

Resourcefulness: Current Insights and Future Directions for Family Scholars and Clinicians

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Abstract

The purpose of this article is to evaluate the current state of studying resourcefulness among children and families and to propose future research directions. Five domains of studying resourcefulness were discussed in this article; these domains are positive outcomes of being resourceful on family members, definition of resourcefulness, assessments of resourcefulness, factors contributing to children's resourcefulness, and the programs aimed at increasing resourcefulness. By reviewing findings of the existing studies, this article revealed that resourcefulness is a multifaceted concept that has caused variations in the definitions/emphases from different scholars and the various existing scales testing different facets of the concept. While most of the studies focused on family members, none of them discussed the value of family resourcefulness in their studies. Research findings suggest that both environmental influences and personal characteristics contribute to children's resourcefulness, which either directly or indirectly reflect the notions of family systems theory. Several resourcefulness intervention programs were identified, but these programs were mainly focused on children and socioeconomically disadvantaged families and all serve different purposes. We propose to generate matched programs for either parents or kids to enhance the outcome of these programs in the family settings. Future studies on consolidating the various definitions, scales, and programs on resourcefulness and family resourcefulness, as well as expanding understandings of the internal and external influences that contribute to a family's resourcefulness from the systemic perspective are needed.

Keywords

resourceful, resourcefulness, family systems theory, current stage, future directions

For the last several decades, most societies around the world have experienced economic hardships due to global economic recessions. A lot of families have been struggling and under a lot of stress for survival during the difficult time. In addition to the family economic hardships and strain, parents or caregivers of children are likely to experience emotional and psychological distress because of their parental responsibilities and burden of raising children. Also, children are likely to be under a lot of stress caused by academic requirements and achievements and diverse developmental tasks in their transitional stages. These stressors and challenges generally lead to adverse outcomes such as low quality of life, depression, physical illness, and problematic behaviors like violence and suicide.

Being resourceful is not only crucially important for families facing financial difficulties but also for family members who are carrying the physical and mental burden related to taking care of themselves and their loved ones (Zauszniewski, Bekhet, & Suresky, 2008). Being resourceful is a desirable quality not only for children of socioeconomically disadvantaged families but also for any family that faces the challenge of using limited resources to achieve life goals. A resourceful person is better able to approach a

problem from different angles, tends to think objectively, and is more likely to solve problems effectively through utilizing the resources around him or her (Corsini, 2007; Elkins, 1985; Rosenbaum & Ben-Ari, 1985; Zauszniewski, Lai, & Tithiphontumrong, 2006). Thus, being resourceful can be important in understanding how children and parents cope with stress, as well as in enhancing their psychological functioning, and alleviating psychological and physical symptoms caused by stress.

In 1980, Rosenbaum introduced the concept of resourcefulness and the Self-Control Scale to assess resourcefulness. Since then, many studies (Ceyhan & Ceyhan, 2011; Zauszniewski & Bekhet, 2011; Zauszniewski et al., 2008) have been conducted to develop valid scales for assessing and detecting the factors

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contributing to resourcefulness and the outcomes of being resourceful for children or family members. Currently, intervention programs focused on promoting resourcefulness among younger children and socioeconomically disadvantaged families have been keeping pace with empirical studies (Zauszniewski, Au, & Musil, 2012; Zauszniewski & Bekhet, 2011; Zauszniewski et al., 2008; Zauszniewski, Fulton-Picot, Roberts, Debanne, & Wykle, 2005).

To better understand the current state of research on resourcefulness, we reviewed the key findings from five domains of studying resourcefulness: positive outcomes of being resourceful, definition of resourcefulness, assessments of resourcefulness, factors contributing to resourcefulness, and the programs aimed at increasing resourcefulness. By demonstrating the critical issues in areas including definition and assessments of resourcefulness, factors contributing to children's resourcefulness, and current programs effective to enhance children's and parents' resourcefulness, we proposed the future research directions on resourcefulness as well as indicated the potential influences of resourcefulness studies on the work of family scholars and clinicians from a systemic perspective.

The databases used to search for articles for this review include EBSCOHost, PsycINFO, and Google Scholar. Each empirical study found and included in this review reflects one of the five domains. Nonscholarly articles (such as magazine articles, handouts and brochures, or web pages) were excluded for this review, with the exception of discussing current resourcefulness programs. Resourcefulness studies focused on people in a certain occupation or in a particular work environment were not included in this review. Specific cultures or populations were not excluded from this review, but only papers written in English were examined.

Resourcefulness Promotes Positive Outcomes on Children and Parents

Being resourceful is beneficial to the person and the rest of the family. A line of positive outcomes of being resourceful on family members were identified by previous studies. These outcomes pertain not only to the mental health of a resourceful family member but also to the academic achievements of a resourceful child. These positive outcomes were either direct effects or moderating effects of being resourceful.

Direct Effects of Resourcefulness

Effects of children's resourcefulness. Previous research has reported that children's resourcefulness was positively related to children's social self-efficacy (Bilgin & Akkapulu, 2007), ability of function in daily activities (Chang, Zauszniewski, Heinzer, Musil, & Tsai, 2007), engagement in academic self-control behaviors (Kennett & Keefer, 2006), ability to deal effectively with academic stress (Akgun & Ciarrochi, 2003), and positive feelings toward school and learning (Corsini, 2007). On the other hand, children's resourcefulness is

negatively associated with children's depression (Chang et al., 2007), aggression (Ronen & Rosenbaum, 2010), social loneliness (McWhirter, 1997), and self-blame (Ginter, West, & Zarski, 1988).

For children, the most direct effect of being resourceful is that it advanced progress in academic performance. Studies have found that when resourcefulness is promoted in the context of school, resourceful students can learn at a faster pace and make more rapid progress than their peers who do not receive resourcefulness-based education (Corsini, 2007; Elkins, 1985). Studies have also found that these students were happier and had better adjustment and more positive feelings toward school and learning (Corsini, 2007). These children were able to look at problems from many different angles and are better able to utilize problem-solving skills effectively; they are also advanced in their critical thinking skills (Elkins, 1985). Elkins (1985) also reported that students in a resourcefulness-based education program tended to have more autonomy than students in a traditional school setting.

Based on results from several studies (Ceyhan & Ceyhan, 2011; Kennett & Keefer, 2006), students who displayed resourcefulness in a university setting tended to have a higher locus of control, a higher sense of self-esteem, higher levels of self-confidence, and advanced assertiveness skills compared to students low in their resourcefulness. Additionally, students higher in resourcefulness are also more apt to use the resources available to them in the environment and tend to take advantage of presented opportunities (Ceyhan & Ceyhan, 2011). Based on Akgun and Ciarrochi's study in 2003, highly resourceful university students' academic performances were found to be less affected by academic stress; when placed in a situation where there was inescapable noise or when presented with continuous failures, highly resourceful students did not give up on the task at hand. They also indicated that students high in learned resourcefulness have a vast collection of behavioral and cognitive skills that allow for them to maintain self-control over their emotions.

Another study conducted on university students and resourcefulness suggests that those higher in resourcefulness tend to be better able to overcome obstacles, complete tasks that although necessary, are quite boring, and are better able to persist when they are presented with difficult situations (Kennett & Keefer, 2006). These researchers found that those who are high in resourcefulness are more likely to be able to avoid the negative aspects of academic stress and achieved higher grades at the end of the year when compared to students who were low in resourcefulness. Researchers reported that a student's level of resourcefulness was found to be the strongest predictor of a student's academic performance (Kennett, 1994; Kennett & Keefer, 2006).

Effect of parents' (or adult individuals, caregivers) resourcefulness. Likewise, it is good for the children and family if a parent is resourceful. Parents' resourcefulness is positively associated with the quality of their life (Zauszniewski et al., 2005); psychological, social, and physical functioning (Zauszniewski

et al., 2012); self-confidence, optimism, and support-seeking (Eroglu, Akbaba, Adiguzel, & Peker, 2014); and children's resourcefulness (Zauszniewski, Chung, Chang, & Krafcik, 2002). Parents' resourcefulness is also negatively related to parents' depressive symptoms (Zauszniewski et al., 2012) and helplessness feeling (Eroglu et al., 2014).

Studies suggest that being resourceful often leads to a better quality of life, especially for caregivers (Zauszniewski et al., 2008; Zauszniewski et al., 2005). Zauszniewski, Fulton-Picot, Roberts, Debanne, and Wyke (2005) found that the higher the amount of daily hassles and the lower the self-esteem for a caregiver, the lower the resourcefulness of that individual. In that particular study, resourcefulness was defined as the way in which an individual responds to a situation in his or her life that causes the individual stress (Zauszniewski et al., 2005).

Resourcefulness training for female family members was conducted and was found to help women and girls to feel able to ask for help when they are unable to complete something on their own and to lead to the use of positive cognitions, which helped reduce the chances of these female family members developing clinical depression (Zauszniewski et al., 2008). A high-quality social support system was indicated as a strong predictor of caregivers' positive cognitions and resourcefulness (Zauszniewski et al., 2005). All of these studies discuss that caregivers may benefit from interventions that aim to reduce the amount of daily hassles present in their lives and interventions that increase self-esteem or social support. Resourcefulness interventions were also found to promote psychological, social, and physical functioning as well as alleviate stress, anxiety, and depression (Zauszniewski et al., 2012).

Moderating Effects of Resourcefulness

Resourcefulness sometimes doesn't work directly on people; instead, it acts as a moderator. Researchers presented that resourcefulness moderates the relationship between stress and outcomes of stress. For example, resourcefulness moderates the relationships between academic stress and academic performance (Akgun & Ciarrochi, 2003), between female caregivers' depression and adoptive functioning of children (Chang et al., 2007), and between stress of peer relationship and depression of children (Akgun & Ciarrochi, 2003). That is, highly resourceful individuals can minimize the negative effect of stress. So, they can do better than less resourceful individuals in the same stressful situations.

These positive outcomes listed above reiterate the importance of instilling resourcefulness in young children and adults and the importance of studying resourcefulness. The positive outcomes identified in the existing literatures can assist the development of specific programs that can target certain at-risk children and families, and more positive outcomes are expected to be identified in the future studies. In the following, we will demonstrate the critical issues in areas including definition and assessments of resourcefulness, factors contributing

to children's resourcefulness, and current programs effective to enhance children's and parents' resourcefulness. An analysis of the existing literature from family systemic perspectives and a suggestion for future study will be followed under each of the three sections.

Discussion on Critical Issues

Definition and Assessment of Resourcefulness

Throughout academic articles being reviewed, resourcefulness is defined in various ways by social scholars. Among them, there are two prominent researchers who made the most significant contributions in understanding and establishing the theoretical concept of resourcefulness: Michael Rosenbaum and Jaclene Zauszniewski.

Michael Rosenbaum, a psychologist, studied injured soldiers in 1970s and first raised the concept of "learned resourcefulness." It was defined as "a repertoire of cognitive behavioral self-control skills" that individuals acquire throughout their lives to cope effectively with stressful life events and to successfully execute self-control behaviors.

Rosenbaum (1989, 1990) viewed learned resourcefulness in three dimensions: redressive self-control, reformative self-control, and perceived self-efficacy. Redressive self-control involves the use of positive self-instructions for thought, mood, and pain control. Reformative self-control is the skills for effective problem-solving and as strategies for postponing the need for instant gratification. Perceived self-efficacy is coping skills involving belief in the effectiveness of one's own coping skills when faced with stressful situations. The concept of learned resourcefulness by Rosenbaum has been widely used in the studies of resourcefulness.

Zauszniewski, Lai, and Tithiphontumrong (2006) also conceptualized resourcefulness adopting the concept of learned resourcefulness by Rosenbaum. However, they viewed resourcefulness in two distinctive dimensions: personal and social resourcefulness. Personal resourcefulness is regarded as the cognitive behavioral skills of learned resourcefulness by Rosenbaum (1990). That is, the concept of personal resourcefulness involves the use of internal self-help strategies (e.g., cognitive reframing, positive thinking, problem-solving, priority-setting, and planning ahead). Social resourcefulness is defined as the ability to seek help from others when unable to function independently (Nadler, 1990). The concept of social resourcefulness involves external help-seeking strategies from formal resources (e.g., professional, medical doctor) or informal resources (e.g., family or friends). Zauszniewski and colleagues suggested that personal self-help strategies and social help-seeking strategies should be viewed as two complementary dimensions. That is, they conceptually expanded Rosenbaum's learned resourcefulness.

To reflect the definition of learned resourcefulness, these two theorists developed the assessments (see Appendix) of resourcefulness based on each definition. As mentioned above,

however, they defined resourcefulness in different ways and constructed assessments with different contents. Rosenbaum developed Self-Control Schedule (SCS) Scale to measure individuals' general repertoire of cognitive behavioral self-control skills and tendencies to solve problems that they encounter through measuring redressive self-control skills, reformative self-control skills, and perceived self-efficacy (i.e., personal resourcefulness).

The SCS, developed by Rosenbaum and available in his 1980 book, *Entitled Behavior Therapy*, looks at the behavior and the thought processes of individuals. The responses are scored on a Likert-type scale, ranging from -3 to $+3$. The questions are asked in terms of whether the statement provided to the individuals is very uncharacteristic/extremely uncharacteristic of them (-3), rather uncharacteristic/quite uncharacteristic of them (-2), somewhat uncharacteristic/slightly uncharacteristic of them (-1), somewhat characteristic/slightly descriptive of them ($+1$), rather characteristic/quite descriptive of them ($+2$), or very characteristic/extremely descriptive of them ($+3$). The scale is designed to determine the individual's level of resourcefulness in terms of the provided descriptions of thought processes and behavior.

Eleven of the 36 items on the SCS are reverse-scored, meaning if the individual marked the item as a $+3$, the item would be recorded as a -3 . All of the individual items are then added into a final total, which could range from -108 to $+108$. Rosenbaum (1980) reports that the average score for normal populations would be a score of $+25$ with a standard deviation of 20. The lower an individual's score on the SCS, the less that individual utilizes his or her self-control in terms of his or her thought processes or behavior, indicating that that particular individual would also have a lower amount of learned resourcefulness as well (Rosenbaum, 1980). However, the higher an individual's score on this particular scale, the more that individual likely utilizes self-control to prevent negative behaviors or cognitions from interfering with the completion of a task, thereby raising that individual's learned resourcefulness as well (Rosenbaum, 1980).

On the other hand, Zauszniewski and colleagues (2006) constructed Resourcefulness Scale to measure both personal and social resourcefulness. Resourcefulness Scale measures personal resourcefulness through 16 items from the SCS Scale and social resourcefulness by 12 items from the Help-Seeking Resourcefulness Scale. This scale is similar to Rosenbaum's SCS Scale, in which individuals answer the statements provided with how descriptive those statements are of them on a Likert-type scale, ranging from 0 (*extremely nondescriptive*) to 5 (*extremely descriptive*). The score range for this scale is between 0 and 140, with lower scores indicating less resourcefulness and higher scores indicating higher resourcefulness. The purpose of this scale is to determine how apt an older adult is to utilizing internal processes and external processes when faced with a difficult situation (Zauszniewski et al., 2006). Internal processes would refer to one's ability to use positive cognitions and behaviors to improve or maintain one's physical and mental health, and external processes

would refer to one's ability to ask others for help when one becomes overwhelmed (Zauszniewski et al., 2006). Previous testing of this scale indicates that this is a reliable measure of resourcefulness for older adults in the family (Zauszniewski et al., 2006).

As for the target populations, both measurements were generally developed for assessing the resourcefulness of adults. However, Rosenbaum's SCS Scale has been used in diverse studies investigating adolescents (Bilgin & Akkapulu, 2007; Bingol & Buzlu, 2016; Erden & Ümmet, 2014; Huang & Guo, 2009; Huang, Sousa, Tu, Hwang, 2005; Turkel & Tezer, 2008) and adult children's resourcefulness (Akgun & Ciarrochi, 2003; Benedict, Jason, & Katesy, 2008; Ceyhan, 2006; Ceyhan & Ceyhan, 2011; Ginter et al., 1988; Goff, 2011; Kennett, 1994; Kennett & Keefer, 2006; McWhirter, 1997).

Applications. In terms of application of assessments, the SCS Scale has been applied to the development of new scales for specific groups, such as the Parent Resourcefulness Scale (Walker, 1990), Children's Academic Resourcefulness Inventory (ARI; Kennett, 1994), or children's SCS (C-SCS; Rimon, 1980).

Many studies have utilized Rosenbaum's (1980) SCS to examine how learned resourcefulness affects attitudes and behaviors. In a study conducted by Akgun and Ciarrochi in 2003, the researchers utilized Rosenbaum's (1980) SCS to examine how learned resourcefulness affects college students' academic stress and performance. The results of the study suggested that academic stress does negatively impact academic performance but that this effect can be moderated with the utilization of learned resourcefulness. Another study, conducted by Rosenbaum and Ben-Ari in 1985, also focused on college students, utilized the SCS and was intended to examine the differences in reactions in subjects who experienced something out of their control. The results of that study found that students who scored high in resourcefulness were more likely to utilize self-regulatory methods that were effective, while low resourcefulness students were more likely to exhibit withdrawal impulses or helplessness, meaning they were less likely to attempt to complete the activity if they felt it was impossible or they were unable to complete in a certain amount of time (Rosenbaum & Ben-Ari, 1985). Thus, those students with lower levels of resourcefulness when examining self-control methods were more likely to have higher levels of learned helplessness.

Most research that has adopted Zauszniewski's scales was conducted by Zauszniewski's team of researchers. In a study that focused on grandmothers who were raising grandchildren and the health consequences that resulted, the researchers used the Resourcefulness Scale to determine the grandmothers' utilization of self-help and help-seeking skills (Zauszniewski et al., 2012). The researchers found that the grandmothers in their study perceived resourcefulness training as a substantial need for them, and approximately 68% of the grandmothers either showed low resourcefulness skills or

had room for improvement. The low resourcefulness skills that the grandmothers possessed contributed to the high levels of stress they experienced, which contributed to increased levels of depression and anxiety (Zauszniewski et al., 2012). Without the ability to utilize self-help or help-seeking behaviors, the grandmothers had little ways by which to relieve their stress.

As previously mentioned, Rosenbaum and Zauszniewski have both substantially added to the resourcefulness literature. Rosenbaum focuses more specifically on the utilization of self-control, specifically redressive and reformatory, while Zauszniewski's research looks specifically at quality of life and resourcefulness. Zauszniewski's perception of resourcefulness pertains more to self-help and help-seeking behaviors, meaning one's ability to use positive cognitions and positive behaviors as well as one's ability to seek help when overwhelmed. Collectively, while these areas of resourcefulness research differ in some respects, they are both focused on resourcefulness as a set of skills that are cognitive and behavioral in nature (Akgun & Ciarrochi, 2003; Zauszniewski, Bekhet, & Suresky, 2008). These skills allow individuals to overcome adverse situations and remain calm when faced with significant challenges (Akgun & Ciarrochi, 2003; Zauszniewski et al., 2008). Family systems theory emphasizes that the family is a whole; any change in one part of the family system affects all other parts (Day, Gilbert, Settles, & Burr, 1995). Although most of the research participants were family members and the focus of the studies were how a single member's resourcefulness influenced his or her ability to take care of other family members, none of the studies considered using the concept of family resourcefulness (where the family was considered as an agent) instead of individual resourcefulness to discuss family lives.

Suggestion for future study. The work of both of these theorists has had a substantial impact on the research and literature regarding resourcefulness. From the review in this section, we can tell that resourcefulness is a multifaceted concept. Different scholars tend to interpret resourcefulness among children and families from their own personal perspective. The two scholars who study the concept most see resourcefulness from different angles; the various existing programs also have their own definitions. Due to the inconsistency in definitions, various scales for assessing resourcefulness exist. This makes the comparison across studies difficult. A single definition in which there is a truly accurate representation of resourcefulness that can satisfy most of the scholars' needs, as well as a comprehensive scale to assess resourcefulness among family members, is expected for future study.

For the assessment of family resourcefulness, in addition to the key components that Rosenbaum and Zauszniewski have addressed, the interconnectedness among family members and interactions among family subsystems should be considered. For example, researchers should also assume, when measuring for positive cognitions and behaviors, that one family member's positive cognition and positive

behavior can promote other family members' resourcefulness and that together they produce an impact on the outcome as a whole (Day et al., 1995). In addition, researchers should assume families share goals and work together to achieve them; therefore, the assessment of family resourcefulness should focus on the behavior of family members' feedback and its complexity.

Factors Contributing to Children's Resourcefulness

Not only have exploratory studies been done in understanding resourcefulness, but descriptive and explanatory research was also conducted extensively. More specifically, various factors were proposed for their contribution to the resourcefulness trait particularly among children. These factors include both environmental influences and personal characteristics. Some of these factors include personal characteristics, parenting, and education. Findings of this section reflect the family systems theory either directly or implicitly. This will be further discussed within the Findings section of this article.

Personal characteristics. Previous research has found that children's gender, age, and positive thoughts are significantly related to their resourcefulness. Another group of studies suggested that a child may have personal characteristics that indicate the ability to become highly resourceful later in life (Characteristics of a Gifted Child, n.d.; Ginter et al., 1988; Zauszniewski et al., 2008). These characteristics include the ability to understand ideas and concepts very quickly, the ability to pick up on patterns, a preference for things to be precise, keen observational skills, and the enjoyment of many different activities such as mulling over complex ideas (Characteristics of a Gifted Child, n.d.). According to this article, children who display these characteristics have the ability to grow into resourceful children with the right guidance. Other researchers have found that the tendency to have positive cognitions as opposed to negative cognitions is more likely to develop resourcefulness (Zauszniewski et al., 2008), as well as the type of coping skills utilized by the child (Ginter et al., 1988).

Even though these findings focused on personal characteristics of a child, we are more interested in asking where those personal characteristics come from. It is necessary to question where children will derive resourcefulness traits if parents do not cultivate them. There may be some differences on how quickly or easily a child can adopt certain abilities innately, but the emotional quotient, or the ways to react to difficulties, is learned by observation and therefore most likely derived from parents (Bandura, 1977).

Parents and parenting. Children's resourcefulness is strongly influenced by parents and family effects, such as parental attitude, father's approval, communication from mothers, maternal resourcefulness and depression, and family functioning. Based on the literature, one of the most effective ways to ensure that a

child becomes resourcefulness begins with the parenting that he or she is exposed to. A study conducted following the Great Depression noted that there was a link between the children's experiences and their fathers' behaviors; a worsening in behavior led to discord within the family unit and psychological problems for the child (Elder & van Nguyen, 1986). Elder and van Nguyen (1986) also noted that the fathers' utilization of self-control in particular was a major determinant of their children's psychological experiences; a father's ability to remain calm and search for alternatives majorly affected how vulnerable his or her child felt. Given that a key aspect of resourcefulness is the ability to examine a problem from multiple angles and come up with a variety of solutions, the ability to remain calm and not allow oneself to be overtaken with emotions is extremely important in the development of a child's resourcefulness skills (Elder & van Nguyen, 1986). Other studies have found that parents who display accepting and warm behaviors toward their children and adolescents foster positive coping skills in their children, which are important in the development of learned resourcefulness (i.e., Turkel & Tezer, 2008). These findings reflect the notion of family systems theory that one change in one part of the family system affects other parts.

Zauszniewski, Chung, Chang, and Krafcik (2002) also found evidence of the importance of parenting in the development of resourcefulness. According to these researchers, the amount of interaction a child receives played a large role in the child's level of resourcefulness. The mother and her engagement with the child is especially important; a mother who is depressed is unlikely to engage in affectionate interactions with her child and will likely be distant and resentful instead (Zauszniewski et al., 2002). In the case of the depressed mother, the child is less likely to learn effective self-control maneuvers and problem-solving skills from the mother (Zauszniewski et al., 2002). The stress level present in the home can affect how present the mother is with her child and how positive the interactions are (Weinraub & Wolf, 1983). If there is a higher amount of stress present in the home, the interactions between the mother and the child tends to be less positive and the mothers tended to be less nurturing to their children, which often leads to a decrease in the quality of the interactions between the mothers and the children (Weinraub & Wolf, 1983). These findings also reflect that the behavior of one member can influence the behavior of other family members.

Parenting skills are another huge contributor to the development of resourcefulness (Turkel & Tezer, 2008). There is evidence to suggest that learned resourcefulness is primarily a learned behavior and begins in childhood through the observation of others, mainly in the home and with the family (Turkel & Tezer, 2008). Turkel and Tezer (2008) examined the four parenting styles of authoritarian, authoritative, permissive/indulgent, and neglectful on a dimension of acceptance/involvement and strictness/supervision, with acceptance referring to how the adolescents view their parents in terms of

responsiveness and strictness relating to the extent of the parents' control over their children. These researchers found evidence to suggest that, among the four parenting styles, adolescents who viewed their parents as more authoritative and as more permissive showed more evidence of learned resourcefulness, with learned resourcefulness being defined as the acquired behaviors and cognitive skills that help a person self-regulate emotions, thoughts, and behaviors, so that one may be able to exhibit better behavior. The researchers also found that the dimensions of acceptance and strictness suggest similarities within the parenting styles, such as the high rate of acceptance among both authoritative and indulgent parents. Again, these findings show how different attitudes and behaviors of one family member can lead to different outcomes for another family member.

Education. In addition, some educational programs can positively affect children's resourcefulness. The type of education that a child receives has also been suggested as playing a significant role in how resourceful that child becomes later in life (Corsini, 2007; Elkins, 1985; Mirella, 2013). According to these studies, traditional education does not emphasize resourcefulness as much as it should. Unfortunately, it has been found that, instead of allowing children to acquire their own knowledge and assisting them in doing so, schools often simply deliver the information to them (Mirella, 2013). Children are not encouraged to seek their own answers and are given limited guidance; they are also told too often that failure is something to avoid (Mirella, 2013). However, there are some who believe that, with the right educational model, children can receive many benefits in their education and can learn to be resourceful (Corsini, 2007; Elkins, 1985). Researchers also suggested that students should be encouraged and motivated to learn, and education should be based on each student's unique abilities; the education system should therefore be individualized, so that each student can get the maximum benefits possible (Corsini, 2007). Corsini (2007) emphasized that this individualization helps children to think for themselves and apply themselves to come up with solutions to problems that are based on their own individual knowledge. To sum up, researchers emphasized that with the right educational environment, children can adopt resourcefulness as a learned behavior. To be able to do so, parents must first be able to identify the unique abilities that the child has and be willing to send the child to the right educational environment.

Even though the influence of parents, parenting styles, and the education model on children have been documented by various studies as the factors to influence a child's ability to acquire resourcefulness, all of these factors, more or less, are related to the family system and the guardians who a child lives with. This, again, points out how predominant family systems theory is in explaining and interpreting contributing factors to a child's resourcefulness. Of course, peers are

significant influencers as well, especially for children at school ages.

Suggestion for future study. There has been extensive evidence on the influence of parents and parenting as well as education models on the development of children's resourcefulness. More studies are needed to explore other significant factors that influence resourcefulness, such as peers' influence on children at school ages, dating partners' influence on teenagers, and spouses' influence on each other. Besides, factors contributing to parents' resourcefulness would be another important arena to explore as parents are the significant figures in the family system and are important to the children's resourcefulness. We believe that high-quality social support system and parents' self-esteem could be important factors for scholars to explore in the future studies as well.

Educational Programs

In order to provide a comprehensive picture of studying resourcefulness among children and parents/families, this section reviewed the existing prevention/intervention programs which either partially or entirely aim to promote resourcefulness. Populations that these programs target include children (Adventure Scouts USA, n.d.; Corsini, 2007), low-income parents (Nobody's Perfect, n.d.), and family caregivers (Toly, Musil, & Zauszniewski, 2013; Zauszniewski et al., 2012; Zauszniewski et al., 2008). Since studies focusing on programs given to family caregivers have been discussed in the "Positive Outcomes of Being Resourceful" section, programs targeting children and parents are mainly discussed in this

section along with how the systemic perspectives should be adopted in these programs.

Adventure Scouts USA. This program is targeted to children from 5 to 18 years old and aims at instilling resourcefulness by building self-esteem, self-confidence, and creative thinking skills. Thus, this program provides diverse activities for young children and camping and backpacking trips for adolescents. This program is conducted by scout leaders.

The BRiTA futures program. Building Resilience in Transcultural Australians (BRiTA) future programs is conducted in Australia. This program targets particular children and young people moving from other countries to Australia and whose first language is not English. Thus, this program was developed to enhance protective factors and minimize risk factors in mental health among these children. Through this program, children can be encouraged and learn diverse skills to handle their psychological, cultural, and social problems. This program is conducted by school teachers or counselors.

Individual education. Corsini developed an individual educational model as an alternative educational model in public education. This model is aimed to develop a student's own unique sense of responsibility, respect, resourcefulness, and responsiveness. Thus, in a class room, students are encouraged and motivated to learn based on their own unique ability. This model is primarily conducted by school teachers (see the graph below for detailed comparisons of the three programs).

Adventure Scouts USA	The BRiTA Futures Program	Individual Education Model
<ul style="list-style-type: none"> ▪ Nation: USA ▪ Target: Children from 5 to 18 years ▪ Aim: To instill resourcefulness in scouts by building self-esteem, self-confidence, creative thinking skills ▪ Program: <ul style="list-style-type: none"> (1) Activities: teaching how to think under pressure and helping children acquire knowledge to use fair play (2) Camping and Backpacking trips: developing true proficiency in first aid and outdoor skills ▪ Facilitator: Scout leaders ▪ http://www.adventurescoutsusa.org/ 	<ul style="list-style-type: none"> ▪ Nation: Australia ▪ Target: Children and young people from cultural and linguistically diverse (CALD) backgrounds ▪ Aim: To enhance protective factors and minimize risk factors in mental health among children ▪ Program: A series of modules ▪ Contents: <ul style="list-style-type: none"> - Concepts of cultural and personal identity - Self-talk and building self-esteem - Cross cultural communication - Understanding and managing emotions - Communication processes and styles - Stages of conflict, triggers and resolution skills - Using humour, and spirituality to build resilience - Building positive relationships - Support networks ▪ Facilitator: Classroom teachers, School counsellors, Mental health workers, Community leaders, Volunteers 	<ul style="list-style-type: none"> ▪ An alternative educational model based on democratic principle ▪ Developer: Corsini, R. (2007) ▪ Target: All Students ▪ Aim: To develop a student's own unique sense (individual) of responsibility, respect, resourcefulness, and responsiveness ▪ Program: <ul style="list-style-type: none"> (1) Individualized educational system (2) In Class rooms, students are encouraged and motivated to learn based on each student's unique ability ▪ Facilitator: Classroom teachers, Educators ▪ Effects: While students learn how to come up with their creative solutions to problems based on their own individual knowledge, their resourcefulness is developed.

Nobody's perfect. This program is targeted to particular parents. This program's recipients have children up to 5 years and are young, single, socially and geographically isolated, and have limited formal education or income. The purpose of this program is to increase parenting knowledge and skills. So, participants can learn about life skills, how to manage their stress, and how to use community resources. This program is mainly conducted by community workers and public health nurses (see the graph below for detailed information of this program).

Nobody's Perfect (NP)

- **A national education and support program**
- **Nation:** Canada
- **Target:** Parents who have children up to 5 years of age, Parents who are young, single, socially and geographically isolated, Parents who have limited formal education or income
- **Aim:** To increase parenting knowledge and skills, improve parent-child interactions, and promote the healthy development of children
- **Program:**
 - (1) Learning of life-skills such as budgeting,
 - (2) Stress and anger management,
 - (3) Utilization of community resources
- **Facilitator:** Community workers, Public health nurses, Parents who are trained

Suggestion for future study. By looking at these programs, the inconsistency in interpreting resourcefulness was once again noted. Because of the lack of consensus for program goals, comparisons across programs become impossible. Promoting resourcefulness in children can increase the child's creativity and his or her ability to solve difficult problems (Corsini, 2007). Increasing the resourcefulness of caregivers and low-income parents can lead to improved mental health for both the parents and caregivers as well as for those they are caring for (Chislett & Kennett, 2006; Zauszniewski et al., 2012; Zauszniewski et al., 2008). Studies on resourcefulness and how to increase resourcefulness are crucial to the well-being of individuals and families. Family scholars and clinicians should know that when families adopt the family resourcefulness (an integrated version of resourcefulness), positive changes could happen quicker and maintain longer.

For all of the programs with a child emphasis, we propose to generate a matched parents' program (happening in the family context) to enhance the positive outcome that the kids acquire from these programs outside of the family. We know that family life is the core of daily life for all children and that the interventions of the children's programs would likely be ineffective if the family environment downplays the positive traits that the children learn from outside programs.

For programs like Nobody's Perfect targeting one parent, we propose to generate a matched children's program and open it to involve more than one parent. By doing so, there is the opportunity to reflect and report the difficulties they are

experiencing in family life and prepare the children with the new parenting techniques taught by the parents' program. It is especially important to involve the other parent, as it is difficult to make change happen if one parent is unable to learn the parenting techniques. These matched programs could be audio learning materials or handouts to tell them what to expect and how to respond to the possible changes.

In educational programs, most existing educational programs were developed for particular groups, such as multicultural children or vulnerable parents. However, being resourceful is generally significant for all children and parents. Thus, it may be necessary to develop more general and comprehensive educational programs involving both parents and children. With the development of educational programs, it is also very important that parents and children are fully informed. Finally, these days, most people, especially young people, are very familiar with online services. Thus, free online courses for parenting and children's resourcefulness may be very useful.

Conclusion

This article evaluated the current state of the study of resourcefulness among children and families by reviewing five domains of resourcefulness including positive outcomes of being resourceful, definition of resourcefulness, assessments of resourcefulness, factors contributing to resourcefulness, and the programs aimed at increasing resourcefulness. It revealed that resourcefulness is a multifaceted concept that caused variations in the definitions/emphases from different scholars and the various existing scales testing different facets of the concept. It also revealed the necessity of understanding the concept of family resourcefulness and how to adopt this concept into research focusing on family life. Research findings suggest that both environmental influences and personal characteristics contribute to children's resourcefulness, which either directly or inexplicitly reflect the notions of family systems theory. The resourcefulness intervention programs that exist mainly focused on children and families living in disadvantaged situations and served various purposes. We suggest that family systemic perspectives be adopted in facilitating the program development, as it can make the positive change happen quicker and last longer. Future research directions were proposed in the area of consolidating resourcefulness and family resourcefulness definitions, scales, and programs, as well as expanding understanding of internal and external influences contribute to a family's resourcefulness from the systemic perspectives.

Future Directions

From this review, we can tell that resourcefulness is a multifaceted concept. Different scholars tend to interpret resourcefulness among children and families from their own personal perspective. The two scholars who study the concept most see resourcefulness from different angles; the various existing

programs also have their own definitions. Due to the inconsistency in definition, various scales for assessing resourcefulness exist. This makes the comparison across studies difficult. In addition, given that the target population is family members, we propose to consider the concept of family resourcefulness instead of individual resourcefulness in studies on family life, as the family is a complicated system with the whole being greater than the sum of its parts. A single definition in which there is a truly accurate representation of resourcefulness or family resourcefulness that can satisfy most of the scholars' needs, as well as a Comprehensive Scale to assess resourcefulness among family members and family resourcefulness of the family, are expected for future study.

There has been extensive evidence on the influence of parents and parenting as well as education models on the development of children's resourcefulness. Various positive outcomes of being resourceful on family members were identified in this review. We found that these outcomes, more or less, reflect the notions of a broader systemic perspective. We hope that the systemic perspectives can be more visible and explicit in interpreting contributors to resourcefulness and outcomes of being resourceful, as it is believed that this will generate more comprehensive understandings and more positive research outcomes, as well as more holistic insights into the idea of resourcefulness. Of course, additional studies are needed to explore other significant factors that influence resourcefulness, such as peers' influence on children at school ages, dating partners' influence on teenagers, and spouses' influence on each other.

The existing findings can facilitate future studies and also the development of specific programs that can target certain at-risk children or families. Adopting family systemic perspectives in facilitating the program development can make the positive change happen quicker and last longer. Examining the effectiveness of the programs as well as comparing the effectiveness across the programs needs is expected in order to better measure and promote children and family resourcefulness. In addition, comparing the individual effects as well as the family effects of resourcefulness can better explain the necessity of adopting the family systemic perspectives in studying resourcefulness and developing programs.

Not only do children or socioeconomically disadvantaged families need resourcefulness but every family that faces the challenge of using limited resources to achieve life goals can benefit from the concepts within the topic of resourcefulness. The family as a whole can generate greater effects than each member individually. The positive cognitions and behaviors from one family member can encourage other members of the family to make the same changes; however, it is important and beneficial that all family members be on the same page as they aim to reach certain goals. The greater effects they can generate, the better outcomes they will receive. More studies are expected to expand the understandings of the internal and external influences contribute to a family resourcefulness; after all, the family is the child's original ecological system and is where children start to observe and learn how to cope with the stresses in the surrounding world.

Appendix

Table A1. Description of Scales for Resourcefulness.

Key Components	Self-Control Schedule (SCS) Scale	Resourcefulness Scale (RS)
Developer	Rosenbaum (1980)	Zauszniewski, Lai, and Tithiphontumrong (2006)
Aims	To assess individuals' general repertoire of cognitive behavioral self-control skills and tendencies to solve problems that they encounter	To assess both personal and social resourcefulness
Items and Scale	36 Items; 6-point Likert-type scale	28 Items; 6-point Likert-type scale
Assessment	Assessing three dimensions of self-control skills: <ol style="list-style-type: none"> 1. Redressive self-control skills (e.g., when I am feeling depressed, I try to think about pleasant events) 2. Reformative self-control skills (e.g., when I am faced with a difficult problem, I try to approach it in a systematic way) 3. Perceived self-efficacy (e.g., I need outside help to get rid of some of my bad habits) 	<ol style="list-style-type: none"> 1. Personal, self-help resourcefulness: 16 items from the SCS (Rosenbaum, 1980) 2. Social, help-seeking resourcefulness: 12 items from the Help-Seeking Resourceful Scale which captures help seeking from both formal (e.g., professional), and informal (e.g., family, friends) sources
Target	<ul style="list-style-type: none"> • Adults • However, used in previous studies investigating diverse age-groups (e.g., adolescents, high school students, undergraduate, graduate students) 	Adults
Application	<ul style="list-style-type: none"> • Parent RS (Walker, 1990) • Children's SCS (Rimon, 1980) • Academic Resourcefulness Inventory (Kennett, 1994) 	

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