

Empathy and Adverse Childhood Experiences' Role in Choice of Major

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Abstract

Prior research suggests that those pursuing college majors with the intent of helping others may be more likely to have higher levels of empathy, and a higher average of adverse childhood experiences. In turn, these experiences may be a motivational factor for a person to select a certain type of major. This study evaluates the number of adverse childhood experiences that undergraduate students majoring in social work, nursing, and psychology have endured in their lifetime. In addition, empathy is quantified as a variable using an Emotional Intelligence Index to analyze a possible relationship with adverse childhood experiences. Analysis suggests that those who have a college major focused on helping others may have elevated levels of emotional intelligence and may have a higher average of adverse childhood experiences.

Keywords: Empathy, Adverse Childhood Experiences, Emotional Intelligence, Social work, Nursing, Psychology

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Social workers are known for their helping nature, and compassionate hearts, but what components play a role in developing these characteristics? Among the plethora of helping majors, social work, nursing, and psychology students play a vital role in their plans to better the people around them. What many social workers share is an abundance of resilience, achieved by overcoming hardships such as trauma (Kotera et al., 2019). A resilient person is one who has overcome adversity and gone on to help others through traumas, this is coined as “The Wounded Healer” (Zerubavel & Wright, 2012). One key concept of the wounded healer is that their adversities do not negatively impact their professional abilities to help others. Instead, they fuel their ability to understand the process of overcoming trauma and recovering with resilience. What sets “The Wounded Healer” apart from others in the helping profession is the first-hand understanding of the vulnerability in the recovery process (Zerubavel & Wright, 2012).

With mental health being pushed further into the spotlight of research, it is important to understand how trauma may play a role in the development of a person and their decision-making process. Using a validated measure of Emotional Intelligence and Adverse Childhood Experiences Index has yet to be used as a motivation predictor of major selection. After a comprehensive literature review of academic material and research, this study aims to further analyze the effects that adverse childhood experiences may have on undergraduate students' choice of major.

Literature Review

Adverse Childhood Experiences and Trauma

Adverse Childhood Experiences' (ACEs) research started with concerns that these experiences could be linked to adult physical and mental health issues (Zarse et al., 2019). While

it was known that traumatic childhood experiences could result in poor behavioral health, an extensive list of consequences was discovered later. In 1998, Felitti et al., conducted the ACE-Q, a 10-question survey connecting the link between Adverse Childhood Experiences and later life outcomes (Zarse et al., 2019) This survey measured these adverse experiences that happened to participants in their youth and then allowed self-reporting health outcomes occurring in their adult lives. The standard for consideration of an ACE (Adverse Childhood Experience), includes experiencing one or more of the following ten: Emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, household substance abuse, household mental illness, parental separation/divorce, incarcerated household member, and parent treated violently (Finkelhor et al., 2013). While it is recognized that Adverse Childhood Experiences do not encompass every trauma experience, for the purposes of this study, the presence or absence of Adverse Childhood Experiences will serve as a measure of trauma.

Not all trauma is deemed an ACE, but all hold long-lasting effects (Finkelhor et al., 2013). Trauma as a variable is extensive and difficult to measure, yet regularly occurring in the world today. In a study by World Mental Health Surveys, 70.4% of respondents reported exposure to at least one traumatic experience in their life (Kessler et al., 2017). Trauma can be classified as exposure to death, violence, or injury or a threat of such exposures (Kleber, 2019). A few commonly occurring specific instances of trauma may include sexual assault, natural disasters, war violence, loss of a loved one, and more (Kessler et al., 2017). Exposure to trauma can be attributed to a variety of psychological difficulties, such as copious amounts of difficult and long-lasting heavy emotions, sadness, general anxiety, and depression (Finkelhor et al., 2013, Weinberg et al., 2021). In cases of repeated exposure to trauma, mental health conditions such as

Post-Traumatic Stress Disorder can arise, and bring an array of additional consequences (Kleber, 2019).

Effect of ACEs on development and health outcomes

Scoring of ACEs can range from zero, or lack of any ACEs, to 10, encompassing all traumas. However, having a lower ACE score should not be discounted, as the impact of having the presence of any can lead to major physical and mental health concerns (Zarse et al., 2019). People with ACEs are more likely to suffer from psychological and behavioral issues (Chartier et al., 2010). In addition, they may also be more likely to struggle with emotional regulation (Hanson et al., 2017).

Having the presence of one or more ACEs brings the risk of early mortality due to the likelihood of further adult health concerns (Chartier et al., 2010). Each trauma may result in risk outcomes later in life (Kessler et al., 2017). For instance, physical and sexual abuse in one's childhood is linked to a higher risk of substance abuse and suicide attempts (Chartier et al., 2010; Zarse et al., 2019).

Predicting Factors Influencing Choice of College Major

Students who pursue a major that has a focus on helping others have diverse backgrounds, but unlike jobs like astronauts, dancers, or firefighters, it may not be a common dream career of children to go in psychology, nursing, or social work. Little has been studied about the motivations of people who pursue majors with a direct focus on helping others. Those who do pursue them must have reasons that lead to the desire to help others in their career. Self-determination theory may give one explanation to the premise of subconscious pursuit towards a major which focuses on bettering others. Self-determination theory, developed by Edward L. Deci and Richard M. Ryan, suggests that motivation for behaviors and decision making can

come from a desire to establish personal growth (Hrbackova & Suchankova, 2016). Perhaps firsthand experiences in childhood could, in turn, leave adults yearning to achieve personal growth by helping others achieve the same by different methods.

Development of Empathy and Resilience

Empathy is a skill developed early in the helping professions. The ability to not only understand what another person is going through, but to feel the connection to their emotions, as if they were their own (Grant et al., 2014; Riess, 2017). Empathy surpasses the level of sympathy or demonstrating feelings of pity and misfortune. Feeling sorry about their situation, as a gesture, provides them with no sort of relief or solution. Empathy, on the other hand, encourages a connection between client and professional to allow for encouraged vulnerability of the client (Grant et al., 2014). When the client gains a sense of trust for the helper, they may share further information that could assist both sides in understanding what is needed to begin the process of assistance.

While knowledge through education plays a pivotal role in the development of any profession, learning through experience is a familiar concept in any helping profession. Many helping fields have an integrated practice requirement. It is during this time, typically in the upper-class students' level of a person's college career, that they volunteer their time to learn more about their field of interest. Social work, nursing and psychology students often find themselves in a variety of different internship and field experience positions, ranging in populations and needs. Many of the clients are struggling or in need of a particular service. Importantly, these field experiences give time to expand on skills such as empathy in the helping profession.

Empathy and trauma combined often result in resilience, or the ability to adapt and overcome strenuous situations, and a desire to help others (Grant et al., 2014). Simplified, a person with significant empathy can socially and emotionally connect with others through a shared bond, even more so than the average person. To put this in context, a student majoring in a helping profession may be more likely to have experienced ACEs, making it easy to relate to and assist clients going through similar things. The hypothesis guiding this study is that social workers and other helping professionals may then have elevated levels of empathy in comparison to students in other majors such as political science, history, and business. This elevated level of empathy could be attributed to experiencing an ACE. Subsequently, students who have experienced one or more ACEs may be more likely to choose a helping profession as a career. Such a prediction could explain the natural call to help others.

Measuring Empathy using Emotional Intelligence

Empathy can be measured in a variety of ways, using a measure of emotional intelligence provides a unified approach to all aspects of how a person interprets emotion traits. Emotional Intelligence is a scale measure used to describe how a person interprets the emotions and appropriate responses of themselves and others (Mikolajczak et al., 2014). People who have elevated levels of emotional intelligence may be more empathetic due to their deeper understanding of emotion, and their tendency to naturally express themselves effectively (Mikolajczak et al., 2014). Emotional intelligence stems from three levels, knowledge of how to express emotions, ability to apply that knowledge into their reality, and trait, the tendency to react to emotions effectively without prompt (Mikolajczak et al., 2014). In this way, empathy and emotional intelligence go together.

Methods

The purpose of this study, conducted via an online survey, is to analyze the possible relationship between ACEs, emotional intelligence, and selection of college major. The aim of this research is to understand the impact that ACEs may have on selecting a major, and in turn, understand if these experiences may develop a person to score higher on the emotional intelligence index. This index portrays a measure of empathy each participant may have, using their understanding of themselves and others. A person in a major focused on helping others may have selected this major based on presumed elevated levels of empathy due to experiencing an ACE. To study this hypothesis, I conducted an online survey with college students majoring in social work, psychology, nursing, history, political science, and business.

Participants

This study received approval from the Hood College Institutional Review Board prior to the start of recruitment. All participants were recruited from Hood College, a private liberal arts college in Frederick, Maryland, via email through contact with the department chair of the respective departments. Recruits were targeted solely on their intended undergraduate major, specifically Social Work, Psychology, Nursing, Political Science, Business, and History. Participants who were eligible and chose to complete the study were given the option to enter a randomly selected gift card giveaway as an incentive for data collection. All surveys remained anonymous, and any personal information was stored separate from survey data, including but not limited to contact information provided for the giveaway.

Department chairs of the six respective majors were contacted three times over the period of one month. Each was asked to forward the survey opportunity to students in their department. Three of the departments did not respond to this request, resulting in a lack of data for the

entirety of the intended sample. While an estimated 300 students encompassed the original population, the results reflect a population of around 150 students. Of those contacted, 32 participants chose to complete the survey from start to finish.

Participants were grouped by helping majors or alternative majors. Those who selected their major as social work, nursing, or psychology were categorized as helping majors.

Participants who reported their major as history, business, or political science were categorized as alternative majors. Majors were categorized based on review of the Hood College course catalog's major descriptions searching for specific inclusion of the word "intervention." Social work, nursing and psychology were found to include "intervention" in the curriculum (Hood College, 2021).

Materials and Design

The primary outcomes to be measured were the levels of empathy of participants and the presence or lack of ACEs in the participant's life. Variables measured in this study included the presence or absence of Adverse Childhood Experiences, the participant's major selection, and their Emotional Intelligence Index Score. Variables were then measured within groups to report the group mean of scores across variables.

Emotional Intelligence and Empathy

The Short Profile of Emotional Competence (S-PEC) was used to measure a participant's empathy and level of emotional intelligence, using a 20-question model (Mikolajczak et al., 2014). This measure provides insight into how people identify, understand, and use themselves and others; as well as how they regulate and express themselves; and listen to others (Mikolajczak et al., 2014). These individual measures, showing both intrapersonal and interpersonal competencies are combined to calculate how emotionally intelligent a person is

(Mikolajczak et al., 2014). The exact questions on the S-PEC can be seen below in Figure 1.

Items are given point values from one to five based on agreement using a Likert scale, while

eight items are reverse scored indicating negative impacts on one's emotional intelligence;

higher scoring on the S-PEC insinuates higher emotional competence (Mikolajczak et al., 2014).

Scoring can also be calculated in differentiation between the participant's self and others

interpretation, particularly centering on one's understanding of others to highlight empathy.

Figure 1. Items of the S-PEC (Mikolajczak et al., 2014)

Items of the S-PEC (to be mixed before usage)

1.	Identification – self	When I am touched by something, I immediately know what I feel
2.	Identification – self	When I feel good, I can easily tell whether it is due to being proud of myself, happy or relaxed.
3.	Understanding – self	I do not always understand why I respond in the way I do (R)
4.	Understanding – self	When I am feeling low, I easily make a link between my feelings and a situation that affected me
5.	Expression – self	I find it difficult to explain my feelings to others even if I want to (R)
6.	Expression – self	I am good at describing my feelings
7.	Regulation – self	When I am angry, I find it easy to calm myself down
8.	Regulation – self	I find it difficult to handle my emotions (R)
9.	Use – self	My emotions inform me about changes I should make in my life
10.	Use – self	I never base my personal life choices on my emotions (R)
11.	Identification – others	I am good at sensing what others are feeling
12.	Identification – others	Quite often I am not aware of people's emotional state (R)
13.	Understanding – others	I do not understand why the people around me respond the way they do (R)
14.	Understanding – others	Most of the time, I understand why the people feel the way they do
15.	Listening – others	Other people tend to confide in me about personal issues
16.	Listening – others	I find it difficult to listen to people who are complaining (R)
17.	Regulation – others	When I see someone who is stressed or anxious, I can easily calm them down
18.	Regulation – others	If someone came to me in tears, I would not know what to do (R)
19.	Use – others	I can easily get what I want from others
20.	Use – others	If I wanted, I could easily make someone feel uneasy

Adverse Childhood Experiences

The survey included a listing of Felitti et al.'s (1998) ten adverse childhood experiences. Rather than specifically reporting which adverse childhood experiences they had endured in their lives; participants were asked to report how many of the ten they had experienced. This design allowed for additional confidentiality in which participants were not required to report specific instances that occurred, in the hope of more accurate reporting.

Procedure

Eligible participants were invited to participate in the study online using Qualtrics, an online survey tool. Prior to the start of the survey, participants were required to view a voluntary consent form, if they did not consent, the survey would be terminated. Participants who consented had the choice to end the survey at any time, terminating the completion and results of any answered questions to be recorded. All participants were made aware there would be no repercussions for terminating the survey at any point.

The survey consisted of 34 questions regarding one's demographics, the Emotional Intelligence Index, multiple-choice questions regarding major selection, and an adverse childhood experience measure. For this measure, participants were not asked to disclose which type of ACE they had endured. Instead, participants were shown a list of the ten types of adverse childhood experiences and were asked to report the quantity, from zero to ten that they have experienced. A lack of trauma included those who reported no ACEs, and a presence of trauma was recorded for those experiences one or more adverse childhood experiences.

Following data collection, scores were categorized by reported major to measure variables in accordance with adverse childhood experiences and their score on the emotional intelligence index.

Results

A survey was considered complete when 100.0% of the survey was answered. Four surveys were rated as incomplete at the end of the survey period, and two were found to be ineligible based on major. Respondents answered all questions regarding demographics. Of the participants, 46.9% reported majoring in psychology (N=15), 21.8% in nursing (N=7), and 31.2% majoring in social work (N=10). No participants reported majoring in history, political science, or business (N=0). Participants ranged in age from 19-45 years old. Many of the respondents self-identified as female (75.0%, N=24), White/Caucasian (65.6%, N=21), and junior year students (46.9%, N=15) at the time of their participation. Nearly all participants had at least one other sibling (96.9%, N=31) and of those, 50.0% (N=16) were the youngest child in the family.

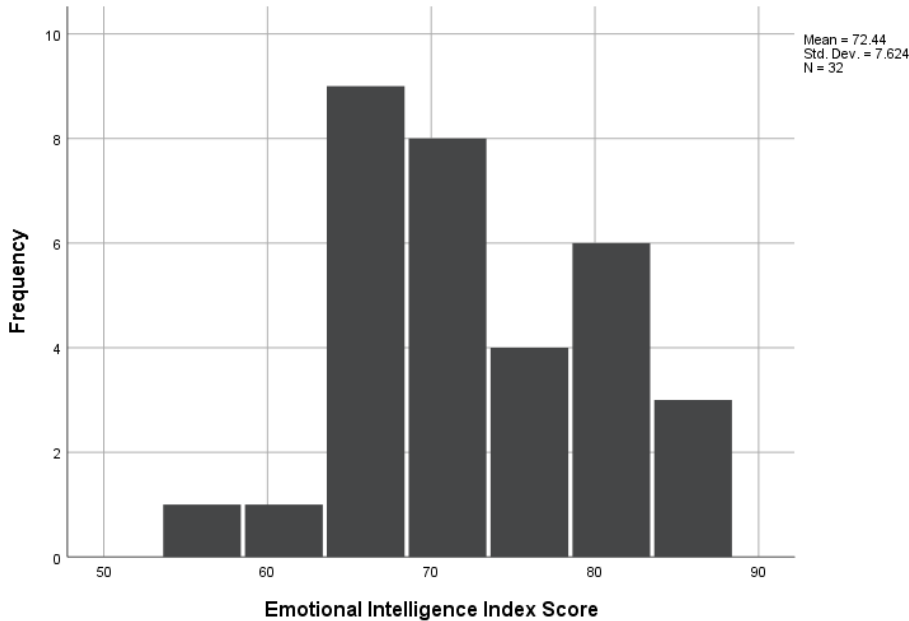
The average Emotional Intelligence Index score among all participants was 72.4 (N=32, SD = 7.6). See Figure 2 for additional Emotional Intelligence Index Score frequencies. Psychology majors reported the highest mean in emotional intelligence index scores 73.9 (N=15, SD=8.5). Nursing followed with a mean of 71.9 (N=7, SD=6.6), and social work 70.6 (N=10, SD=7.2).

Of the 32 participants, 90.6% had experienced one or more ACE, and 50.0% had experienced four or more (M=3.6, SD=2.8). Further averages were calculated by participants who reported major. Students majoring in social work had the highest mean of adverse childhood experiences (M=4.8, SD=2.8); Psychology (M=4.3, SD=2.5), Nursing (M=1.6, SD=1.9).

Many respondents who are majoring in a helping profession (N=32), selected that their most significant reason for their major is helping others (81.3%, N=26). More than half of the participants (53.1%, N=17) agreed or strongly agreed that their adverse childhood experience(s)

had influenced their selection of a college major. Chi-square calculations were made to assess the likelihood of a relationship between Adverse childhood experiences and the influence of the choice of college major, no relationship was found to be significant.

Figure 2. Emotional Intelligence Index Frequency Scores



Discussion

The goal of this study was to evaluate if people who are pursuing a major rooted in helping others by means of intervention have higher levels of empathy and a higher average of adverse childhood experiences. The survey attempted to understand whether these experiences had influenced their decision on a college major, and their level of emotional intelligence.

The results suggest that undergraduate students pursuing a major rooted in helping others display a high average of both emotional intelligence and adverse childhood experiences. Similar to the findings of the World Health Organization, most study participants had experienced one or more adverse childhood experiences (Kessler et al., 2017). While 90.6%

(N=29) of the participants had experienced one or more ACEs in this study, without a comparison group of alternative majors, no implications of the original hypothesis can be made. Emotional intelligence could be an indicator of readiness to handle emotionally tolling fields (Grant et al., 2014). Results indicating high emotional intelligence may be able to better process and react to hand trauma when encountered.

Many participants agreed that their adverse childhood experience(s) had an influence on selection of their college major (53.1%, N=17). This supports prior research suggesting that one's own personal history can instill a desire to help others through similar experiences (Zerubavel et al., 2012).

Strengths and Limitations

While all measures were taken to encompass a representative sample, the size of this sample (N=32) is not enough to assume the results are representative of the larger population of helping majors. The sample did not encompass a diverse representation across gender or ethnic background. The participants in this study largely encompassed those who identify as female and white, with little representation from male, non-binary persons, and people of color. While all measures were taken to encompass both groups of helping and alternative majors, communication restraints set forth by the IRB lead to an incomplete data set. This limitation left no access to directly contact participants to attempt a higher sample size.

This study contributes to a larger body of work regarding the effects of ACEs. While much is known about the physical health impacts of these experiences, this study encompasses some of the psychosocial effects that could occur, such as emotional intelligence levels and motivational factors of deciding on an undergraduate college major. There is little known

research that has attempted to understand if adverse childhood experiences specifically influence others to choose a certain undergraduate major.

Further Research Suggestions

In the future, a similar study with a larger sample size, encompassing both helping and alternative majors may yield more accurate results. If researchers are limited in not having direct access to participants, it is recommended to establish a prior relationship with people who are needed to assist in the distribution of survey materials.

It should be taken into consideration that students who are completing the survey need assurance of confidentiality when identifying traumatic experiences in their life. In that way, adverse childhood experiences may be most accurately reported if expressed in a quantity rather than an explicit selection of experiences.

Implications for Social Work

Social work is a trauma-informed profession, rooted in intervention and assistance. Knowing this, it should be understood that people's methods of processing and reacting to traumatic experiences vary. Continuing education to further understand the various effects that adverse childhood experiences have on people should be a priority in understanding how to help.

It is not assumed that a person must experience an ACE to know how to help others that have; however, this study's results suggest a connection between how one understands their own empathy and their emotional intelligence related to others. Such self-awareness may start by looking inward rather than outward to understand one's own emotions before beginning to understand others. As identified by the S-PEC, emotional intelligence encompasses the identification, understanding, use, and regulation of one's own emotions as well as others (Mikolajczak et al., 2014).

Conclusion

People are influenced by their past and present. Experiences that one has in their childhood may have the most influence over how a person behaves, and the decisions they make as young adults. ACEs may be a prominent factor in students' major decisions. Further analysis of ACEs is needed to understand the influence they may have on a person's emotional intelligence. This study contributes to the variety of potential motivation factors a person may have in their selection of a college major. In addition, it adds to the volume of questions surrounding ACEs and emotional intelligence research: Do some ACEs have more influence than others on the selection of major? Do adverse childhood experiences have different influences based on how they were managed after the fact? Do other traumas have the same effect? In what other ways is a person's emotional intelligence influenced? Overall, this study suggests that many participants in helping majors such as psychology, social work and nursing may have both elevated levels of emotional intelligence, and a high quantity of ACEs.

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