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Emotional Intelligence: A New Variable in Career Decision-Making

Annamaria Di Fabio

*Department of Psychology, University of Florence
Italy*

1. Introduction

This chapter introduces emotional intelligence as an innovative variable in career decision-making processes. It also discusses recent empirical studies and outlines new research and intervention perspectives. In recent years, interest has grown in the significance of individual differences in career decision-making (Gati et al., 2010; Savickas, 2004). Awareness has also gradually increased that career decision-making is complex and multidimensional and that individual characteristics have to be taken into account in order to understand the way in which individuals deal with their career decisions (Gati et al., 2010). From this perspective, emotional intelligence appears to be a particularly promising variable in career decision-making processes (Di Fabio & Kenny, 2011).

The chapter will deal first with the principal decisional variables in the career field (career indecision and indecisiveness, career decision-making difficulties, decisional styles) and then describe the evolution of the emotional intelligence construct. Next, it will consider the role of emotional intelligence as a new variable in the career decision-making process (Caruso & Wolfe, 2001; Di Fabio & Blustein, 2010; Di Fabio & Kenny, 2011; Di Fabio & Palazzeschi, 2008b, 2009; Emmerling & Cherniss, 2003; Kenny & Di Fabio, 2009; Kidd, 1998; Young, 2010; Young & Valach, 1996) and also discuss various empirical studies on emotional intelligence.

2. Decisional variables

2.1 Career indecision and indecisiveness

The career indecision construct is used in the literature to underline the problems that can arise during career decision-making (Gati et al., 1996). The construct is designed to explain why some individuals experience uncertainty about their educational and vocational future while others are more involved and confident in making their own choices (Wanberg & Muchinsky, 1992).

From a theoretical point of view, different approaches can be used to examine different aspects of indecision (Kelly & Lee, 2002). The vocational interests approach, supported by Holland and Holland (1977), holds that indecision results from difficulties in personal and vocational identity and from insufficient crystallization of interests. Holland's (1959) theory

categorizes individuals into six personality types that correspond to specific professional areas (RIASEC). Accordingly, individuals who belong simultaneously to two or more types could be more undecided about which career path to take. Individuals with low scores in all personality types could also have interests that are not sufficiently defined to lead to a clear career choice. Another possibility is that individuals with high scores in all personality types could have so many interests that they cannot come to a clear decision. Finally, individuals with a wide range of skills could have difficulties in choosing among the various alternatives (Holland, 1959).

According to Super's approach (1953), indecision can correspond to a normal stage of career development. Osipow (1999) supports the thesis, developed earlier by Super (1953), that indecision should not necessarily be considered a persistent problem but rather a normal stage that all people go through during their lifetime. It is possible to distinguish between evolutive indecision (indecision), which corresponds to a normal stage in life in terms of development, and chronic or generalized indecision, known as indecisiveness, which is a personality characteristic that manifests itself in the difficulty that certain individuals have in taking decisions in any contexts of their lives. More recently, Savickas (2004) distinguished between undecided individuals (characterized by a momentary inability to choose but having the potential to make decisions based on their development level, the availability of information, and their decisional training and social support), and indecisive individuals (characterized by chronic anxiety and lack of problem-solving abilities).

3. Career decision-making difficulties

The theoretical and applicative relevance of the career indecision construct is underlined and contextualized by Gati et al. (1996) who state that the increasing rate of change in the world of work increases the number of individual transitions from one job to another during the lifetime of a person. A primary purpose of career counseling is to facilitate the construction of the career decision-making process, particularly with regard to overcoming the difficulties encountered during the process.

The research on career decision-making has devoted considerable attention to the categorization of the various facets of career indecision. Tinsley (1992) argues that, historically, two lines of research have been established: one purely theoretical and one empirical, that is characterized by attempts to devise measures to detect career indecision. However, the two lines of research were developed independently of each other, and, in an attempt to integrate them, Gati et al. (1996) proposed and empirically tested a taxonomy of difficulties individuals may experience. The career decision-making process can be subdivided into different components each of which involves different types of difficulties (Gati et al., 1996). Thus, the various difficulties that individuals may encounter during the career decision-making process can be classified into different categories, and difficulties with the same characteristics can be allocated to the same categories (Campbell & Cellini, 1981). According to Gati et al. (1996), a 'tree' can be used to list the difficulties: the two main groups of difficulties can be distinguished temporally – those that may be encountered before (lack of readiness) and those that may be encountered after the start of the decision-making process (lack of information, inconsistent information). The three main categories of difficulties (lack of readiness, lack of information, inconsistent information) each have a number of subcategories, giving a total of ten subcategories.

Regarding lack of readiness, three specific subcategories of difficulties can be identified: lack of motivation (low willingness to make a decision), indecisiveness (general difficulty in making a decision) and dysfunctional beliefs (distorted perception of careers and the decision-making process, irrational expectations and dysfunctional thoughts about the process).

Regarding lack of information, four specific subcategories of difficulties can be identified: lack of information about the decision-making process (lack of knowledge on how to make a decision appropriately and, particularly, on the steps in the career decision-making process); lack of information about the self (where individuals feel they do not have enough information about themselves, for example about their career preferences, their abilities, and so on); lack of information about occupations (lack of information on career options, for example what alternatives exist and the characteristics of these alternatives); lack of information about ways of obtaining information and getting help with career decision-making.

Regarding inconsistent information, three specific subcategories of difficulties can be identified: unreliable information (where individuals feel they are getting contradictory information about themselves and possible occupations); internal conflicts (an internal state of confusion that arises from the difficulty in reaching compromises on incompatible factors that individuals consider important); external conflicts (the gap between individual preferences and those of significant others, or the differing opinions of significant others).

3.1 Decisional styles

In recent decades, a gradual shift has occurred from economic and probabilistic decision-making models to decision maker characteristics (Arroba, 1977; Harren, 1979; Mann et al., 1997; Scott & Bruce, 1995). The early normative models that characterized the study of decision-making processes (Edwards, 1954; Luce & Raiffa, 1957; Von Winterfeldt & Edwards, 1986; Von Neumann & Morgenstern, 1947) have gradually been replaced by research on how the problem and the situation influence decision-making (Kleindorfer et al., 1993; Payne, Bettman, & Johnson, 1993), and also by research on the influence of personal factors in choice modalities (Brew et al., 2001), suggesting therefore the existence of different types of decisional styles (Arroba, 1977; Harren, 1979; Janis & Mann, 1977; Jepsen, 1974; Mann et al., 1997; Scott & Bruce, 1995).

In the debate on decisional styles, attention swung from task and decisional situation variables (Driver et al., 1990; Scott & Bruce, 1995) to more cognitive, individual variables (Andersen, 2000; Hunt et al., 1989; Keegan, 1984; McKenny & Keen, 1974; Mitroff, 1983) until a more timely and integrated decisional style definition could be formulated (Thunholm, 2004).

In the literature, the concept of decisional style was first used to indicate the primary mode employed by individuals to resolve decisional conflict (Janis & Mann, 1977; Mann et al., 1997; Radford et al., 1993). Decisional style was subsequently defined as individuals' habitual pattern of making decisions (Driver, 1979) or as the typical way of perceiving and responding to individual decision-making tasks (Harren, 1979).

The term decisional style was also often used synonymously with cognitive style (Andersen, 2000; Hunt et al., 1989; Keegan, 1984; Mckenny & Keen, 1974; Mitroff, 1983), a term which, in the career decision-making field, refers to the procedures for selecting and processing information that are central to understanding the decision-making process (Hunt et al., 1989). Driver et al. (1990), however, refer to decisional style as learned habit and state that the key difference between styles is the amount of information considered during the decision-making process as well as the number of alternatives identified in the decision-making: in this case, the task and context clearly influence individual differences on how meaning is attributed to the collected data.

Scott and Bruce (1995, p. 820) further defined decisional style as “the learned habitual response pattern exhibited by an individual when confronted with a decision situation. It is not a personality trait, but a habit-based propensity to react in a certain way in a specific decision context”. The role of habit and situational factors as predictors of decisional behaviour is thus highlighted.

More recently, Thunholm (2004, p. 941) formulated a more integrated definition of decisional style as a “pattern of response given by an individual in a decisional situation. This pattern of response is determined by the decisional situation, by the decisional task and by the same decider”. The deciders demonstrate individual differences in habits as well as in basic cognitive abilities such as information processing, self-evaluation and self-control, which impact consistently on the pattern of response in different tasks and situations.

Interest in different types of decisional styles also gradually developed (Arroba, 1977; Harren, 1979; Janis & Mann, 1977; Jepsen, 1974; Mann et al., 1997; Mann et al., 1989; Scott & Bruce, 1995). The model by Scott and Bruce (1995) identifies five decisional styles in behavioural terms: the rational style, characterized by extensive information research and a systematic evaluation of identified alternatives; the intuitive style, characterized by confidence in one’s own intuition and feelings; the dependent style, characterized by seeking the advice and opinions of others before deciding; the avoidant style, characterized by an attempt to avoid decision-making as far as possible; the spontaneous style, characterized by immediate intuition and the desire to reach a decision as quickly as possible.

Mann et al.’s (1997) taxonomy identifies four decisional styles: avoidance, which refers to the tendency to avoid conflict by giving others the responsibility for making a decision; vigilance, which refers to the careful and involved clarification of the goal to be reached through the decision-making process and the thorough evaluation of each option prior to deciding; procrastination, which refers to the tendency to postpone confronting a decisional problem; hypervigilance, which refers to the tendency to attempt, frenetically, to resolve a conflict that arises from having to make choices.

4. Evolution of the emotional intelligence construct

Emotional intelligence is considered a relatively new and growing research area, which has attracted interest at various levels (Zeidner et al., 2004). Emotional intelligence as a construct was first defined by Thorndike in 1920 as the ability to perceive one’s own and others’

emotions, motives and behaviours, and to use them to act optimally. In 1966, Leuner coined the term emotional intelligence, and, in 1988, Bar-On came up with the term Emotional Quotient (EQ). The emotional intelligence construct has elicited increasing interest since the nineties, especially from psychologists and researchers who have developed different models and definitions.

An early proposition of emotional intelligence was articulated by Mayer et al. (2000) who distinguished between mental ability models and mixed models: the first defined emotional intelligence in terms of individual cognitive abilities in processing emotional information, and the second conceptualized emotional intelligence as a construct that included a mix of cognitive abilities with other characteristics such as aspects of personality.

A second proposition of emotional intelligence called into question the different measures of emotional intelligence arguing that the type of measurement rather than the theory itself determines the nature of the different EI models (Petrides & Furnham, 2000, 2001). In line with this view, Petrides and Furnham (2000, 2001) distinguish between the trait EI (or the trait emotional self-efficacy) and the ability EI (formally defined as information-processing EI). This distinction is not linked to the ability model and the mixed model discussed earlier: Petrides and Furnham's proposition is indeed based on the method of measuring the construct (self-report *vs* maximum performance), and it sees the assessed construct as qualitatively different. Trait EI represents a constellation of emotion-related self-perceptions located at the lower levels of personality. Information-processing emotional intelligence, on the other hand, concerns emotional abilities (e.g. the ability to identify, express and label emotions). Trait EI is thus assessed through self-reported measures while information-processing emotional intelligence refers to objective maximum performance measures (Petrides & Furnham, 2000).

Finally, a further distinction regarding emotional intelligence should be considered, namely that the various models in the literature are distinguished according to whether they are focused on specific abilities or on the overall integration of these abilities (Mayer et al., 2008). Mayer et al. differentiate between specific-ability approaches that concentrate on a particular ability or abilities that can be considered fundamental to emotional intelligence; integrative-model approaches that consider emotional intelligence an overall ability; and the mixed-model approaches that include a wide range of non-cognitive factors.

The empirical studies that will be discussed later in this chapter deal in particular with Bar-On's (1997, 2002) theoretical model of emotional intelligence and also with the model by Salovey and Mayer (1990, Mayer & Salovey, 1997).

In Bar-On's (1997, 2002) model, emotional intelligence is conceptualized as a multifactorial construct where emotional, personal and social competencies converge and determine the modalities through which individuals relate with themselves and with others and that support them in coping effectively with environmental demands and pressures. Emotional intelligence develops over time, it changes in an individual's life and it can be improved through training programmes. Bar-On's (1997) model is hierarchical and includes a global dimension of emotional intelligence, five principal dimensions and fifteen subdimensions. The principal dimensions and their fifteen subdimensions are the following: 1) intrapersonal emotional Intelligence, which refers to awareness of one's own emotions and ability to express one's own feelings and communicate own's one needs. It concerns: self-regard,

emotional self-awareness, assertiveness, independence and self-actualization; 2) interpersonal emotional intelligence, which refers to the ability both to establish cooperative, constructive and satisfactory relationships and to understand the feelings of others. It concerns: empathy, social responsibility and interpersonal relationships; 3) stress management, which refers to the ability to control and regulate emotions. It concerns: stress tolerance and impulse control; 4) adaptability, which refers to the ability of use emotions to implement effective strategies for problem-solving. It concerns: reality testing, flexibility and problem-solving; 5) general mood, which refers to the ability to be optimistic, to feel and express positive feelings and to draw pleasure from the presence of others. It includes: optimism and happiness. Based on the Bar-On model, the Emotional Quotient Inventory (EQ-i, Bar-On, 1997) was developed as a self-report questionnaire for detecting perceived emotional intelligence. There is also a short version (Bar-On, 2002).

The first model of Salovey and Mayer (1990) includes three categories of adaptive abilities: appraisal and expression of emotion, regulation of emotion and utilization of emotions in solving problems. The first category includes the dimension of appraisal and expression of emotion in the self and appraisal of emotion in others. The component of appraisal and expression of emotion in the self is further subdivided into verbal and non-verbal subcomponents while the appraisal of emotion in others component consists of the non-verbal perception and empathy subcomponents. The second category, regulation of emotion, consists of regulation of emotion in the self component and the regulation of emotion in others components. The third category, utilization of emotions, includes the flexible planning, creative thinking, redirected attention and motivation components. Mayer and Salovey (1997) later revised their EI model by focusing more on the cognitive aspects of the construct. The revised model includes four components that develop over time ranging from basic psychological processes to higher and more integrated processes on a psychological level: 1) perceiving emotions; 2) facilitating thought; 3) understanding emotions; 4) managing emotions. According to this model, the first and the second components are part of the experiential emotional intelligence area while the third and the fourth components flow into the strategic emotional intelligence area. Based on this proposition, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT, Mayer et al., 2002) was developed for detecting ability-based emotional intelligence.

5. Emotional intelligence: An innovative variable in career decision-making

Emotions seemingly play an important role in career decision-making processes, but often this influence is not fully understood and recognized (Emmerling & Cherniss, 2003; Young, 2010). The literature on career development has increasingly focused on the role of emotions in career decision-making. Kidd (1998) maintains that emotion, in addition to cognition, is a key determining factor in career choice and career behaviour. Caruso and Wolfe (2001) argue that emotions play a crucial role in career development and selection.

According to Young et al. (1996), the role of emotion in career construction is understandable in the light of the action theory approach, which holds that career is built through the everyday actions. The authors argue that emotions are linked to the purposes, projects and needs of every individual. They accordingly advance three reasons in support of the importance of emotions in career construction: emotions motivate action, they regulate it, and they permit access to and the development of narratives about chosen career

paths (Young et al., 1996). Young and Valach (1996) argue that career development is closely connected to emotions and that, therefore, the awareness of one's emotions is essential to building one's career path. In support of the importance of emotions in career decision-making, Cooper (1997) argues that those who trust their feelings and allow themselves to be guided by them have more successful career paths. In studying the role of emotions in the career choice process, emotional intelligence is introduced as a critical variable for career success (Brown et al., 2003; Di Fabio & Blustein, 2010; Di Fabio & Kenny, 2011; Di Fabio & Palazzeschi, 2008a, 2008b, 2009; Emmerling & Cherniss, 2003). People with high emotional intelligence generally have greater awareness of their emotions and have a greater capacity to integrate emotional experience with their thoughts and actions (Emmerling & Cherniss, 2003). Emmerling and Cherniss (2003) consequently stress the key role that emotional intelligence plays in the processes of career exploration and career decision-making. Brown et al. (2003) state that individuals with greater emotional intelligence will probably place more trust in their own capacity to confront tasks related to career decision-making. Emmerling and Cherniss (2003) argue that people with high emotional intelligence are more aware of their own interests and professional values and that they can communicate these interests and values more efficiently during career counseling. The authors similarly believe that such people are better able to manage their own emotional response to career decision-making. Emmerling and Cherniss (2003) conclude that people who are better able to understand and manage their own emotions will probably also be better able to predict the emotional consequences of a potential career choice and avoid jobs that imply unpleasant responsibilities and tasks for them. Instead, they will choose career options that will bring them greater job and life satisfaction. Emotional intelligence is therefore a particularly promising variable for better understanding career decision-making processes. The link between emotional intelligence and different decisional variables (career decision-making difficulties, decisional styles, indecisiveness) has been empirically analyzed (Di Fabio & Blustein, 2010; Di Fabio & Kenny, in press; Di Fabio & Palazzeschi, 2007, 2008a, 2009, Di Fabio et al., submitted).

On the basis of the relationship between career decision-making difficulties, defined according to the model by Gati et al. (1996), and the EI construct according to the model by Bar-On (1997), based on the results of a study conducted on a sample of Italian interns (Di Fabio & Palazzeschi, 2008a), it appears that less emotional intelligence is associated with a greater lack of readiness regarding the difficulties that the individual may encounter before starting the decisional process; a greater lack of information in respect of the decisional process, the self, occupations (and the way to obtain such information); a greater inconsistency of information in respect of not only the lack of consistent information but also in respect of internal and external conflicts. The study also reveals that the intrapersonal dimension of emotional intelligence explains more of each of the three dimensions on the Career Decision-making Difficulties Questionnaire (CDDQ, Gati et al., 1996) and stresses the importance of one's own emotions in the construction of one's own career. Furthermore, a study on a sample of Italian interns (Di Fabio & Palazzeschi, 2009) – still using the career decision-making difficulties model by Gati et al. (1996), the Big Five personality model accessed through the Big Five Questionnaire (BFQ, Caprara et al., 1993) and the EI model by Bar-On (1997, 2002) – showed that the dimensions of emotional intelligence add a percentage of incremental variance compared to the variance explained by personality traits in respect of each of three subdimensions of the CDDQ. The results reveal the role of

personality traits as well as emotional intelligence in career decision difficulties thus demonstrating the interesting contribution that emotional intelligence can make in career decision-making. This is because personality traits are seen as stable in the literature (Costa & McCrae, 1992) whereas emotional intelligence is considered a characteristic that can be improved through specific training (Di Fabio & Kenny, 2011). Furthermore, the EI dimension that best explains each of the three dimensions of the CDDQ is the intrapersonal dimension again highlighting the importance of awareness of one's own emotions.

A study on university students (Di Fabio & Palazzeschi, 2008b) using the General Decision Making Style questionnaire (GDMS, Scott & Bruce, 1995) to evaluate decisional styles and the Bar-On Emotional Quotient Inventory: Short (Bar-On EQ-i:S, Bar-On, 2002) to evaluate emotional intelligence, showed 1) that the Adaptability dimension of emotional intelligence impacts positively on the Rational decisional style thus highlighting the role of the ability to use emotions in resolving problems and making use of an adaptive decisional style characterized by an attentive and rational way of proceeding; 2) that the Interpersonal dimension of emotional intelligence impacts positively on the Intuitive style suggesting that the ability to comprehend the feelings of others is central in the use of a style characterized by trusting one's own intuitions and feelings; 3) that the Intrapersonal dimension of emotional intelligence impacts inversely on the Dependent decisional style thus indicating that a limited awareness of one's own emotions is linked to a decisional style characterized by the need to entrust one's self to others for decision-making; 4) that the Intrapersonal dimension impacts inversely on the Avoidant decisional style suggesting that limited awareness of one's own emotions plays a role in the use of a decisional style characterized by the avoidance of decision-making; 5) that the Adaptability dimension of emotional intelligence impacts inversely on the Spontaneous decisional style indicating that limited competence in using emotions for problem-solving is linked to the use of a decisional style characterized by the wish to make decisions immediately and as fast as possible.

A later study (Di Fabio & Blustein, 2010) on high school students using the Melbourne Decision Making Questionnaire (MDMQ, Mann et al., 1997) and the Bar-On Emotional Quotient Inventory: Short (Bar-On EQ-i:S, Bar-On, 2002), revealed that the Intrapersonal dimension is linked inversely to disadaptive decisional styles indicating that a lack of awareness of one's own emotions may be related to the use of inadequate decisional styles. The Adaptability dimension is strongly related to the Vigilance adaptive style highlighting the importance of the ability to use emotions to realize effective strategies in problem solving. Another study (Di Fabio & Palazzeschi, 2007) conducted on a sample of interns using the MDMQ (Mann et al., 1997), the Big Five Questionnaire (BFQ, Caprara et al., 1993) and the Bar-On EQ-i: S (Bar-On, 2002), revealed that the emotional intelligence dimensions add a percentage of incremental variance with respect to personality traits in relation to adaptive as well as disadaptive decisional styles. In particular, for the Vigilance adaptive style, the percentage of incremental variance explained by emotional intelligence is greater than the percentage of incremental variance explained by personality traits. Furthermore, in this study, the Adaptability dimension had a greater inverse influence on the Vigilance adaptive style, and the Intrapersonal dimension had a greater inverse influence on the Disadaptive decisional styles.

Concerning decisional styles, a further investigation was conducted using, simultaneously, self-reported emotional intelligence as well as ability-based emotional intelligence. The

study by Di Fabio and Kenny (in press) on Italian high school students using the GDMS by Scott and Bruce (1995) to evaluate decisional styles, the Bar-On Emotional Quotient Inventory (Bar-On EQ-i, 1997) to evaluate self-reported emotional intelligence and the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT, Mayer et al., 2002) to evaluate ability-based emotional intelligence, revealed that self-reported emotional intelligence with respect to ability-based emotional intelligence largely explained decisional styles thus underlining the principal role of self-assessment of one's emotional skills and personal qualities.

Another study investigated the different roles that emotional intelligence could play in career indecision and indecisiveness. Research by Di Fabio et al. (submitted) on Italian university students looked at the relationship between career indecision and personality traits, career decision-making self-efficacy, perceived social support and self-reported emotional intelligence according to the Bar-On model (1997). The results showed that emotional intelligence explained a percentage of the incremental variance with respect to both personality traits and career decision-making self-efficacy and perceived social support in relation to both career indecision and indecisiveness. While career indecision was better explained by emotional intelligence, indecisiveness was better explained by personality. The study could thus investigate in depth the two constructs and highlight their convergences as well as their divergences.

The above studies showed the possible emergence of an attractive operating scenario at various levels in educational/vocational guidance and career counseling. What makes emotional intelligence an interesting, innovative variable in the research and intervention field is that, whereas personality characteristics are considered substantially stable, there is broad consensus in the literature that emotional intelligence is an improvable characteristic (Bar-On, 1997; Di Fabio & Kenny, 2011; Mayer et al., 2002). Psychologists have also been encouraged to develop intervention programmes that promote emotional and social growth as well as academic success and career development (Walsh et al., 2002). Training programmes on emotional intelligence (Di Fabio & Kenny, 2011; Kotsou et al., 2011; Nelis et al., 2009) would be particularly relevant given the links found with the decision variables (Di Fabio & Blustein, 2010; Di Fabio & Kenny, 2011, in press; Di Fabio & Palazzeschi, 2007, 2008a, 2008b, 2009; Di Fabio et al., submitted).

An emotional intelligence training programme specifically developed according to the model by Mayer and Salovey (1997) for Italian high school students (Di Fabio, 2010) not only increased the emotional intelligence (both ability-based and self-reported) but also reduced the career decision-making difficulties and indecisiveness of the students (Di Fabio & Kenny, 2011).

During the preliminary intervention phase, four classes (91 participants) were randomly chosen from the final high school year in a school system in the Province of Florence. The two classes that showed no significant differences between the mean scores of the studied variables were selected to take part in the research, which contained an experimental group and a control group for the administration of the instruments at T1 and T2. The following instruments were administered collectively in the classroom: the MSCEIT (Mayer et al., 2002); the Emotional Intelligence Scale (EIS, Schutte et al., 1998); the Indecisiveness Scale (IS, Frost & Shows, 1993); and the Career Decision-Making Difficulties Questionnaire (CDDQ, Gati et

al., 1996). Di Fabio and Kenny's (2011) study showed that the intervention was effective not only in improving emotional intelligence, both ability-based and self-reported, but also in reducing indecisiveness and career indecision with effects that remained a month after the intervention (Di Fabio & Kenny, 2011). This further underlined the link between emotional intelligence and decisional variables.

6. Conclusions

The literature review earlier in the chapter, which focused on the links between emotional intelligence and career decisional variables, identified promising innovations in the field of research and intervention. Current prevention models recognize the need to reduce risks and increase resources and strengths (Kenny & Hage, 2009; Kenny et al., 2009). Here, it is particularly important to identify variables that may represent strengths for the individual and that can be used in specific interventions. In this regard, emotional intelligence is seen as a particularly promising variable in the literature (Bar-on, 1997; Kotsou et al., 2011; Mayer et al., 2002; Nelis et al., 2009). The importance of developing interventions that support career development and career decision-making is underlined by research that documents the links between career decision-making difficulties, psychological distress, low levels of psychological well-being and school problems (American College Health Association, 2004; Fouad et al., 2006; Multon et al., 2001).

Recent research suggests that interventions that strengthen emotional intelligence could well promote progress in professional development (Ellis & Ryan, 2005). The importance of emotional awareness and abilities in managing emotions is receiving increasing recognition in the literature on career development (Brown et al., 2003; Emmerling & Cherniss, 2003; Kidd, 1998; Young, 2010). The studies cited in this chapter also highlight the relationship between the emotional intelligence construct and career decision-making difficulties (Di Fabio & Palazzeschi, 2008a, 2009, Di Fabio et al., submitted), decisional styles (Di Fabio & Blustein, 2010; Di Fabio & Kenny, in press; Di Fabio & Palazzeschi, 2007, 2009) and indecisiveness (Di Fabio et al., submitted). It could be argued that interventions to improve emotional intelligence could also reduce career indecision and indecisiveness (Di Fabio & Kenny, 2011).

It should, however, be noted that the studies discussed in this chapter cannot summarily be generalized as the results were obtained from non-representative samples of participants. Future research should therefore use more representative samples of the Italian population and also verify the results in other national contexts. A further limitation in most of the reviewed studies was the exclusive use of self-report measures for assessing emotional intelligence. As suggested (Di Fabio & Kenny, in press) with regard to decisional styles defined according to the GDMS model by Scott and Bruce (1995), it might be interesting to use instruments that can detect both ability-based emotional intelligence and self-reported measures. This would help clarify aspects of overlap and the specificity of the ability-based emotional intelligence model and the self-reported emotional intelligence model regarding different decisional variables.

Despite these limitations, emotional intelligence seems to be a particularly promising variable in respect of decisional issues in the career field (Di Fabio & Blustein, 2010; Di Fabio & Kenny, 2011, in press; Di Fabio & Palazzeschi, 2007, 2008a, 2008b, 2009; Di Fabio et al.,

submitted). In their interventions, practitioners could determine clients' emotional intelligence abilities and use specific ways to increase these abilities. The enhancement of emotional intelligence could be a new component of interventions to promote career development and of programmes aimed at the development of young people (Di Fabio & Kenny, 2011). Recognition of the role of emotional intelligence in different career decisional situations could also help define operational scenarios for different levels of prevention: a level of intervention for psycho-emotional enhancement (primary prevention) (Di Fabio & Blustein, 2010; Hage et al., 2007; Kenny & Di Fabio, 2009); screening interventions (secondary prevention) for early specific training in emotional intelligence (Di Fabio & Kenny, 2011; Dulewicz & Higgs, 2004; Emmerling & Cherniss, 2003); career counseling intervention (tertiary prevention) for the identification of specific paths for clients who could benefit from programmes on specific aspects of emotional intelligence. Guidance and career counseling could be enriched by identifying clients with difficulties in perceiving and working with emotions in order to calibrate specific types of intervention. Preventive services and interventions in support of career development could help prevent dysfunctions and minimize social costs related to career indecision and psychological stress (Fouad et al., 2006). The costs associated with providing preventive interventions could reduce future demands for more expensive health and social services (Swisher et al., 2004). Increasing attention is being given to the role of individual variables in career decision-making in an attempt to develop more effective and individualized interventions (Bernaud, 2008). From this perspective, emotional intelligence appears to be a very promising variable in terms of research and intervention. Here it should be remembered that many counselors believe that emotions play a significant role in career decision-making (Young, 2010). The importance of reintroducing the study of emotions and doing more research on their role in career decision-making processes has rightfully been emphasized as a new challenge in the field of guidance and career counseling (Young, 2010).

7. References

- American College Health Association. (2004). *Healthy Campus 2010*. Retrieved from http://www.acha.org/info_resources/hc2010.cfm
- Andersen, J. A. (2000). Intuition in managers: Are intuitive managers more effective? *Journal of Managerial Psychology*, Vol. 15, No. 1, (2000), pp. 46-67, ISSN 0268-3946
- Arroba, T. (1977). Styles of decision making and their use: An empirical study. *British Journal of Guidance and Counselling*, Vol. 5, No. 2, (July 1977), pp. 149-158, ISSN 0306-9885
- Bar-On, R. (1988). *The development of a concept of psychological well-being*. Unpublished Doctoral Dissertation, Rhodes University, South Africa.
- Bar-On, R. (1997). *The Emotional Intelligence Inventory (EQ-I): Technical manual*, Multi-Health Systems, Toronto, Canada.
- Bar-On, R. (2002). *Bar-On Emotional Quotient Inventory: Short. Technical manual*, Multi-Health Systems, Toronto, Canada
- Bernaud, J.-L. (2008). International seminar *Counseling and guidance in employment services*, Medici-Riccardi Palace, Florence, Italy (December, 2008)
- Brew, F. P., Hesketh, B., & Taylor, A. (2001). Individualist-collectivist differences in adolescent decision making and decision styles with Chinese and Anglos. *International Journal of Intercultural Relations*, Vol. 25, No. 1, (January 2001), pp. 1-19, ISSN 0147-1767

- Brown, C., George-Curran, R., & Smith, M. L. (2003). The role of emotional intelligence in the career commitment and decision-making process. *Journal of Career Assessment*, Vol. 11, No. 4, (November 2003), pp. 379-392, ISSN 1069-0727
- Campbell, R. E., & Cellini, J. V. (1981). A diagnostic taxonomy of adult career problems. *Journal of Vocational Behavior*, Vol. 19, No. 2, (October 1981), pp. 175-190, ISSN 0001-8791
- Caprara, G. V., Barbaranelli, C., & Borgogni, L. (1993). *BFQ: Big Five Questionnaire. Manual* (2nd ed.), Giunti O.S., Florence, Italy
- Caruso, D. R., & Wolfe, C. J. (2001). Emotional intelligence in the workplace. In: *Emotional intelligence in everyday life: A scientific inquiry*, J. Ciarrocchi, J. P. Forgas, & J. Mayer (Eds.), 150-167, Taylor & Francis, ISBN 1-84169-028-7, Philadelphia
- Cooper, R. K. (1997). Applying emotional intelligence in the work place. *Training & Development*, Vol. 51, No. 12, (December 1997), pp. 31-38, ISSN 1055-9760
- Costa, P. T., & McCrae, R. R. (1992). *NEO PI-R professional manual*, Psychological Assessment Resources, ISBN 978-9997924452, Odessa, FL
- Di Fabio, A. (2010). *Potenziare l'intelligenza emotiva in classe. Linee Guida per il training* [Enhancing emotional intelligence at school: Guidelines for training], Giunti O.S., ISBN 978-88-09-74892-7, Florence, Italy
- Di Fabio, A., & Blustein, D. L. (2010). Emotional intelligence and decisional conflict styles: Some empirical evidence among Italian high school students. *Journal of Career Assessment*, Vol. 18, No. 1, (February 2010), pp. 71-81, ISSN 1069-0727
- Di Fabio, A., & Kenny, M. E. (2011). Promoting emotional intelligence and career decision making among Italian high school students. *Journal of Career Assessment*, Vol. 19, No. 1, (February 2011), pp. 21-34, ISSN 1069-0727
- Di Fabio, A., & Palazzeschi, L. (2007). Intelligenza emotiva, tratti di personalità e stili decisionali: Alcune evidenze empiriche in un campione italiano di apprendisti [Emotional intelligence, personality traits and decisional styles: Some empirical evidence in an Italian sample of apprentices]. *Risorsa Uomo. Rivista di Psicologia del Lavoro e dell'Organizzazione*, Vol. 13, No. 4, (2007), pp. 469-486, ISSN 1128-0689
- Di Fabio, A., & Palazzeschi, L. (2008a). Indécision vocationnelle et intelligence émotionnelle: Quelques données empiriques sur un échantillon d'apprentis italiens [Career decision difficulties and emotional intelligence: Some empirical evidence in an Italian sample of wage-earning apprentices]. *Pratiques Psychologiques*, Vol. 14, No. 4, (June 2008), pp. 213-222, ISSN 1269-1763
- Di Fabio, A., & Palazzeschi, L. (2008b). Intelligenza emotiva: Nuove prospettive nel career decision-making [Emotional intelligence: New perspectives in career decision-making]. *Risorsa Uomo. Rivista di Psicologia del Lavoro e dell'Organizzazione*, Vol. 14, No. 4, (2008), pp. 459-471, ISSN 1128-0689
- Di Fabio, A., & Palazzeschi, L. (2009). Emotional intelligence, personality traits and career decision difficulties. *International Journal for Educational and Vocational Guidance*, Vol. 9, No. 2, (July, 2009), pp. 135-146, ISSN 0251-2513
- Di Fabio, A., Palazzeschi, L., Asulin-Peretz, L., & Gati, I. (submitted). Career indecision versus indecisiveness: associations with personality traits, career decision-making self-efficacy, perceived social support, and emotional intelligence. *Journal of Career Assessment*, ISSN 1069-0727

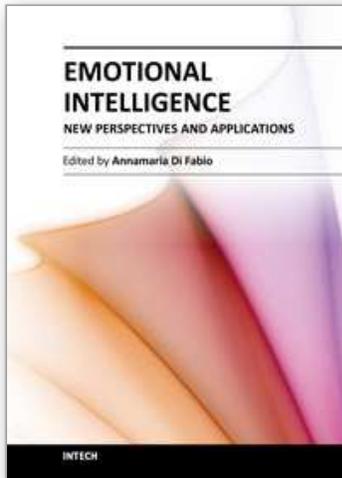
- Driver, M. J. (1979). Individual decision making and creativity. In: *Organizational behaviour*, S. Kerr (Ed.), 59-94, Grid Publishing, Columbus, OH
- Driver, M. J., Brousseau, K. E., & Hunsaker, P. L. (1990). *The dynamic decision maker*, Harper & Row, ISBN 978-1-55542-593-7, New York.
- Dulewicz, V., & Higgs, M. (2004). Can emotional intelligence be developed? *International Journal of Human Resource Management*, Vol. 15, No. 1, (February 2004), pp. 95-111, ISSN 0958-5192
- Edwards, W. (1954). Probability preferences among bets with differing expected values. *American Journal of Psychology*, Vol. 67, No. 1, (March 1954), pp. 56-67, ISSN 0002-9556
- Ellis, R., & Ryan, J. A. (2005). Emotional intelligence and positive psychology: Therapist tools for training/coaching clients to move beyond emotional relief. *Annals of the American Psychotherapy Association*, Vol. 8, No. 3, (September 2005), pp. 42-43, ISSN 1535-4075
- Emmerling, R. J., & Cherniss, C. (2003). Emotional intelligence and career choice process. *Journal of Career Assessment*, Vol. 11, No. 2, (May 2003), pp. 153-167, ISSN 1069-0727
- Fouad, N. A., Guillen, A., Harris-Hodge, E., Henry, C., Novakovic, A., Terry, S., & Kantamneni, N. (2006). Need, awareness, and use of career services for college students. *Journal of Career Assessment*, Vol. 14, No. 4, (November 2006), pp. 407-420, ISSN 1069-0727
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*, Basic Books, ISBN 978-0-465-02433-9, New York
- Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision-making. *Journal of Counseling Psychology*, Vol. 43, No. 4, (October 1996), pp. 510-526, ISSN 0022-0167
- Gati, I., Landman, S., Davidovitch, S., Asulin-Peretz, L., & Gadassi, R. (2010). From career decision-making styles to career decision-making profiles: A multidimensional approach. *Journal of Vocational Behavior*, Vol. 76, No. 2, (April 2010), pp. 277-291, ISSN 0001-8791
- Guilford, J. P. (1956). The structure of intellect. *Psychological Bulletin*, Vol. 53, No. 4, (July 1956), pp. 267-293, ISSN 0033-2909
- Hage, S., Romano, J., Conyne, R., Kenny, M., Mathews, C., Schwartz, J. P., & Waldo, M. (2007). Best practice guidelines on prevention in practice, research, training, and social advocacy for psychologists. *The Counseling Psychologist*, Vol. 35, No. 4, (July 2007), pp. 493-566, ISSN 0011-0000
- Harren, V. A. (1979). A model of career decision making for college students. *Journal of Vocational Behavior*, Vol. 14, No. 2, (April 1979), pp. 119-133, ISSN 0001-8791
- Holland, J. L. (1959). A theory of vocational choice. *Journal of Counseling Psychology*, Vol. 6, No. 1, (1959), pp. 35-44, ISSN 0022-0167
- Holland, J. L., & Holland, J. E. (1977). Vocational indecision: More evidence and speculation. *Journal of Counseling Psychology*, Vol. 24, No. 5, (September 1977), pp. 404-414, ISSN 0022-0167
- Hunt, R. G., Krzystofiak, F. J., Meindl, J. R., & Yousry, A. M. (1989). Cognitive style and decision making. *Organizational Behavior and Human Decision Processes*, Vol. 44, No. 3, (December 1989), pp. 436-453, ISSN 0749-5978

- Janis, I. L., & Mann, L. (1977). *Decision making: A psychological analysis of conflict, choice, and commitment*, Free Press, ISBN 978-0-02-916190-6, New York
- Jepsen, D. A. (1974). Vocational decision-making strategy-types: An exploratory study. *Vocational Guidance Quarterly*, Vol. 23, No. 1, (September 1974), pp. 17-23, ISSN 0042-7764
- Keegan, W. J. (1984). *Judgements, choices and decisions*, Wiley, ISBN 978-0-471-86834-7, New York
- Kelly, K. R., & Lee, W. C. (2002). Mapping the domain of career decision problems. *Journal of Vocational Behavior*, Vol. 61, No. 2, (October 2002), pp. 302-326, ISSN 0001-8791
- Kenny, M. E., & Di Fabio, A. (2009). Prevention and career development. *Risorsa Uomo. Rivista di Psicologia del Lavoro e dell'Organizzazione*, Vol. 15, No. 4, (2009), pp. 361-374, ISSN 1128-0689
- Kenny, M. E., & Hage, S. M. (2009). The next frontier: Prevention as an instrument of social justice. *Journal of Primary Prevention*, Vol. 30, No. 1, (January 2009), pp. 1-10, ISSN 0278-095X
- Kenny, M. E., Horne, A. M., Orpinas, P., & Reese, L. E. (2009). Social justice and the challenge of preventive interventions: An Introduction. In: *Realizing social justice: The challenge of preventive interventions*, M. E. Kenny, A. M. Horne, P. Orpinas, & L. E. Reese (Eds.), 3-14, American Psychological Association, ISBN 978-1-4338-0411-3, Washington, DC
- Kidd, J. M. (1998). Emotion: An absent presence in career theory. *Journal of Vocational Behavior*, Vol. 52, No. 3, (June 1998), pp. 275-288, ISSN 0001-8791
- Kleindorfer, P. R., Kunreuther, H. C., & Schoemaker, P. J. H. (1993). *Decision sciences: An integrative perspective*, University Press, ISBN 978-0-521-32867-8, Cambridge, NY
- Kotsou, I., Nelis, D., Grégoire, J., & Mikolajczak, M. (2011). Emotional Plasticity: Conditions and Effects of Improving Emotional Competence in Adulthood. *Journal of Applied Psychology*, Vol. 96, No. 4, (July 2011), pp. 827-839, ISSN 0021-9010
- Leuner, B. (1966). Emotional intelligence and emancipation. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, Vol. 15, No. 6, (September 1966), pp. 196-203, ISSN 0032-7034
- Luce, R. D., & Raiffa, H. (1957). *Games and decisions*, Wiley, New York
- Mann, L., Burnett, P., Radford, M., & Ford, S. (1997). The Melbourne Decision Making Questionnaire: An instrument for measuring patterns for coping with decisional conflict. *Journal of Behavioral Decision Making*, Vol. 10, No. 1, (March, 1997), pp. 1-19, ISSN 0894-3257
- Mann, L., Harmoni, R., & Power, C. (1989). Adolescent decision making: The development of competence. *Journal of Adolescence*, Vol. 12, No. 3, (September 1989), pp. 265-278, ISSN 0140-1971
- Mayer, J. D., Roberts, R. C., & Barsade, S. G. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology*, Vol. 59, (January 2008), pp. 507-536, ISSN 0066-4308
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In: *Emotional development and emotional intelligence: Educational implications*, P. Salovey & D. Sluyter (Eds.), 3-31, Basic Books, ISBN 978-0-465-09587-2, New York
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Selecting a measure of emotional intelligence: The case of ability scales. In: *The handbook of emotional intelligence*, R. Bar-On & J. D. Parker (Eds.), 320-342, Jossey Bass, ISBN 978-0-7879-4984-6, San Francisco

- Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT): User's manual*, Multi-Health Systems, ISBN 978-0-72952-630-2 Toronto, Canada
- Mckenny, J., & Keen, P. (1974). How managers' mind work. *Harvard Business Review*, Vol. 52, (May-June 1974), pp. 79-90, ISSN 0017-8012
- Mitroff, I. I. (1983). *Stakeholders of the organizational mind*, Jossey-Bass, ISBN 978-0-87589-580-2, San Francisco
- Multon, K. D., Heppner, M. J., Gysbers, N. C., Zook, C., & Ellis-Kalton, C. A. (2001). Client psychological distress: An important factor in career counseling. *Career Development Quarterly*, Vol. 49, No. 4, (June 2001), pp. 324-335, ISSN 0889-4019
- Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences*, Vol. 47, No. 1, (July 2009), pp. 36-41, ISSN 0191-8869
- Osipow, S. H. (1999). Assessing Career Indecision. *Journal of Vocational Behavior*, Vol. 55, No. 1, (August 1999), pp. 147-154, ISSN 0001-8791
- Payne, J. W., Bettman, J. R., & Johnson, E. J. (1993). *The adaptive decision maker*, University Press, ISBN 978-0-521-42526-1, Cambridge, NY
- Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, Vol. 29, No. 2, (August 2000), pp. 313-320, ISSN 0191-8869
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality*, Vol. 15, No. 6, (December 2001), pp. 425-428, ISSN 0890-2070
- Radford, M. H. B., Mann, L., Otha, Y., & Nakane, Y. (1993). Differences between Australian and Japanese students in decisional self-esteem, decisional stress and coping styles. *Journal of Cross Cultural Psychology*, Vol. 24 4, No. 3, (September 1993), pp. 284-297, ISSN 0022-0221
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, Vol. 9, No. 3, (1990), pp. 185-211, ISSN 0276-2366
- Savickas, M. (2004). Vocational psychology. In: *Encyclopedia of Applied Psychology*, C. Spielberger (Ed.), 655-667, Elsevier, ISBN 978-0-12-657410-4, Amsterdam, Netherlands
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, Vol. 25, No. 2, (August, 1998), pp. 167-177, ISSN 0191-8869
- Scott, S. G., & Bruce, R. A. (1995). Decision-making style: The development and assessment of a new measure. *Educational and Psychological Measurement*, Vol. 55, No. 5, (October 1995), pp. 818-831, ISSN 0013-1644
- Super, D. E. (1953). A theory of vocational development. *American Psychologist*, Vol. 8, No. 5, (May, 1953), pp. 185-190, ISSN 0003-066X
- Swisher, J. D., Scherer, J., & Yin, R. K. (2004). Cost-benefit estimates in prevention research. *The Journal of Primary Prevention*, Vol. 25, No. 2, (October 2004), pp. 137-148, ISSN 0278-095X
- Thorndike, R. K. (1920). Intelligence and its uses. *Harper's Magazine*, Vol. 140, (January 1920), pp. 227-235, ISSN 0017-789X

- Thunholm, P. (2004). Decision-making style: Habit, style or both? *Personality and Individual Differences*, Vol. 36, No. 4, (March 2004), pp. 931-944, ISSN 0191-8869
- Tinsley, H. E. A. (1992). Career decision making and career indecision. *Journal of Vocational Behavior*, Vol. 41, No. 3, (December 1992), pp. 209-211, ISSN 0001-8791
- Von Neumann, J., & Morgenstern, O. (1947). *Theory games and economic behaviour*, Princeton University Press, ISBN 978-0-691-13061-3, Princeton, NJ
- Von Winterfeldt, D., & W. Edwards (1986). *Decision analysis and behavioral research*, Cambridge University Press, ISBN 978-0-521-27304-6, New York
- Walsh, M. E., Galassi, J. P., Murphy, J. A., & Park-Taylor, J. (2002). A conceptual frame work for counseling psychologists in schools. *The Counseling Psychologist*, Vol. 30, No. 5, (September 2002), pp. 682-704, ISSN 0011-0000
- Wanberg, C. R., & Muchinsky, P. M. (1992). A typology of career decision status: Validity extension of the vocational decision status model. *Journal of Counseling Psychology*, Vol. 39, No. 1, (January 1992), pp. 71-80, ISSN 0022-0167
- Young, R. A. (2010, July). *Counselling Psychology: The ways forward*. Paper presented at 27th International Congress of Applied Psychology, Melbourne, Australia.
- Young, R. A., & Valach, L. (1996). Interpretation and action in career counseling. In: *Handbook of career counseling theory and practice*, M. L. Savickas & W. B. Walsh (Eds.), 361-375, Davies-Black, ISBN 978-0-89106-080-2, Palo Alto, CA
- Young, R. A., Valach, L., & Collin, A. (1996). A contextual explanation of career. In: *Career choice and development*, D. Brown & L. Brooks (Eds.), (3rd ed.), 477-512, Jossey-Bass, ISBN 978-0-7879-0204-9, San Francisco
- Zeidner, M., Matthews, G., & Roberts, R. D. (2004). Emotional intelligence in the workplace: A critical review. *Applied Psychology: An International Review*, Vol. 53, No. 3, (July 2004), pp. 371-399, ISSN 0269-994X

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Emotional intelligence is an emerging construct for applied research and possible interventions, both in scholastic, academic and educational contexts, organizational contexts, as well as at an individual level in terms of people's well-being and life satisfaction. From the presented contributions, it emerges how this volume is characterized by an interest to give an international overview rich of stimuli and perspectives for research and intervention, in relation to a promising variable of current interest, such as emotional intelligence. The goal is that this book further contributes to the affirmation of a particularly promising variable, such as emotional intelligence, which requires a greater interest and attention in both research and application field.

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Phone: +86-21-62489820
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