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Chapter

Using Matching “Smarts” and Interest to Successfully Address Depression Caused by Existential Crisis

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Abstract

This chapter outlines the background, nature, and explanations of existential crises. An unresolved existential crisis commonly causes depression. Crises occur in periods throughout the life cycle. They usually involve careers, relationships, or identity. The resolution often requires a development of a new stage of intellectual functioning, through which people can reflect on their interests and stage. The Existential Crisis Assessment measures severity of an existential crisis. A factor analysis showed the most important items in a person's existential crisis. My life, life in the universe, and relationships were the most important factors determining the severity of a person's existential crisis. The first solution is to match a person to a career. Another solution is to match one person to another. Three scales are used to match people to careers and partners: (1) decision-making measures how well a person addresses tasks of increasing difficulty; (2) perspective-taking predicts how well a person understands behavior of self and others; (3) core complexity interest scale identifies the reinforcement value of engaging. A further solution is that of cognitive behavioral therapy that can be used to both treat depression and offer training on social perspective-taking, a key ingredient to resolving one's crisis.

Keywords: model of hierarchical complexity, existential crisis, depression, anxiety, cognitive behavioral therapy

1. Introduction

Existential crises are seen as related more to periods in development rather than to stages of development. There is a main reason why existential crises are occurring more often and are increasingly difficult to resolve. The crisis is due to a constant increase in the number of choices that individuals face in modern day. For that reason, they are deserving of more attention.

An existential crisis occurs when an individual questions whether their life has meaning, purpose, or value. The conflict that occurs during this exploration can lead to anxiety and depression. It is important, therefore, to develop ways to help individuals alleviate these feelings and “resolve” their existential crisis. The main purpose of this paper is to discuss the several factors that influence how adults

respond to an existential crisis and how a crisis can be successfully addressed. These conflicts serve as a stimulus for action while an individual searches for new sources of meaning in the hopes of resolving their crisis. This chapter turns to systematic findings from different areas within the psychology in order to analyze how and why changes in behavior take place during an existential crisis.

We unify the current work by extending notions of the existential crisis from something that happens during a “midlife crisis,” to something that can happen at several periods in one’s life: (a) the early teenage crisis [1], (b) the sophomore crisis [2], (c) the adult crisis [3], (d) the midlife crisis [4], and (e) the later-life crisis [1]. This discussion compares these crises in terms of features that are shared as well as those that are unique and also addresses possible influences.

In today’s society, most people do not resolve their existential crises. Many people mishandle their crises and consequently do not resolve them. Such lack of resolution is mainly due to a lack of appreciation for the importance of resolving one’s crises. Findings and discussions in this paper can serve as initial steps toward recognizing existential crises and their eventual resolutions.

2. The model of hierarchical complexity

The model of hierarchical complexity is a mathematical measurement theory [5, 6]. The model is a nonmentalist, neo-Piagetian, and quantitative behavioral-developmental theory that analyzes the developmental difficulty of tasks. The model organizes task complexity. It proposes that tasks can be ordered in terms of their hierarchical complexity using an equally spaced unidimensional ordinal scale. It is used to predict the difficulty of behavioral tasks independent of domain and content.

The order of hierarchical complexity refers to the number of times that the coordinating actions must organize lower order actions. The hierarchical complexity of an action is determined by decomposing the action into the two or more simpler actions that make it up. This iterative process is done until the organization can only be carried out on a set of simple elements that are not built out of other actions. Actions at a higher order of hierarchical complexity can be described by several traits: (1) they are defined in terms of actions at the next lower order of hierarchical complexity; (2) organize and transform the lower-order actions; (3) produce organizations of lower-order actions that are new and not arbitrary, and cannot be accomplished by those lower-order actions alone.

Using the MHC, Commons and colleagues have shown that there are 17 OHCs [7]. The numbering of the orders and behavioral-developmental stages correspond with each other [8]. OHCs starting with the Preoperational Order 7, and continuing to the Paradigmatic Order 14, are relevant for adults. Because we estimate that 1.5% of individuals would be found who could successfully solve tasks at Order 13 (Metasystematic), and even fewer at Order 14 (Paradigmatic), most instruments constructed by those doing research in this area do not go beyond the metasystematic order. Only people performing at Concrete Stage 9 and above would be applying for employment.

3. Instruments

3.1 Existential crisis instrument

The existential crisis instrument was created to measure the extent to which someone is experiencing an existential crisis. This scale would be useful for

counselors and therapists, so as to understand the severity of the crisis. The knowledge that one may be experiencing an existential crisis may push a person to resolve it by making changes in their life. The resolution of an existential crisis would likely mitigate anxiety and depression.

3.1.1 Method

Fifty participants filled out an online survey containing questions designed to assess the degree to which they feel that they are in an existential crisis. The questions in the existential crisis questionnaire are focused on three factors, those being (1) the meaning of life, (2) philosophy of living, and (3) relationships with partners.

3.1.2 Results

In the first factor, meaning of life, we have asked questions such as, “How often do you think about life’s big question?” The highest factor loading was between 0.835 and 0.613. In the second factor, philosophy of living, we have asked questions such as “Does your work give your life a purpose?” The highest factor loading was between 0.780 and 0.514. In the third factor, relationships with partners, we have asked questions such as “How often do you change relationships?” The highest factor loading was between 0.728 and 0.668. Total percentage of the variance is 22.98%.

3.2 The decision-making instrument

The decision-making instrument (DMI) measures the complexity of information that an individual has considered in a decision-making process. Pascual-Leone referred to this as a measure of working memory [9, 10]. This assessment can be directly related to the task demands that certain jobs require of individuals as discussed later in (**Table 1**).

The DMI is based on a problem called the laundry instrument [8]. The laundry instrument is a causality task based upon Inhelder and Piaget’s pendulum task [11]. The laundry instrument asked participants whether or not a piece of laundry would be clean after varying treatment. Participants are required to view a table depicting what has already happened (informational episodes) and then make predictions about what will happen in a new episode. Based on this method of construction, the DMI then consisted of tasks at the Preoperational Order 7, Primary Order 8, Concrete Order 9, Abstract Order 10, Formal Order 11, Systematic Order 12, Metasystematic Order 13, and Paradigmatic Order 14 in the MHC [7].

3.3 The perspective-taking instrument

The perspective-taking instrument measures an employee’s ability to understand social situations, at least in terms of the notion of informed consent. Employees completing the perspective-taking instrument gauge the helpfulness and quality of guidance of varied hypothetical helpers. The perspective-taking instrument, like the DMI, is an online test. It asks participants to rate on a 1–6 scale the quality of six “helper” figures’ arguments in support of their specific methods of providing assistance [12]. Each helper’s argument corresponds to one of the six stages in the MHC, ranging from Primary Order 8 to Paradigmatic Order 14 (**Table 2**).

Stage	Decision-making
8-Primary	An individual's reasoning skills are low. At the primary stage, an individual can follow very clear and simple instructions but rely heavily on authority figures such as their managers to guide their actions and choices. The tasks they can handle must be simple and straightforward, such as stacking boxes, sweeping an area, and stocking a shelf. They can make simple logical deduction and can work unsupervised for only a moderately short period of time.
9-Concrete	An individual's reasoning skills are low. At the concrete stage, one must be given instructions but can make choices based on explicit guidelines. The tasks given can require various skills as long as guidelines are given. They can work unsupervised for a moderate amount of time.
10-Abstract	An individual's reasoning skills are average. At the abstract stage, one follows procedures and learns social normative ways of doing things. Therefore, they understand social norms and easily imitate what other people do. This individual uses abstract notions to make their decisions, e.g., best, coolest, never, anyone, or everyone. These notions are generally not completely accurate, but at the abstract stage, they are considered very important. When reasoning about a position, they use assertions that do not include fact or logic to justify their position. At this stage, one can work all day but need to be supervised a lot at first.
11-Formal	An individual's reasoning skills are average. At the formal stage, one can carry out instructions in a logical fashion of clearly stated policies. This individual is capable of making decisions based on empirical or logical evidence. They can work with one causal or predictive variable at a time. This translates to carrying out a single objective that is part of the greater whole, for example, solving one-dimensional problems, calculating interest rates, collecting marketing data, and writing reports that follow a format.
12-Systematic	An individual's developmental stage is high. At the systematic stage, one can be given instruction regarding goals without the need to dictate how the specific goals and objectives should be reached. They balance competing concerns and regulations and make judgments when there are multiple concerns and conflicting policies. They may supervise relatively large single units, such as one department. They understand unintended consequences and may adjust policies to deal with them. They calculate risk and understand its many sources and its costs and benefits. They write relatively complex programs. They do not need regular supervision. Performance of teams they supervise may be used as a measure of success.
13-Metasytematic	An individual's developmental stage is high. This manager constructs multivariate systems and matrices, for example, coordinating work between engineering and design departments. They work with the amount of information necessary to manage a team. They can put together a good team and orchestrate their work with marketing, accounting, and any other necessary teams.
14-Paradigmatic	An individual's behavioral-developmental stage is high (0.06% of population). These individuals are C-level managers and usually their own bosses. They are the innovators who institute the process, involve the stakeholders, and sell the solution. They tend to be long-term visionary thinkers regarding business models, objectives, opportunities, negotiations, external influences, and business direction in general. At this stage, they can develop operating mechanisms across multiple business lines to know and drive quarter-by-quarter performance in tune with long-term strategy.

Table 1.
Decision-making behaviors.

3.4 The core complexity interest scale

The fourth instrument used to job match is a new behavioral version of the interest test that is based on Holland's interest scale [13]. Our behavioral version is based on Holland's finding that people's "interests" have six different factors. These

Stage	Perspective-taking
8-Primary	Individuals appear immature in social settings and take the view of the manager even though it is possible for them to take their own view.
9-Concrete	Individuals lack social grace but can negotiate and bargain effectively with some guidance.
10-Abstract	Individuals understand social norms, easily imitate what other people do, have good manners, and are good at maintaining social harmony and pleasing others. They accept the company culture from a social norm's point of view and adopt professional standards as they see them modeled or as taught.
11-Formal	Individuals can revise social norms based on evidence or logical reasons. They understand social norms and can understand when a manager is needed to make a decision.
12-Systematic	Individuals balance competing concerns and regulations and make judgments when there are multiple concerns and conflicting policies. They may supervise relatively large single units, such as one department. They understand unintended consequences and may adjust policies to deal with them. They understand how to coordinate the different roles of people in the organization, particularly in one department, in a flexible manner to meet the short- and long-term needs. They can effectively deal with customers, employees, and the public.
13-Metasytematic	Individuals take the perspective of the various stakeholders including employees, managers, stockholders, and the public.
14-Paradigmatic	Individual sees that there are no perfect solutions but only partial ones. They involve all the stakeholders in negotiations to try to reach a consensus as to what to sacrifice. They ask each stakeholder to represent themselves realizing that no one else can do this. That is the way they come up with a way of dealing with conflicting claims and priorities.

Table 2.
The perspective-taking behaviors.

are as follows: realistic, investigative, artistic, social, enterprising, and conventional. The behavioral interest assessment interest test is much shorter than the Holland. The items are more clearly written in terms of task or activity preferences. It also uses a 6-point scale rather than a 2-point scale [14].

4. Cognitive behavioral therapy and depression

Aaron T. Beck's cognitive theory of depression proposes that persons susceptible to depression develop inaccurate core beliefs about themselves, others, and the world as a result of their learning histories. These beliefs can be dormant for extended periods of time and are activated by life events that carry specific meaning for that person. Core beliefs that render someone susceptible to depression are broadly categorized into beliefs about being unlovable, worthless, helpless, and incompetent. Cognitive theory also focuses on information processing deficits, selective attention, and memory biases toward the negative.

Cognitive behavioral therapy (CBT) aims to change our thought patterns, the beliefs we may or may not know we hold, and our attitudes and further helps us to more effectively strive toward our goals. In CBT, clients are taught cognitive and behavioral skills so they can develop more accurate/helpful beliefs and eventually become their own therapists. The beliefs that will be addressed in this chapter are about who the person is in terms of their “smarts” and their interests.

Cognitive behavioral therapy can help treat depression in multiple ways. Depression is an episode of sadness or apathy along with other symptoms that lasts

at least two consecutive weeks and is severe enough to interrupt daily activities. Depression is not a weakness, but it should be treated. Negative thinking can affect a person's mood, sense of self, behavior, and even physical state, while CBT can help a person learn to recognize negative patterns of thought, evaluate their validity, and replace them with healthier ways of thinking. CBT can help treat depression by doing the following:

- a. Utilizing cognitive restructuring and focusing on the immediate present.
- b. Focusing on specific problems in individual or group sessions.
- c. Being goal oriented.
- d. Taking an educational approach to teach patients ways to cope.
- e. Making sure patients take an active role in their learning, in sessions, and between sessions using homework assignments.
- f. Employing multiple strategies such as role playing, imaging, guided discovery, and behavioral experiments.
- g. CBT makes it possible to face conflicts and explore possibilities more directly.

CBT, combined with the abovementioned instruments, is a very effective way to help people through their existential crises and treat depression. We can get a score from the instruments which can allow us to determine what specifically is causing the depression, especially among an unresolved existential crisis. The instruments also reveal the severity of the existential crisis. With the help of all these scores, one treats the depression more successfully.

If someone is struggling with an existential crisis, a recommendation that may be made is to seek cognitive behavioral therapy. In therapy, a clinician may consider contextual circumstances. They may offer specific perspectives that may help the individual to resolve their crisis. The person might work with a guidance counselor or career counselor to see which careers, their interests, and smarts match. Through matching, an individual can attain results through taking all three of the previously mentioned matching instruments. These results may help to guide the individual.

It is important to note that the matching instruments do not consider contextual circumstances. These would include but not be limited to loss of loved one, end of a relationship, and loss of job. Therefore, it is necessary that the individual reconsiders their circumstances with regard to their results and how best to proceed in the choice-making which they will face in resolving their existential crisis. Indeed, matching is not designed to offer instructions for a person to follow exactly. It is only there to help guide a person better as they continue to introspect. Merely choosing the career that is best matched according to the three instruments does not guarantee a resolution to one's crisis.

5. The nature of existential crises

To live existentially is to question life's meaning: van Deurzen-Smith writes that "Existential thinking is an attempt to think about everyday human reality in order to make sense of it, and is probably as old as the human ability to reflect" [15]. From this, it can therefore be inferred that the ability to achieve consciousness elicits the

ability to think existentially. Indeed, “it is the human psyche and his consciousness, which makes us capable of making meaning.” The ability to think as an independent being not subject to ingrained evolutionary instincts allows for the consequential ability not only to make decisions for oneself but also to question one’s existence through introspection. “Rooted in the work of early philosophers such as Sartre, Kierkegaard, Heidegger, and Nietzsche, existentialism came about as an approach to addressing the fundamental questions of man’s existence”.

These crises occur not as stages of development but as periods of one’s life. The form and shape seem to be tied to age and role. The crises themselves arise at different ages and within different roles. If one crisis is experienced but not resolved, it does not mean that the crisis will last a lifetime. The crisis will likely diminish due to other factors that mask the lack of meaning within a person’s life. Under such a mask, a person will not acknowledge their existential crisis until later in life when it will appear again. The mask can take the form of reinforcement. For example, in making a decision to pursue a career as bankers, these people might receive a lot of reinforcement from their job in the form of money, praise, etc. However, these people may also realize later in life, after these forms of reinforcement have worn off, that there is a lack of meaning in life which will be acknowledged through an existential crisis. In resolving their crisis, these people may decide to be a teacher and find true meaning in their life.

Furthermore, the resolution of a crisis earlier in life does not guarantee the lack of existential crises later. The resolution of an earlier crisis through which a person finds meaning does not guarantee that the source of meaning will remain constant in the person’s life. A person’s interests may change, and through a later existential crisis, they may realize the necessity of finding a new source of meaning. The experience of existential crises is natural to human development. It allows for a person to find new sources of meaning by which they can live their lives. Their occurrence cannot and should not be evaded.

In understanding the concept of an existential crisis, the logical inquiry would be to question why is it that only recently, existential crises have been garnering more attention from the society. This attention is the result of the increased difficulty of resolving one’s existential crisis within the modern society.

In finding such *true meaning* within life, a person makes a choice out of the options that are presented to them. In this sense, the existential crisis acts as a fork in the road or rather a turning point through which a person is challenged with choosing the most meaningful course of action in their life. From this understanding, it can be said the expansion of the availability of choice in the society elicits an increased difficulty in finding the correct resolution to one’s existential crisis. For this paper, *availability of choice* merely means the *existence* of choice within a society. The availability itself is not to be understood as being synonymous with the *accessibility* of those available choices. Accessibility here is concerned with a person’s ability to access the available choices in the society. It is with such access that the person can then choose the choice which they believe to elicit the most meaning with their lives.

The availability of choice as an existence of choice within the society allows for a person to consider who they are and what will work for themselves. Making good choices will result in the most meaning and satisfaction within their lives. As Bigelow writes, “each man must accept responsibility for his own becoming.” People must ensure that they are appropriately taking responsibility for their lives. Indeed, “an awareness of responsibility is in itself not enough to implement personal change.” One must utilize that responsibility in order to gain access to the available choices that dominate the society while recognizing the necessary further steps needed to make the correct choice which will lead to meaningful changes in one’s life.

The resulting anxiety of having to make such a choice is best understood using Barry Schwartz's law: "As the number of options increases, the costs, in time and effort, of gathering the information needed to make a good choice also increase."

Choice has always existed among the human society but only really started to dominate the society in the form of career choice during the Renaissance period during which urbanization took place. Such urbanization created more options within the scope of careers for wider populations. Indeed, "although nobles and the wealthy largely worked in the same occupations they had during the Middle Ages, increased urbanization expanded roles for women and the emerging middle class."

Due to the middle class being a small portion of the population during this time, it was still common for most sons to merely take over the businesses of their fathers, thereby involving little introspection. It was only during the industrial age that existential crises, as a consequence of further choice, began to occur more frequently. This expansion of choice is shown by the fact that "during the Industrial Revolution, due to the technological improvement, new jobs were created which lead to more job opportunities, thus emerged the middle classes."

This further availability of choice resulted in the pursuit by people to find a job through which they could experience the most meaning in their lives. In seeking such a job, these people would face an existential crisis in which they would reflect on all of the options available to them. It was a time of opportunity for people to find meaning that personally matched their individual lives. The commonality of sons merely taking over the businesses of their fathers was diminishing in place of further introspection performed by the growing middle class. Now, such availability of choice is inescapable. For example, high school and university, particularly in the USA, are structured so that people are constantly presented with different areas of study and interest, leading people into existential crises through which they must not only select a career but also discover who they are as an individual.

Such availability of choice within the US society increases the potential difficulty of the process by which an individual resolves their existential crises, due to the challenge of not only having to access the available choices in the society but also having to sift through all of the choices once they are accessed. The mere knowledge of there being an increased availability of choice in one's society makes that person's existential crisis more difficult especially if those choices are not readily accessible with ease.

Indeed, though everyone in the USA will face similar difficulty of shifting through the available choice, depending on the number of interests, as established by Schwartz's law, the route by which availability of choice is accessed is very much differentiated, usually by class, in terms of difficulty between different people [16]. Not everyone shares the same privilege of being able to make a choice without any struggle of attaining the means to make that choice. Such privilege increases the likelihood of finding the correct path that will elicit the most meaning in one's life due to the ease of accessing choice associated with that privilege.

Though such privileged, people may struggle as they attempt to make the correct choice. Their struggle will not compare to the additional struggle that a person may face in trying to gain access to an availability of choice. Bigelow references Kierkegaard, stating that "we encounter the true self in the involvement and agony of choice and in the pathos of commitment to our choice" [17]. It is only through the experience of that *agony of choice* that people can find the choices in their life that elicit the most meaning.

The additional struggle of gaining access to such agony is noticeable with regard to the differentiated accessibility of choice between the poor and the wealthy. This differentiation is explained by the fact that "class affects whether someone is going to be accepted into a particular kind of school, their likelihood of succeeding in that

school, the kinds of jobs they have access to the kinds of friends they make.” Each of these things determines and defines a person’s privilege as related to his or her level of accessibility to the availability of choice within the USA.

Hence, little accessibility to choice is greatly significant in the scope of its limitation on the freedom of choice. Indeed, outside of luck and individual circumstances, in most cases, it is only through such access that a person can even have a chance at resolving their existential crisis.

These people seem to be caught in a viscous cycle, though which their limited accessibility to choice earlier in life systematically maintains their low socioeconomic status, thereby both maintaining their little accessibility to choice later in their life and extending the cycle to their children. It can be said that greater accessibility to choice correlates with higher likelihood of attaining wealth, and it is wealth that typically grants a person access to *choice*. Without choice, people will have little opportunity to find meaning in their life even though they have the freedom to do so. Indeed, the possibility to find meaning for such people is dramatically limited by diminished accessibility to choice.

The viscous cycle which limited accessibility to choice creates emphasizes the importance of true equal opportunity in the USA. This equal opportunity can only be achieved through a fair distribution of wealth across the USA, distribution that will provide opportunities for every American to lead a meaningful life. It is this misdistribution of wealth that is at the root of racism in the USA, as pointed out by Anderson: “True racism exists only when one group holds a disproportionate share of wealth and power over another group then uses those resources to marginalize, exploit, exclude and subordinate the weaker group” [18].

With the assumption of full accessibility to choice, in order to have a better understanding of the details of existential crises, it is important to consider the main aspects of each crisis. There are at least five existential crises that all revolve around the theme of choice: the early teenage crisis, the sophomore crisis, the adult crisis, the midlife crisis, and the later-life crisis.

5.1 The early teenage crisis

The early teenage crisis is concerned with, as suggested by Fitzgerald, one of the “greatest of life’s tasks: the breaking away from the protection of others to find and define oneself” [19]. Through this breaking away, it is likely that a teenager will seek a form of individuality by changing their behaviors as well as their personalities. Through such redefinitions, teenagers change their behaviors as well as their personalities. These changes are a part of the developmental transition from childhood to adulthood developing organisms that must attain the necessary skills for independence. However, contrary to a common belief, hormones have been shown to have little effect on this developmental transition. Indeed, “gonadal hormones, have been shown to account for only a small amount of the variance in behavior during adolescence” [20]. The developmental transition and the attributed changes are rather linked to the teenager’s learning of independence. This learning is reinforced by the levels of peer interaction which dominate the teenager’s life: “During an average week during the academic year, adolescents have been reported to spend close to one-third of normal waking hours talking with peers, but only 8% of this time talking with adult. These outside-the-home relationships help to ease the transition toward independence from the family” [20].

The relationships themselves facilitate the behavioral change during adolescence. In understanding this, the reason for rebellious behavior becomes clear. “As noted peer interactions may also in some cases facilitate antisocial behavior, with peer conformity to antisocial behaviors including cheating, stealing, trespassing,

and minor property destruction peaking in early- to mid-adolescence.” What is important to note here is the idea of *conformity*. In seeking to find independence from one’s parents, a teenager will likely conform to the behaviors that define their peer groups, typically one variable at a time. It is important to note that due to media, such conformity is not only influenced by peers but also by celebrities.

A celebrity’s behavior and decisions will likely affect a teenager’s choice of behavior and decisions. Indeed, a teenager will likely conform to the actions of the celebrity, therefore highlighting the importance of responsibility in celebrities whom teenagers idolize. For example, more and more in today’s society, younger teenagers are sexualizing their clothing and appearance as part of their conformity to celebrities’ self-presentations. It can therefore be said that depending on what is valued by either celebrities or peers, a teenager will likely conform to these values.

The reason for this conformity is more than mere consequence of peer pressure to *fit in* according to the highest-held values, whether those values be peer or celebrity related. The reason can be extended to the idea that as teenagers’ developmentally transition, they displace their dependence on the behavioral values held by their parents and other adults with further dependence on those values held by one’s peers or idolized celebrities for the sake of comfort. One article points this out in writing that “It is possible that this heightened conformity to peer pressure during early adolescence is a sign of a sort of emotional ‘way station’ between becoming emotionally autonomous from parents and becoming a genuinely autonomous person...the adolescent may become emotionally autonomous from parents before he or she is emotionally ready for this degree of independence and may turn to peers to fill this void.”

Dependence on one’s parents is all the teenager will have known before having their time dominated by peer relationships. Consequently, being dependent on one’s peers will be the comfortable route of action for the teenager. However, after constantly changing their behaviors according to the current peer-held behavioral values, it is likely that teenagers will desire a form of independence defined by individuality. One study finds that “resistance to peer influence increases linearly over the course of adolescence, especially between ages 14 and 18.” This resistance would be the result of pursuing independence. This pursuit is emblematic of a teenager experiencing their early teenage crisis in which they acknowledge their lack of independence and individuality.

Through this crisis, the teenager will gradually distance themselves from the broken amalgamation of peer values which used to define their identity. The teenager will be challenged by having to find the correct resolution to their crisis through which they can define their own personal values, independence, and individuality. Fitzgerald suggested “succumbing to the external pressures of conformity and meanings that are thrust upon one by objects or circumstances encountered in the environment it is solely up to the individual in order to create meaning and purpose in life” [19]. However, if such meaning and purpose is not created, the early teenage crisis will not be resolved, likely resulting in the teenager feeling lost in their identity. Such teenagers will likely experience depression, a side effect which is further discussed later.

Depression at this vulnerable age can have extreme consequences such as suicide. It is therefore very important that the early teenage crisis is resolved. The nature of the crisis and its resolution can be discussed developmentally in terms of resistance to peer pressure: “the growth of resistance to peer influence is a developmental phenomenon bounded by individuation from parents at its onset and by the development of a sense of identity at its conclusion.” Indeed, achieving a sense of identity through independence is the goal of the early teenage crisis.

5.2 The sophomore crisis

This is the first existential crisis through which an individual begins to question the meaning of their life and how to find such meaning. It occurs during one's late teens or early 20s as evidenced by William Perry's "model for intellectual development in college students" [2]. The final stage of intellectual development, according to Perry, is *commitment*. It is the "integration of knowledge from other sources with personal experience and reflection; students make commitment to values that matter to them and learn to take responsibility for committed beliefs."

It is such commitment that is arguably required in order to resolve the sophomore crisis, commitment to one's personal sources of meaning. Furthermore, the sophomore crisis is related to the existential questions which Erikson poses: "Who am I? Who can I be?" These questions are the focus of a young adult's thoughts in relation to choice of career during the sophomore crisis [1]. Erikson writes that these questions occur from 12 to 18 years of age. However, this is likely an outdated range due to the recent influx of choices career-wise available to students caused by interconnectivity of the Internet age.

As Schwartz says, more choices will result in further anxiety over the difficulty of making the correct choice [16]. This difficulty requires an older age in order to sift through the many choices in career that are available to the young adult. The sophomore crisis is best understood as being rooted in anxiety over one's future and ability to optimally perform while delivering one's best intellectual capabilities. Such anxiety is typically the driving force behind wanting to resolve the sophomore crisis so as to establish one's identity as defined by a career.

If this crisis is recognized yet unresolved, the individual can find themselves feeling lost and panicked, feelings which eventually result in depression caused by the inability to find meaning within life. Indeed, the sophomore crisis is a major source of adolescent depression in today's society. It is important to note that some people may not suffer through this crisis if they have already decided for themselves what they want to do with the rest of their lives at an early age. These decisions, instead of being informed ones, are rather poorly grounded guesses which may turn out to be correct.

By *poorly grounded*, what is meant is that these guesses are typically based not on one's personal interest but rather on those of others. For example, young children may base their career choice on that of their parents or even their idols. In doing so, these children may grow older never considering their own personal interests, merely relying on essentially a *bet* that their guess was correct. In some cases, these bets turn out to be correct, and a person can fully avoid a sophomore crisis having already resolved for themselves what will elicit meaning in their lives.

However, if these guesses turn out to be wrong, which they often do, the person will face the sophomore crisis, likely with a heightened level of suffering. Such extended suffering would be the result of the individual's profound lack of introspection with regard to their own interests in potential careers before the sophomore crisis. It is therefore important not to solely rely on the guess which one might make as a child but rather explore one's identity so as to establish for oneself if that guess aligns with one's interests. Indeed, only through introspection and reflection over one's interests in potential careers can a person resolve their sophomore crisis, establishing for themselves the correct career path from which the most meaning in their life can be derived.

5.3 The adult crisis

This existential crisis occurs during a person's mid- to late 20s and is similar to the sophomore crisis in that it is concerned with making choices as to who you want

to be. Indeed, it is an extension of the existential questions posed by Erikson (“Who am I? Who Can I be?”), being more complex in nature, dealing with things other than career path [1]. It challenges the person to decide for themselves who they want to be and who they can be. In resolving this crisis, a person usually becomes comfortable with who they are in all facets of their life, whether it has to do with the choice of religion, political party, familial dedication, level of introversion or extraversion, level of attachment to others, etc.

The list goes on and is embodied by the choices by which a person defines themselves. In resolving the adult crisis, the idea is that a person becomes a fully formed, resolved, and individual adult who is comfortable with who they are as a member of the society. Along with resolving how one defines themselves, the adult crisis is concerned with becoming financially independent and performing adult roles, hence, the name, *adult crisis*. The crisis is the capstone of entering adulthood.

“The definition of adulthood that emerges from the GSS includes being financially independent, leaving home, completing school, and working full-time and further involves the acquisition of the skills and attitudes needed to perform adult roles.” Interestingly, one study shows that this fulfillment of entering adulthood under this definition is achieved at a later age in today’s society compared to the past generations: “The primary reason for the prolongation of early adulthood is that it takes much longer to get a full-time job that pays enough to support a family than it did in the past” [1].

This prolongation is the likely result of not only more choices in today’s society but also the limited availability of jobs. As one article points out, “being a college graduate nowadays no longer offers the probability of a career.” It used to be the case that in pursuing a college education, the security of a job would be mostly guaranteed. This is no longer the case and as a consequence, “In order to complete their education and begin work careers, young people now often linger in a state of ‘semi-autonomy’ during their 20s, combining support from their families with whatever they can make in the labor market and borrow.”

The outcome of this *semiautonomy* is an inability to attain full autonomy through adulthood until much later on during one’s late 20s, the peak of the adult crisis. Therefore, not only does a person need to become confident in the choices that define him or her as sources of meaning in their life through the resolution of their adult crisis, but they also need to have achieved adulthood. Not resolving this crisis can lead to feelings of disorientation and panic caused by a lack of confidence in personal identity. Ultimately, not knowing how to identify oneself in all aspects of life including your role as an adult will result in feelings of concern and depression.

5.4 The midlife crisis

This crisis is widely discussed in the media and is a household term, occurring during the early middle-age years, a variable age range. Wethington states that the midlife crisis is a term that “connotes personal turmoil and sudden changes in personal goals and lifestyle, brought about by the realization of aging, physical decline, or entrapment in unwelcome, restrictive roles” [3]. People often mistake this turmoil in life to be the result of high levels of stress. Indeed, though there is “expected stress” attributed with the midlife crisis, it is not the presence of stressors in life that causes the crisis. Indeed, there is a key difference between the midlife crisis and a “midlife stressor.”

As one article points out, “common psychosocial stressors may have severe and long-standing physiological and psychological consequences.” The stressor is best described as an independent variable which is viewed as stressing to the individual. The summation of these stressors is sometimes defined as a midlife crisis but is

rather merely defined as the “overload stressors in midlife.” In brief, many midlife stressors simply require the individual to resolve some of the stressors so as to relieve the overbearing stress that is dominating the individual’s life.

A midlife crisis on the other hand is the result of reflection over life choices and the meaningfulness of those choices. As one article points out, “problems occur at the midlife transition when a person around the age of 40 perceives that personal growth has been stymied or thwarted. This distance between current achievement and aspirations arises from personal reflection at reaching a symbolic (or physical) marker of age.” Within this marker of age, the individual is questioning the choices as markers of personal achievement (and meaning) that they have made in their life and whether or not they regret these choices [21].

The signs that reveal dissatisfaction with life choices during a mid-life crisis [21] usually revolve around career, partner, children, regrets over spent youthfulness, economic or social status, unaccomplished goals, and more. The length and struggle of the midlife crisis is therefore typically determined by whether or not earlier crises were resolved. Indeed, as one article reports, “the majority of self-perceived ‘most important’ turning points in life were reported as taking place in early adulthood, or even adolescence.”

Inasmuch as these turning points being able to elicit meaningfulness in one’s life, if they were resolved, it would be logical to conclude that the struggle of a midlife crisis, which involves reflection over the meaningfulness of one’s life, would be significantly lessened. Through the resolution of earlier crises, people will generally feel fulfilled by their life choices which elicit meaningfulness upon reflecting over their life during the midlife crisis. However, it is important to note that the resolution of earlier crises does not always imply that the sources of meaning will remain constant throughout a person’s life.

Consequently, during a midlife crisis, an individual may recognize the necessity of finding other sources of meaning. In contrast, if earlier crises were not resolved, the person will certainly suffer through regret over their life choices and inability to have found meaning in their lives. In order to resolve this crisis, many will desperately try to correct their life choices in order to find meaning. Indeed, as found in one study, “many respondents connected the midlife crisis to life events such as job loss or forced unemployment, early retirement, extramarital affairs, divorce, separation, deaths of close friends or family members, and other major life crises, such as health problems.”

Each of these events suggests or predicts a level of reflection over life and the meaning of one’s personal life. Under this reflection, people will desire and attempt to find meaning in their life. However, many will fail, not able to deploy the energy and youthfulness that is required in order to make meaningful changes to their lives. The inability to find the desired source of meaning in one’s life usually after years of attempting to do so will result in the *later-life crisis* through which a person will acknowledge the lack of meaning in their life and face depression and hopelessness.

5.5 The later-life crisis

The later-life crisis takes place toward a person’s late 60s and is understood as a time of reflection. It is usually triggered by retirement, losing a job, illness, or death of peer or loved one all of which leads a person to reflect on their life choices and the meaningfulness of their life. This reflection is prompted by an awareness of the little time left in one’s life. This crisis is further defined by Erikson’s existential question: “Is it okay to have been me?” Within this question, Erikson writes that we engage in contemplation over whether or not we feel accomplished or satisfied with the meaningfulness of our lives [1].

People dealing with this crisis generally want to feel affirmed that they have led a meaningful life in which they have personally made a positive (or negative, depending on the sources of meaning) impact in the world. People who feel that they have led a meaningful life will typically and comfortably resolve this crisis and continue to lead a meaningful life. However, although having affirmed that they have led a meaningful life, some may not resolve this crisis and experience desperation as they try to make their lives even more meaningful before death. Such desperation can last until death and is usually experienced as an outlet of their fear of approaching death.

On the other hand, those who feel they have not found meaning in their lives will likely experience depression and hopelessness up until death. "Thirty percent of those who said they had suffered a crisis in their 60s said the long-term effect was totally negative." These negative effects are likely the embodiment of the depression and hopelessness which result from a lack of resolution within this crisis. People who experience these negative effects will believe themselves to have not led a meaningful life and, due to old age and little time left, will experience very little hope of correcting their life choices. The article states that in order to "avoid a late-life crisis in your 60s," a person should "maintain physical, financial and emotional health," "work longer," "use your time in a positive way," and "develop and maintain a strong support network."

Though it is true that doing each of these things will likely prevent an individual from experiencing a crisis in their 60s, it does not prevent the crisis from occurring entirely. They are better understood as avoidance methods which only dealt the crisis. Each of these actions elicits levels of reinforcement which will likely cloud one's existential thoughts through mere busyness. Therefore, though this reinforcement will delay an existential crisis, if a person has not led a meaningful life, their crisis will surely catch up with them.

Avoidance methods aside from one piece of advice that is helpful for potentially resolving the later-life crisis if a person has not found their life to be meaningful up to this point is found in Johns Hopkins Medicine: "Instead of lamenting what you never did, or what you've lost, Arbaje suggests thinking about this time as a chance to take on new challenges and embrace life in a new way" [22]. Indeed, this idea of embracing life in a new way raises the opportunity of making new life choices that align with the meaningfulness which one desires in life.

Through such embracement, the later-life crisis can potentially be resolved, though it is rare due to the difficulty caused by old age and a lack of energy. Indeed, "it is in accepting the reality of death, the fact that it will occur, that can give meaning and significance to living by emphasizing that our time is limited and therefore we must do what we value" [23].

However, such embracement of new potential sources of meaning is better deployed in pursuit of resolution of earlier crises such as the midlife crisis. Indeed, it is important to recognize that life is fleeting early on in one's life before it is too late to make the most of one's life and find meaning. The best method by which the later-life crisis can be resolved is through the resolution of one's earlier crises in life. Otherwise, there will certainly be negative effects from this crisis, elicited by an acknowledgment of a lack of meaning in one's life.

6. Conclusion

There are negative side effects to existential crises if they are not resolved, such as depression. If resolved, however, existential crises serve a great purpose in our lives, providing an opportunity to find meaning and purpose. The crises may push

us through the anxiety we feel, to find the meaning. It would be appropriate to hypothesize that with more meaning and consequential satisfaction among the population, there would be less violence, more productivity, and more general tolerance among people.

Cognitive behavioral treatment will be more effective if the focus is more on the periods of life crisis and the stages of model of hierarchical complexity. A huge component of failure in treatment is due to lack of accurate matching of the instruments to an individual. Matching helps figure out at what stage an individual is at and helps us plan out an intervention treatment.

In future studies, we would like to match people to the causes of the crisis, for example, their career/job or their life partners, and resolve the crisis using the three suites of matching instrument.

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