more money contributes to well-being only if it means avoiding poverty (Diener & Biswas-Diener, 2002). Moreover, subjective well-being is more related to cultural values than to an individual's salary (Steel et al., 2018). Since perceived health and economic status are positively related, it may be the case that perceived economic status affects well-being through its associations with perceived health status.

Figure 1: *Empirical Path Model for Effects of Perceived Health, Perceived Economic Status, and Psychosocial Resources on Well-being Indicators*



Note. *p < = .01

All psychosocial resources - namely, dispositional optimism, sense of mastery, self-esteem and social support - were positively related to life satisfaction and PA, and all except social support were negatively related to NA. A combined resources score showed the same effects regarding well-being indicators: A negative association with NA and a positive association with PA and life satisfaction. Hence, as previously claimed, psychosocial resources are important characteristics contributing to well-being in everyday life (e.g., Ben-Zur, 2002, 2003; Green et al., 2012; Moksnes & Espnes, 2013; Zeidner & Ben-Zur, 2013). Moreover, in the present study, psychosocial resources were shown to affect students' well-being as well as function as mediators of the effects of perceived health on well-being.

The contribution of psychosocial resources to well-being can be explained by their potential to help the individual solve problems and cope effectively with adversity. Thus, optimism can lead people to continue to strive and reach their goals in spite of obstacles, while mastery can make them believe in their ability to surmount the obstacles. Self-esteem helps individuals develop a high level of self-regard, which can contribute to confidence in one's plans and actions; social support conveys the belief that one has friends and family to help in times of need. These resources may also reinforce each other's contribution.

This study used a relatively large sample and social desirability

as a control variable, but was conducted at one point in time; therefore, the direction of the cause and effect relationship cannot be determined unequivocally. The self-report measures used are reliable and valid instruments, and their Hebrew versions possess satisfactory or good internal reliability, but their validity should be checked in future studies. The study was conducted among students; thus, its generalizability to other sectors of the population must be further investigated.

In sum, the present study highlights the contribution of perceived health to psychosocial resources and well-being, and the role of resources in mediating perceived health effects on well-being. Future longitudinal studies may deepen the investigation of the intricate relationship between health and resources. ■

Biography

Dr. Hasida Ben-Zur is an Associate Professor (emeritus) at the University of Haifa, Haifa, Israel, with PhD degree in Psychology. Her research areas include stress, resources, coping, and health; adjustment and wellbeing; and decision-making and risk taking.

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