Empirical Article


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The current study examined the contribution of different types of parental support to career self-efficacy among 11th and 12th grade students (N = 160): 66 students with hearing loss (23 hard of hearing and 43 deaf) and 94 hearing students. Participants completed the Career-Related Parent Support Scale, the Career Decision-Making Self-Efficacy Scale, and the Self-Efficacy for the Management of Work–Family Conflict questionnaire. Different aspects of parental support predicted different types of career self-efficacies across the 3 groups. Differences among groups were also found when levels of parental support were compared. The deaf group perceived lower levels of parental career-related modeling and verbal encouragement in comparison with the hard-of-hearing students and higher levels of parental emotional support compared with the hearing participants. No significant differences were found among the research groups in career decision-making self-efficacy and self-efficacy in managing work–family conflict. Implications for theory and practice are discussed.

Persons with disabilities face various challenges during the process of their career development. They are often slower in launching a career than their nondisabled counterparts (Benshoff, Kroeger, & Scalia, 1990) and face greater hurdles in testing their skills and abilities (Lustig, Strauser, & Donnell, 2003). Consequently, they tend to be slower in crystallizing their career interests (Shahnasarian, 2001) and demonstrate lower aspiration levels, which have a negative impact on their vocational choices (Babbitt & Burbach, 1990; Jones, 1997; Saunders, Leahy, & Frank, 2000).

Studies on deaf or hard-of-hearing (HH) persons reported similar results. They tend to suffer from higher rates of unemployment and underemployment (e.g., MacLeod-Gallinger, 1992; Schroedel & Geyer, 2000). In addition, they often earn less money and have fewer promotion opportunities than their hearing colleagues (Luft, 2000; Winn, 2007). It should be noted that studies on this population have tended to focus on either deaf or HH persons, neglecting a comparison between them despite major differences between these two groups. Deaf people, for instance, tend to have a sense of community and to hold a well-defined Deaf identity (Anderson & Leigh, 2011). HH persons, on the other hand, who constitute the majority of people with hearing loss, tend to place more importance on blending into the hearing world. Most of the HH students are integrated in regular classrooms, whereas many deaf persons study in special classes from an early stage (Plaut, 2007; Weisel & Reichstein, 1990). These differences may be influential when exploring issues such as career choice and planning. The current study addressed this issue by examining deaf, HH, and hearing participants. It should be noted that the distinction between deaf and HH in the present study was based on educational placement and mode of communication, not solely on audiological criteria.

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In order to help persons with disabilities in general—those with hearing loss in particular—to overcome their career-related difficulties, identification of the factors influencing their resiliency and their resources is much needed. One of these factors is parental support. Research has shown the importance of parental behaviors for the development of children with disabilities (e.g., Bennett & Hay, 2007). However, the exact impact parents have on the career development of their child remains unclear (Whiston & Keller, 2004). Studies that highlighted the role parents play in this domain have focused mainly on samples of children with no known disability (e.g., Young & Friesen, 1992). The present study examines the contribution of parental support to career self-efficacy—one of the key factors in career development processes (Lent, Brown, & Hackett, 1994, 2002)—among hearing, HH, and deaf adolescents.

Career Self-Efficacy

Self-efficacy theory proposes that the probability of engaging in an activity and executing it successfully is determined in part by the degree to which individuals believe they can effectively perform the behavior (Bandura, 1986). Social Cognitive Career Theory (SCCT; Lent et al., 1994, 2002) has applied Bandura’s (1986) concept of self-efficacy to career development processes and has pinpointed it as an important personal variable for understanding career development. According to the SCCT, career self-efficacy can be defined as the confidence in one’s ability to manage career development and work-related tasks. This construct has been shown to relate to vocational interests (Nauta, Kahn, Angell, & Cantarelli, 2002), self-esteem (Brown, Reedy, Fountain, Johnson, & Dichiser, 2000), career indecision (Betz & Voyeten, 1997), and vocational aspirations (O’Brien, Friedman, Tipton, & Linn, 2000). Moreover, Bandura and his colleagues (Bandura, Barbaranelli, Vittorio Caprara, & Pastorelli, 2001) found that children’s perceived occupational self-efficacy was more predictive of career choice than academic performance.

Lent et al. (1994) partitioned SCCT into two complementary levels of theoretical analysis. The first level presents cognitive-person variables (such as self-efficacy) that enable people to exercise personal control over their own career development. The second level of analysis considers the paths through which several additional sets of variables—such as physical attributes (e.g., gender, race, and disability/health condition) and features of the environment (e.g., environmental support and the opportunities and barriers imposed by parents, teachers, and educational counselors)—influence career-related interests and choice behavior. This means that in addition to self-efficacy beliefs, factors such as having a disability and environmental support may affect the individual’s career development.

Empirical research on career self-efficacy has focused mainly on career decision-making self-efficacy (Brown et al., 2000; Tang, Fouad, & Smith, 1999). Career decision-making self-efficacy has been defined as an individual’s confidence in his or her ability to effectively engage in career decision-making tasks and activities (Taylor & Betz, 1983). Research on hearing participants has revealed significant positive correlations between career decision-making self-efficacy and various indices of adaptive career functioning, including active engagement in career exploration activities (Blustein, 1989), career decidedness (Taylor & Popma, 1990), and career aspirations (Nauta, Epperson, & Kahn, 1998). However, Punch, Creed, and Hyde (2005) who examined the contribution of different SCCT variables, including career decision-making self-efficacy, among hearing and HH adolescents, reported that these variables were more predictive of career behaviors for the hearing than for the HH participants.

Less is known about the career decision-making self-efficacy of deaf participants. Schroedel (1991), who investigated career indecision among deaf high school seniors, reported that school staff rated them as either not prepared to make a good vocational choice or lacking important competencies to make a career decision. However, he did not explore self-efficacy in this domain. Due to existing differences between HH and deaf persons in other domains (e.g., Anderson & Leigh, 2011), the investigation of this concept among both groups is much needed.

Numerous studies have examined other kinds of career self-efficacy such as career planning and exploration self-efficacy and educational and vocational development self-efficacy (e.g., Alliman-Brissett, Turner,
Only few studies have explored the efficacy of combining work and family roles and most of them have examined only hearing participants (e.g., Cinamon, 2006, 2010; Hennessy & Lent, 2008). Following Super’s theory, which emphasizes the advantage of a life span perspective (e.g., Super, Savickas, & Super, 1996), and due to the fact that people participate simultaneously in different life roles, Cinamon (2006) has emphasized the importance of investigating self-efficacy in managing work–family conflict. She defined this type of efficacy as the individual’s beliefs in his or her ability to manage future work–family conflict, or in other words, the individual’s confidence in his or her ability to successfully handle interference from work in the family sphere and interference from family in the work sphere. Results of her study indicated that self-efficacy in managing future conflict between work and family roles is negatively correlated with expectations for this type of conflict among young adults. Young adults who are confident in their ability to successfully handle interference from the work domain in family matters less often expect work–family conflict, and those who are confident in their ability to successfully handle future interference from the family in their work expect less family–work conflict.

Michael, Cinamon, and Most (2011) explored the self-efficacy in managing work–family conflict among hearing, HH, and deaf young adults. They reported significant differences when variables of gender, employment status, and engagement in intimate relations were taken into account. In their study, hearing and deaf male participants showed lower levels of self-efficacy in managing situations in which family interferes with work compared with female participants, HH male participants reported higher levels of self-efficacy in family-interfering-with-work management compared with HH female participants. Moreover, hearing and deaf employed participants reported higher levels of self-efficacy in managing situations in which work interferes with family compared with nonworking participants and HH working participants showed lower levels of this type of efficacy compared with nonworking ones. In contrast, the HH group resembled deaf participants in terms of engagement in intimate relations and self-efficacy in family-interfering-with-work conflict management. Both groups reported higher levels of efficacy among participants with no intimate relationship compared with participants who were engaged in an intimate relationship. In the hearing group, the results were in the opposite direction.

The above findings suggest that hearing status, in combination with additional variables, contributes to differences in career self-efficacy. The current study examines this subject by investigating the relations between hearing status and two different types of career self-efficacies—decision-making and managing future work–family conflict—among adolescent participants in order to better understand the contribution of hearing status to different aspects of career self-efficacy. On the basis of previous research (Michael et al., 2011), as well as SCCT assumptions regarding the impact that disabilities may have on career development, the research hypothesis was that career self-efficacy levels will be higher among hearing adolescents than among deaf/HH ones. However, because there are two different types of efficacies, they are expected to differ across the research groups. Moreover, in line with SCCT, which considers environmental factors as being highly influential in career development, the current study focuses on one major environmental aspect—the family—and examines career-related parental support and its contribution to career self-efficacy among deaf, HH, and hearing adolescents.

Parental Support and Career Development

It is generally recognized that parents are a major influence on the career development of their sons and daughters (Whiston & Keller, 2004). This influence is exerted through certain kinds of parental behaviors as well as through family conditions that foster the development of values, attitudes, and self-concepts in children (Schroedel & Carnahan, 1991). Although adolescents become progressively independent from their parents during the high school years, they continue to depend heavily on parents in the area of career development (Sebald, 1989). Research has shown that adolescents speak most frequently about career issues with their parents (Otto, 2000) and name parents as being a major influence during educational and career transitions (Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002).
The impact that parents have on their adolescents’ career development may be even more significant when considering children with disabilities. It is well known that people with disabilities face challenges in establishing a career. They are often slower in launching a career than their nondisabled counterparts (Benshoff et al., 1990) and tend to exhibit high rates of unemployment and underemployment (Burkhauser & Houtenville, 2003). However, relatively few studies have explored the factors contributing to their career development. Regarding parental influence, Wagner and colleagues reported that youth with disabilities are more likely than nondisabled youth to mention having received a high level of parental attention (Wagner, Newman, Cameto, Levine, & Marder, 2007). Parents’ desire to support and protect their children may be incongruent with youth’s burgeoning demands for self-determination and independence (Powers, Geenen, & Powers, 2009). Then again, it has long been established that high levels of parental involvement can be a critical factor in promoting the successful transition of youth into adulthood (Hasazi, Gordon, & Roe, 1985; Schalock & Lilley, 1986).

Although parents play an important role in adolescents’ career development process, exactly what they do to encourage them to learn about careers is unknown. The various studies that have examined family contribution to adolescents’ career development and future plans have focused on general family attributes rather than on career-specific ones (e.g., Hargrove, Inman, & Crane, 2005). In the current study, the contribution of career-related parental support is examined.

Research has shown that adolescents tend to report parental support as an influential aspect in their career development (Altman, 1997; Phillips, Blustein, Jobin-Davis, & White, 2002; Schultheiss, Kress, Manzi, & Glasscock, 2001; Young et al., 2001). Career-related parental support is conceived as a behavior in which parents let their offspring make their own choices while offering orientation and instrumental support (e.g., writing applications) if needed (Phillips et al., 2002), encouraging them to explore vocational interests and abilities as well as various occupational options, and helping them to reflect on relevant career choice experiences (Schultheiss et al., 2001). Adolescents consider these behaviors as highly promoting their motivation to engage in the career preparation process (Phillips et al., 2002).

Studies have found that parents affect career choice more than school counselors, teachers, friends, other relatives, or people working in their field of interest (Kotrlik & Harrison, 1989). According to Keller and Whiston (2008), parents can act as a source of general psychosocial support (e.g., giving encouragement) by offering instrumental guidance and support for their child’s career (e.g., talking about specific careers or finding information on the Internet). One factor found significant in the domain of career construction is parent–child career-related interactions. Research on the matter has focused only on structured interactions rather than on spontaneous ones (e.g., Young, Paseluikh, & Valach, 1997). In the current study, examination of career-related parental support focuses on the extent to which different types of career-related child–parent interactions occur in the family surroundings.

For adolescents, parents are salient providers of self-efficacy information (Turner & Lapan, 2002). For example, children can develop career decision-making self-efficacy vicariously by observing their parents carry out tasks associated with career exploration and selection (Alliman-Brissett et al., 2004). Furthermore, support from parents also facilitates children’s engagement in career-related learning experiences that shape self-efficacy (Turner & Lapan, 2002). Indeed, studies that examined the relationships between career-related parental support and self-efficacy found significant correlations between these two concepts (e.g., Alliman-Brissett et al., 2004; Turner & Lapan, 2002). Consequently, an additional research hypothesis was that career-related parental support will significantly predict adolescents’ efficacy in the areas of career decision-making and managing future work and family roles.

However, when studying adolescents who are deaf/HH, it is important to keep in mind that approximately 95% of them have hearing parents (Mitchell & Karchmer, 2004). Most of these parents had no meaningful contact with deaf people prior to their child’s birth (Hulsebosch & Myers, 2002) and their knowledge on the matter is based solely on information from the mass media (Rice, 1984). This limited
experience may lead to communication difficulties and low career expectations (DeCaro, Dowaliby, & Maruggi, 1983). Consequently, many parents of deaf children believe that deafness limits occupational opportunities and that deaf persons cannot succeed in the work force as well as their hearing peers (Schroedel & Carnahan, 1991). In addition, they tend to express concerns about education and future opportunities for their children (Jamieson, Zaidman-Zait, & Poon, 2011). Such perceptions may sabotage their child’s occupational development (McHugh, 1975). Thus, another research hypothesis was that parental support and self-efficacy levels will be higher among hearing adolescents than among deaf/HH ones.

Parents of deaf adolescents have great impact on their child’s development. They influence their child’s learning of basic communication skills, his or her sense of independence, job motivation, and personal relationship abilities and values, which are vital to vocational success (Schroedel, 1992). Research has found that parents of hearing adolescents tend to encourage participation in a wider range of occupations compared with parents of deaf adolescents with similar training. Reasons offered to justify this tendency include communication difficulties and security issues. In addition, they perceive data- and object-oriented jobs to be most suited for deaf persons rather than people-oriented occupations (DeCaro, Mudgett-DeCaro, & Dowaliby, 2001; Parasnis, DeCaro, & Raman, 1996).

The above findings suggest that the way in which parents perceive their child’s deafness influences their behavior towards him or her. This means that adolescents’ development is influenced not only by personal perceptions but also by the perceptions of the people surrounding them, especially with reference to their self-image and their attitudes toward others with similar disabilities. These self-images and attitudes are reflected in the adolescents’ self-efficacy regarding various life domains, such as educational aspirations and occupational expectations. The educational level aspired to, the occupation in which one expects to work, and the extent of belief one holds regarding his or her ability to succeed in various occupations are major components in occupational choices and career development (Read, 1994).

Not surprisingly, the few studies that examined the perceptions of deaf youth regarding the ability of deaf persons to succeed in different occupations found, similarly to the studies of parental attitudes, that their expectations were relatively low (Hurwitz, Weisel, Parasnis, DeCaro, & Savir, 1997; Parasnis et al., 1996; Parasnis, Samar, & Mandke, 1996; Weisel & Cynamon, 2005). Farrugia (1982), for instance, reported that although deaf high school students held similar ambitions as their hearing peers with regard to socioeconomic status, they had lower career and skill development aspirations. Such findings may imply low levels of career self-efficacy, which may affect the career options and abilities among deaf persons (Hurwitz et al., 1997). However, it should be noted that these findings relate to deaf persons and there was no examination of HH individuals. Due to differences existing between deaf and HH persons in various areas of life (e.g., Weisel & Reichstein, 1990), two additional hypotheses of the current study are that differences will emerge between deaf and HH participants with respect to parental support and that the contribution of parental support to participants’ career self-efficacy will differ among the deaf, the HH, and the hearing groups.

In sum, the aim of the present study was to explore the contribution of career-related parental support and hearing status to the career self-efficacy of adolescents. In light of the literature on parents’ perceptions and career expectations from their deaf children (e.g., Schroedel & Carnahan, 1991), the research hypotheses are the following: (a) self-efficacy levels will be higher among hearing adolescents than among deaf/HH ones, (b) career-related parental support will be stronger among hearing adolescents than among deaf/HH ones, and (c) significant positive relations will emerge between parental support and the two types of career self-efficacies, but these will differ among the study groups.

Methods

Participants

Participants were 11th- and 12th-grade Jewish students (N = 160: 102 females, 58 males) aged 16–18 years.
(mean [M] = 17.06, standard deviation [SD] = 0.63) from north and central urban and suburban Israel. They were approached during school hours, after receiving approval from their principals. Sixty-six were deaf/HH and 94 were hearing students. Among participants with hearing loss, 23 (13 females and 10 males) studied in regular classes and used spoken language, whereas 43 (21 females and 22 males) studied in special classes for deaf students, used mainly sign language, and reported perceiving themselves as part of the Deaf community.

In the current study, students from regular classes are referred to as hard of hearing (HH) and students from special classes are referred to as the deaf group. Thus, the distinction between HH and deaf participants in this study was not based purely on audiological criteria but rather on social factors of group affiliation, main mode of communication, and educational placement. All deaf/HH participants had reading levels appropriate for coping with research questionnaires.

Within the HH group, 6 had hearing aids, 10 used cochlear implants, and 7 did not use any sensory aids. Four of them had moderate hearing loss (40–60 dB) and 19 had severe to profound hearing loss (70 dB or more). Seventeen students reported being born with a hearing loss and two students stated that at least one of their parents was deaf. Twenty used spoken language with their parents and three used simultaneous communication (spoken language accompanied by signs). Within the deaf group, 5 students had hearing aids, 16 used cochlear implants, and 22 did not use any sensory aids. Seven of them had moderate hearing loss and 36 had severe to profound hearing loss. Thirty-four reported having been born deaf and 24 stated having at least one deaf parent. Nineteen of the deaf participants used spoken language with their parents, 11 used sign language, and 13 used simultaneous communication.

Instruments

In order to ensure that the research instruments were suitable for deaf/HH students’ reading level, all measures were first examined as to their language level. Minor modifications that simplified the language but did not change the meaning of the statements were made.

Career-related parental support. The Career-Related Parent Support Scale (CRPSS; Turner, Alliman-Brissett, Lapan, Udipi, & Ergun, 2003) is a measure of parental support for each of Bandura’s sources of self-efficacy information for adolescents’ educational and vocational development: Instrumental assistance (IA; e.g., “My parents teach me things that I will someday be able to use at my job”), Career-related modeling (CM; e.g., “My parents tell me about things that happen to them at work”), Emotional support (ES; e.g., “My parents talk to me when I am worried about my future career”), and Verbal encouragement (VE; e.g., “My parents told me they expect me to finish school”). The scale includes 27 items using a five-point Likert-type scale (1 = strongly disagree, 3 = neither agree nor disagree, 5 = strongly agree). Cronbach alpha coefficients ranged between .78 and .85 in the original scale and between .66 and .85 in the current study.

Career decision-making self-efficacy. The Career Decision-Making Self-Efficacy Scale (CDMSE) is part of a middle school self-efficacy questionnaire (Fouad, Smith, & Enochs, 1997). Participants are asked to rate the degree of their agreement (ranging from 0 [strongly disagree] to 9 [strongly agree]) with each of 12 items (e.g., “Make a plan for my educational goals for the next 3 years”). In the original normed sample of the scale, as well as in the present study, internal consistency coefficients were α = .79.

Self-efficacy for the management of work–family conflict. The Self-Efficacy for the Management of Work–Family Conflict Scale (Cinamon, 2006) includes eight items that measure participants’ confidence in being able to handle future work and family conflicts along a 10-point scale ranging from 0 (not at all confident) to 9 (very confident). Four items assess self-efficacy in one’s ability to manage work-interfering-with-family conflict (e.g., “Succeeding in your family role although faced with many difficulties in your work”), and four items assessed self-efficacy in one’s ability to manage family-interfering-with-work conflict (e.g., “Investing in your job even when under heavy pressure due to family responsibilities”). Cinamon reported Cronbach alpha coefficients of .86 for both subscales. In the
current study, alphas were .86 for work-interfering–
with-family conflict management self-efficacy and .88
for family-interfering-with-work conflict management
self-efficacy. Significantly high correlations were found
in all three groups (deaf, HH, and hearing) between the
two subscales: between 58% and 74% of the variance
in one type of self-efficacy was explained by the other.
Thus, participants may not have differentiated between
the two types of conflicts. Indeed, principal component
factor analysis revealed only one factor. Consequently,
work–family conflict management self-efficacy was
treated in this study as a single scale.

Procedure

After receiving the approval needed, research ques-
tionnaires were administered individually to partici-
pants in school. The questionnaires were presented
and explained to participants using their main mode
of communication (i.e., spoken language for HH and
hearing participants and sign language for deaf par-
ticipants). Participants completed the questionnaires
in approximately 30–45 min. They were offered help if
they had trouble understanding questions; however, no
major difficulties arose. No incentives were provided to
the participants.

Results

Table 1 presents means, SDs, and intercorrelations for
the main study variables.

As presented in Table 1, participants rated their
parental support and their career self-efficacy as being
above moderate (parental support mean scores above 3
on a scale of 1–5 and self-efficacy mean scores above 6
on a scale of 0–9). In addition, significant positive cor-
rrelations were found among all study variables.

The first goal of the study was to explore differ-
ences in career self-efficacy among the deaf, the HH,
and the hearing participants. The research hypothesis
was that self-efficacy levels will be higher among hear-
ing adolescents than among deaf/HH ones. However,
the results of one-way ANOVA analyses, as shown in
Table 2, indicated that there were no significant dif-
fferences in both types of career self-efficacy (career
decision-making self-efficacy and self-efficacy in man-
aging work–family conflict) among the three research
groups.

The study’s second goal was to examine differences
in career-related parental support among the three
groups. A multivariate analysis of variance indicated a
significant group difference \( F(8, 158) = 7.25, p < .001, \mu = .16 \). As hypothesized, the three groups varied sig-
nificantly in career-related parental support but not
always in the expected direction (Table 2). Significant
differences emerged among the three groups for all the
subscales except IA. Bonferroni post hoc tests revealed
that deaf participants reported significant lower levels
of parental CM and VE in comparison with the HH
group and higher levels of ES compared with the hear-
ing group. In addition, the HH participants reported
higher levels of ES compared with the hearing par-
ticipants. These findings support the hypothesis about
differences between participants with different hearing
statuses.
The third goal of the study was to investigate the contribution of career-related parental support to the career self-efficacy among the deaf, HH, and hearing participants. The research hypothesis was that positive relations will emerge between parental support and the two types of career self-efficacy, but these will differ among the study groups. As presented in Table 3, significant positive correlations were found between variables of career-related parental support and career self-efficacy. The only nonsignificant correlations were in the HH group—between the career self-efficacy variables and the three types of parental support, namely, CM, VE, and ES.

In order to examine the contribution of career-related parental support to participants’ career self-efficacy, linear regression analyses were conducted with the four parental support variables (IA, CM, ES, and VE) as independent variables and each of the self-efficacy scales (career decision-making self-efficacy and self-efficacy in managing work–family conflict) as dependent variables. The results of regression analyses are presented in Table 4.

Significant results were found among all the groups. Among the deaf participants, the models for career decision-making self-efficacy [$F(4,37) = 6.27, p < .01$] and self-efficacy in managing work–family conflict [$F(4,37) = 7.74, p < .001$] were significant. Regarding career decision-making self-efficacy, parental support explained 40% of the variance by IA and VE. Higher levels of IA and VE were related to stronger career decision-making self-efficacy. As for self-efficacy in managing work–family conflict, career-related parental support explained 46% of the variance, with a significant contribution by VE. Higher levels of parental VE were related to higher levels of efficacy in managing future work–family conflict ($r = .63, p < .001$).

Significant linear regressions were also found for self-efficacy in managing work–family conflict among the HH [$F(4,17) = 3.40, p < .05$] and hearing participants [$F(4,89) = 6.84, p < .001$]. In the HH group, parental support (CRPS) explained 44% of the variance by IA. Higher levels of parental IA were correlated with higher levels of self-efficacy in managing work–family conflict. In the hearing group, parental support explained 23% of the variance by career-related modeling. Higher levels of CM were related to higher levels of self-efficacy in managing work–family conflict.

### Table 2

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<th>Subscale</th>
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<th>SD</th>
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<td>7.24</td>
<td>1.55</td>
<td>—</td>
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</tbody>
</table>

*Note. IA, instrumental assistance; CM, career-related modeling; VE, verbal encouragement; ES, emotional support; CDMSE, career decision-making self-efficacy; WFCSE, work–family conflict self-efficacy; HH, hard of hearing. * * p < .05, *** p < .001
Overall, the results indicate a lack of difference in career self-efficacy but significant differences in career-related parental support among adolescents with different hearing statuses (deaf, HH, and hearing). In addition, a positive relationship was found between parental support and career self-efficacy. However, this relationship varied in accordance with hearing status. Among deaf participants, both types of self-efficacy (career decision-making self-efficacy and self-efficacy in managing work–family conflict) were explained by specific aspects of parental support, whereas among the HH and hearing participants, only self-efficacy in managing work–family conflict was explained by parental support. In addition, different variables of parental support predicted self-efficacy in managing work–family conflict among the three groups: VE among the deaf participants, IA among the HH participants, and CM among the hearing participants.

**Discussion**

Parents play an important role in adolescents’ career development process (Whiston & Keller, 2004) and are salient providers of self-efficacy information (Turner & Lapan, 2002). The purpose of this research was to examine differences in career self-efficacy and parental support and the relationships between these two aspects among adolescents with different hearing statuses—deaf, HH, and hearing. No differences emerged among the three groups in the two types of career self-efficacy examined (career decision-making self-efficacy and self-efficacy in managing work–family conflict). However, participant groups did differ in career-related parental support and in the relations between parental support and career self-efficacy.

Lack of differences in career self-efficacy among participants with different hearing statuses was also reported in a previous study that examined the self-efficacy in managing work–family conflict among young adults (Michael et al., 2011). However, that study did find significant differences in self-efficacy when considering other variables such as employment status and engagement in intimate relations. Those findings, as well as the current ones, suggest that hearing status alone is not a distinctive variable in career self-efficacy. It also suggests that this type of efficacy may be affected

### Table 3: Correlations between subscales of parental support and self-efficacy among HH (n = 23), deaf (n = 43), and hearing (n = 94) participants

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Group</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>Career-Related Parental Support Scale</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1. IA</td>
<td>HH</td>
<td>.48*</td>
<td>.33</td>
<td>.62**</td>
<td>.36*</td>
<td>.70***</td>
</tr>
<tr>
<td></td>
<td>Deaf</td>
<td>.41**</td>
<td>.47**</td>
<td>.63***</td>
<td>.56***</td>
<td>.50**</td>
</tr>
<tr>
<td></td>
<td>Hearing</td>
<td>.39***</td>
<td>.44***</td>
<td>.58***</td>
<td>.34***</td>
<td>.37***</td>
</tr>
<tr>
<td>2. CM</td>
<td>HH</td>
<td>—</td>
<td>.21</td>
<td>.63**</td>
<td>—</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td>Deaf</td>
<td>—</td>
<td>.52***</td>
<td>.55***</td>
<td>.28*</td>
<td>.35*</td>
</tr>
<tr>
<td></td>
<td>Hearing</td>
<td>—</td>
<td>.04</td>
<td>.29**</td>
<td>.23*</td>
<td>.37***</td>
</tr>
<tr>
<td>3. VE</td>
<td>HH</td>
<td>—</td>
<td>—</td>
<td>.20</td>
<td>.16</td>
<td>.12</td>
</tr>
<tr>
<td></td>
<td>Deaf</td>
<td>—</td>
<td>—</td>
<td>.45**</td>
<td>.52***</td>
<td>.63***</td>
</tr>
<tr>
<td></td>
<td>Hearing</td>
<td>—</td>
<td>—</td>
<td>.40***</td>
<td>.32**</td>
<td>.26*</td>
</tr>
<tr>
<td>4. ES</td>
<td>HH</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.13</td>
<td>.16</td>
</tr>
<tr>
<td></td>
<td>Deaf</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.43**</td>
<td>.44**</td>
</tr>
<tr>
<td></td>
<td>Hearing</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>.19*</td>
<td>.35**</td>
</tr>
</tbody>
</table>

| Career Self-Efficacy Scale |       |   |   |   |   |   |
| 5. CDMSE | HH    | —   | —   | —   | —   | .02 |
|          | Deaf  | —   | —   | —   | —   | .80*** |
|          | Hearing | —   | —   | —   | —   | .48*** |
| 6. WFCSE | HH    | —   | —   | —   | —   | —   |
|          | Deaf  | —   | —   | —   | —   | —   |
|          | Hearing | —   | —   | —   | —   | —   |

*Note.* IA, instrumental assistance; CM, career-related modeling; VE, verbal encouragement; ES, emotional support; CDMSE, career decision-making self-efficacy; WFCSE, work–family conflict self-efficacy; HH, hard of hearing.

* p < .05, **p < .01, ***p < .001
by the individual’s own developmental phase. As noted above, during young adulthood, relevant aspects of employment and relationships contribute differently to the career self-efficacy of persons with different hearing statuses. Further research is needed to identify the variables that are influential in the formation of career self-efficacy among deaf/HH adolescents.

As for career-related parental support, the deaf group perceived lower levels of parental CM and VE in comparison with the HH group and higher levels of ES compared with the hearing group. In addition, HH participants reported higher levels of ES compared with the hearing participants. These findings are not surprising because more than 50% of the deaf participants reported having deaf/HH parents compared with less than 10% among the HH group.

It is well known that a high percentage of deaf persons struggle with unemployment, underemployment, and marginalization (e.g., Johnson, 1993; Winn, 2007). Thus, it is plausible that a greater proportion of deaf participants’ parents suffer from occupational problems. Consequently, encouragement to pursue career aspirations, either directly (by talking to their children) or indirectly (by presenting them with their own job environment) may not come as easily to them as to the other parents.

The higher levels of ES reported by the deaf/HH participants, compared with hearing ones, found in this research seem, at first glance, to be in contrast with previous studies on career-related attitudes of parents with deaf children (DeCaro et al., 2001; Parasnis et al., 1996). However, greater support does not necessarily

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Linear regression predicting career self-efficacy (N = 160)</th>
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<tbody>
<tr>
<td>Group</td>
<td>Variable</td>
</tr>
<tr>
<td>HH</td>
<td>CDMSE</td>
</tr>
<tr>
<td></td>
<td>IA</td>
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<tr>
<td></td>
<td>CM</td>
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<tr>
<td></td>
<td>VE</td>
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<td></td>
<td>ES</td>
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<td>WFCSE</td>
<td>IA</td>
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<td>CM</td>
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<td>ES</td>
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<tr>
<td>Deaf</td>
<td>CDMSE</td>
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<tr>
<td></td>
<td>IA</td>
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<td>CM</td>
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<td>ES</td>
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<td>WFCSE</td>
<td>IA</td>
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<td>CM</td>
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<td>Hearing</td>
<td>CDMSE</td>
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<td></td>
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<tr>
<td>WFCSE</td>
<td>IA</td>
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<tr>
<td></td>
<td>CM</td>
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<td></td>
<td>VE</td>
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<td></td>
<td>ES</td>
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</tbody>
</table>

Note. IA, instrumental assistance; CM, career-related modeling; VE, verbal encouragement; ES, emotional support; CDMSE, career decision-making self-efficacy; WFCSE, work–family conflict self-efficacy; HH, hard of hearing.

* p < .05, ** p < .01
mean a more positive attitude toward the occupational abilities of deaf/HH persons. It is quite possible that due to low career expectations, parents of deaf/HH adolescents feel a greater need to provide emotional compensation to their sons and daughters.

Regarding the relationship between career-related parental support and career self-efficacy, significant positive correlations were found in all three groups for these variables, suggesting that the two are connected. However, although correlations were significant among the deaf and hearing groups on all four types of parental support, among the HH group career self-efficacy variables were significantly correlated with only one parental support variable—IA. Two conclusions may be derived from these findings. First of all, the fact that high levels of parental IA are related to high levels of career self-efficacy in adolescents, disregarding their hearing status, is an encouraging finding. IA is a more direct way of career-related support (compared with other types such as career modeling or ES), and thus it may be more easily taught to parents when adolescents’ career self-efficacy needs to be boosted. Second, the fact that HH participants portray a different picture when considering relations between career-related parental support and career self-efficacy supports the idea that they are a distinct group. As discussed earlier, deaf people tend to have a well-formed Deaf identity and to perceive themselves as a community (Anderson & Leigh, 2011). HH persons, on the other hand, despite their hearing loss, tend to invest most of their efforts in blending into the hearing world (Weisel & Reichstein, 1990). Consequently, they may feel ambiguous regarding their group affiliation. This ambiguity may affect their perceptions regarding various life domains, such as the ways in which their parents may contribute to their career self-efficacy.

Assessment of the contribution of parental support to participants’ career self-efficacy yielded significant results as well. However, different aspects of parental support predicted different types of career self-efficacies across the three groups. Career decision-making self-efficacy was explained by career-related parental support only among the deaf participants and only in relation to IA and VE. Self-efficacy in managing work–family conflict, on the other hand, was predicted in all three groups by parental support. Furthermore, it was explained by VE in the deaf group, by IA in the HH group, and by CM in the hearing group. These findings suggest that career-related parental support is an important element in the career self-efficacy of adolescents, although its contribution varies among individuals with different hearing statuses.

The different findings that were found among the deaf, HH, and hearing participants support the notion that deaf and HH people are distinct groups. Previous studies have shown differences between these two groups in various domains, such as social adjustment (e.g., Weisel & Reichstein, 1990). The results of the current study imply that this differentiation exists in the career development domain as well. Indeed, research on perceptions of young adults with hearing losses regarding the importance of different life roles has revealed a greater sense of commitment to the work world among the deaf compared with the same in hearing and HH groups (Cinamon, Most, & Michael, 2008). Consequently, it has been suggested that hearing loss affects role salience in the exploration process during emerging adulthood. Considering the present findings, it is plausible that hearing loss may be an important variable in career development during adolescence as well.

The results of this study suggest some practical implications regarding career interventions. The positive relations that were found between career-related parental support and career self-efficacy suggest that counselors working with parents should encourage them to enhance the support they give to their child. This may be especially challenging when dealing with parents of children with hearing disabilities due to their low career expectations toward deaf people in general (Schroedel & Carnahan, 1991) and their own deaf child in particular (DeCaro et al., 1983). Career counselors should help parents focus on positive aspects of career development, such as providing opportunities for experiencing success and encouraging their child to pursue career-related activities, and not focus on the potential difficulties that their child may encounter in the work force.

The fact that among all groups of participants, higher levels of parental IA were related to higher levels of adolescents’ career self-efficacy may imply that in order to increase adolescents’ career self-efficacy, regardless of hearing status, counselors should focus on enhancement of this type of parental support. Specifically, career-related interventions should relate to ways in which
parents can help their children chose a suitable academic domain and succeed in it, develop relevant work skills, and generally take pride in their actions.

Nonetheless, the study’s findings also show that parents’ contribution to their child’s self-efficacy may vary in accordance with different variables such as a child’s hearing status. Therefore, we suggest that career-related interventions should take into account the extent and nature of parental support individuals receive along with specific characteristics and needs such as hearing status.

Furthermore, the study’s findings imply that career-related parental support should not be perceived as one general factor because its different aspects (IA, CM, VE, and ES) varied in their contribution to career self-efficacy. Career decision-making self-efficacy was explained by parental support only among the deaf group and only by IA, whereas self-efficacy in managing work–family conflict was explained by VE among the deaf participants, by IA among the HH participants, and by CM among the hearing participants. Thus, it seems that interventions aimed at enhancing career-related parental support should focus on a variety of specific behaviors. Further research is needed to determine the behaviors that may be most relevant.

As mentioned earlier, previous studies on career self-efficacy tended to focus on one type of self-efficacy, usually on career decision-making self-efficacy (e.g., Brown et al., 2000; Tang et al., 1999). The current study offers a broader perspective of this concept by including both career decision-making self-efficacy and self-efficacy in managing work–family conflict. Because self-efficacy beliefs are domain specific and refer to perceptions of capabilities to learn or perform given tasks within specified domains (Pajares, 1996), research on career self-efficacy should address different career-related aspects, such as the efficacy in managing work–family conflict, and not limit itself only to career decision-making. Furthermore, by including self-efficacy in managing future conflict between work and family, this research broadens the traditional perspective on career to include not only occupation but also the relations between occupation and family roles.

The results of this study should be addressed with caution. First of all, they are limited by the self-report nature of the instruments. In this study, adolescents were asked about their parents’ support. Indeed, self-perceptions are important when examining self-efficacy. However, in order to receive a more adequate picture, especially for intervention needs, further research should explore not only adolescents’ perceptions but also parental perceptions. Second, in this study, two types of career self-efficacy were examined—career decision-making self-efficacy and self-efficacy in managing work–family conflict. In order to better understand the connections between career self-efficacy and parental support, other types of career self-efficacies, such as the efficacy in exploring and planning a career, should be examined as well.

Additional limitations concern the research variables. The study’s findings, as well as the SCCT (Lent et al., 1994, 2002), imply that additional variables, along with parental support (for example, the opportunities and barriers imposed by other environmental factors, such as teachers and educational counselors, the media, and globalization), may predict the career self-efficacy of adolescents with different hearing statuses. In order to fully comprehend the factors influencing the development of career self-efficacy, these variables must be explored. Furthermore, the present study focused on career self-efficacy—an important variable in career development processes (Lent et al., 1994, 2002). However, other career-related issues should be addressed as well. For instance, further research is needed to examine the ways in which deaf/HH adolescents may effectively develop career-related skills and abilities that will help them to successfully compete in the workforce and avoid high levels of unemployment and underemployment.

Conflicts of Interest

No conflicts of interest were reported.

References


