

Vocational Identity in College Students: Path Analysis of Childhood Attachment, Gender, Age, and Socioeconomic Status

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Abstract

The purpose of this study was to explore the effect of gender, age, socioeconomic status, and early childhood parental attachment on vocational identity. Participants included 309 college students who completed a demographic questionnaire, the Adult Scale of Parental Attachment-Short Form (ASPA-SF; Michael & Snow, 2019), and My Vocational Situation (MVS; Holland, Gottfredson, & Power, 1980). Responses were examined through structural equation modeling. Results indicated an overall acceptable model fit and the specific strength of the corresponding variables had on the levels of vocational identity. Implications and areas for future research are proposed.

INTRODUCTION

Career decision-making has been an area of interest for more than 50 years (Nauta, 2010; Melvin, Galles & Lenz, 2012). Holland's (1959) *Theory of Vocational Choice* set the foundation for future research and developments, and others continued to update his theory after his death (Brown & Lent, 2021; Niles & Harris-Bowlsbey, 2022). Research has focused on the relationship between decision-making and various other variables. Most of the research regarding career decision-making investigated negative thoughts (Galles & Lenz, 2013), mental health factors (Jia, Hou, Zhang & Xiao, 2022; Strauser, Lustig & Ciftci, 2008), and vocational identity (Holland & Holland, 1977; Gati & Levin, 2014). Career indecision has been linked to a less developed sense of identity (Holland & Holland, 1977). A strong, or more developed sense of identity has been shown to be closely related to a lower rate of burnout and higher psychological well-being (Edwards & Dorette, 2010). Additionally, research has indicated that one's vocational identity influences confidence in career decision making. These findings highlight the importance of identifying factors that influence career decision-making to promote psychological well-being and mental health.

Previous studies have emphasized the importance of identifying variables that influence career development and occupational satisfaction (Blustein, Prezioso & Schultheiss, 1995). One factor that has been investigated in combination with career decision-making is early attachment. Studies have shown that attachment shows a positive influence on career decision-making (El-Hassan & Ghalayini, 2020; Scott & Church, 2001). However, some studies have also found contrasting results that deny any significant relationship between attachment and career decision-making (Germeijs & Verschueren, 2009). These inconsistent findings lead the authors to suggest researchers to further investigate the relationship between these two constructs to gain a more knowledgeable understanding of how they relate.

Vocational Identity and Career Decision Making

Career decision-making has been related to vocational identity throughout literature. In 1977, Holland and Holland hypothesized that career indecision is likely to result from difficulties in forming vocational identity. Vocational identity refers to a stable and clear set of goals, interests, personality, and talents. According to the authors of the My Vocational Situation assessment, a clear and stable vocational identity leads to fewer career decision-making difficulties (Holland, Daiger & Power, 1980). This relationship between career decision-making and vocational identity suggests that a clear and stable sense of vocational identity serves as a basis for effective career decision-making. While they are separate constructs, for the purpose of this study they will be used interchangeably to explore the relationship of parental attachment on career decision-making through vocational identity (Galles, Lenz, Peterson & Sampson Jr., 2018).

Attachment and Career Decision Making

Attachment has long been known as a vital factor in child development and healthy development into adulthood (Bretherton, 1992; van Rosmalen & van der Horst, 2016). According to attachment theory, nurturing and safe relationships with one or more caregivers are crucial for a child to develop into a healthy individual. Insecure attachment can result in a negative view of the self, low self-worth, fear of abandonment, and mistrust (Dempster et al., 2015; Wright & Perrone, 2010). It can be concluded that parental unavailability or unresponsiveness can lead to barriers in healthy development, and even to psychopathological behaviors.

The role of parents on the career decision-making process has been evaluated (Neuenschwander & Hofmann, 2022); however, existing research has also been characterized by diverse constructs and inconsistent findings (Eigen, Hartman & Hartman, 1987; Lopez & Andrews, 1987; Blustein, Walbridge, Friedlander & Palladino, 1991). Many of these studies have focused on the effect that separation from parents has on career decisiveness (Eigen, Hartman & Hartman, 1987; Blustein, Prezioso & Schultheiss, 1995). They have proposed that the processes of identity development and career decision-making occur simultaneously (O'Brien, 1996; Blustein, Devenis & Kidney, 1989).

There are numerous reasons why these findings are inconsistent. For example, individual differences between the participants are a principal factor to consider. The experience of an individual going through the stages of separation from their parents while moving toward individuation can be quite different from another person at that same stage. It may be difficult to distinguish between general self-efficacy and self-efficacy related to attachment and career decision-making. O'Brien (1996) stated that confidence in making career-related decisions could also be the result of a higher engagement in other independent decision-making activities, however, there is a lack in research supporting this statement.

Overall, research on this topic has been inconsistent and highlighted the importance of considering other factors when drawing inferences from their results. The findings suggest the more independent an individual is the more decisive they are in making career decisions. Based on these results, it will be hypothesized that individuals with secure attachment will score lower on MVS, indicating higher levels of vocational identity and fewer difficulties in career decision-making.

Attachment theory has proposed that relationships with their parents serve as a secure base from which individuals can engage in exploration and to which they can return during stressful situations (Germeijs & Verschueren, 2009; Allen & Land, 1999). Previous research has suggested conceptualizing the investigation of attachment as an organizing rubric for the development of a career perspective (Blustein, Prezioso & Schultheiss, 1995). Exploration has been linked to career development by multiple researchers (Blustein, 1992; Grotevant & Cooper, 1988). Relationships to their parents can serve as a secure base during career decision-making because of the stressful task of making such an impactful choice. Based on the literature and the implications from previous research, this study examines the relationship between college students' attachment style to their parents and their sense of vocational identity.

Lopez (1989) found an influential relationship between the quality of the opposite-sex parent and young adult relationship and their vocational identity development. According to this study, conflict between the parent and the young adult may increase the difficulties in vocational identity development. Due to the strong intercorrelations between the two conflictual independence scales utilized, inferences are to be interpreted with caution. One interpretation could be that an unsafe relationship with the opposite-sex parent leads to a higher rate of indecision among students. Lopez suggested that future research focus on exploring the relationship between same- and opposite-sex parent and young adult to specify the nature of these findings. In this study, it will be hypothesized that individuals with a safer relationship to the opposite-sex parent will have lower scores on the MVS scale.

Potential factors influencing career decision making

Previous research suggested gender differences regarding career decision making (Tian et al., 2021). Males tend to experience fewer decision-making difficulties than females (Zhou & Santos, 2007; Gadassi et al., 2015). Furthermore, males may make decisions more independently, while females are more inclined to take more information from significant others into account when making decisions. This statement agrees with conclusions drawn by Hsieh and Huang (2012) in researching a population of Taiwanese college students. According to the researchers, female participants were more influenced by parents than males. Furthermore, the researchers suggested that participants' mothers seemed to have a significant influence on their daughters, while the relationship of the father tended to have more influence on the sons. The sociological implications of their study have not been replicated with a western college student population. Nevertheless, overall gender differences in career decision-making seemed to be a factor that has been explored in previous research and yielded results indicating differences in several studies, while other researchers have not found significant differences (Shen, Gu, Chen & Wen, 2021).

Another factor that researchers have linked to career decision-making is socioeconomic status (Ses; Trusty, Ng & Plata, 2000). The socioeconomic status of a family influences the learning experiences of individuals, which in return shape their self-efficacy beliefs. This relationship between self-efficacy beliefs and learning experiences also has an impact on career decision-making (Hsieh & Huang, 2012). Blustein et al. (2002) suggested that individuals from a background of higher levels of SES are more likely to have more resources and expectations for higher education. Congruently, del Carmen Olmos-Gómez, Luque-Suárez, Becerril-Ruiz and Cuevas-Rincón (2021) concluded that higher SES positively influences self-concept, motivation, and self-esteem. Therefore, this study seeks to investigate the relationship between SES and career decision-making to further provide insight into the role SES plays in predicting career decision-making abilities.

In addition to gender and SES, age is a factor that will be included in this study, as some authors suggested an influence between age and career decision-making (Scott & Church, 2001; Mau, 2004). Zhou and Santos (2007) found that age correlated negatively with career decision-making, indicating the older the individual the lower the level of difficulties in career decision-making. There is a lack in research that focuses on the relationship of age and career decision-making; this study aims at exploring

and understanding the relationship between these two constructs by hypothesizing a negative effect of age on vocational identity development and career decision-making.

To summarize, this study will focus on identifying the relationship between vocational identity and parental attachment and clarifying the role and direction of age, gender, and SES in vocational identity development.

Hypothesis 1: Individuals with secure attachment will score lower on MVS, indicating higher levels of vocational identity.

Hypothesis 2: Individuals with a safer relationship to the opposite-sex parent will have lower scores on the MVS scale.

Hypothesis 3: There will be a negative effect of age on vocational identity development.

Hypothesis 4: SES will have an influence on vocational identity.

METHODS

Participants

The sample consisted of 328 students from a mid-size university in the southeastern United States. 19 participants had to be excluded due to incomplete information on the father subscales – resulting in a final sample of 309 participants. Of this sample, 47.9% were female, and 52.1% male (4 participants did not identify their gender), with a mean age of 19.42 ($SD=3.04$) and a range from 18-46. The ethnicity of the sample was 89.9% White/Caucasian, 5% or less Black or African American, Asian, Hispanic or Latino/a, and Multiracial. Of the participants 58.6% of students were in their first year of college, 30.4% in their second, 7.4% in their third, and 3.6% in their fourth year. Most participants belonged to the middle class (52.1%), followed by the upper middle class (21%) and the lower middle class (19.7%). 4.2% identified themselves as lower class, and 2.3% as upper class.

Measures

The demographic variables age, gender, and SES were included as separate variables in this analysis. For gender differences, two different samples for female and male were utilized to assess for differences.

My Vocational Situation

Holland, Gottfredson, and Power (1980) developed the My Vocational Situation scale (MVS) to assess difficulty related to vocational identity. The MVS scale consists of three subscales: Vocational Identity (VI), Occupation Information (OI), and Barriers (B). For this study, the Vocational Identity subscale was used to determine the degree to which individuals possess stable and clear goals, interests, and abilities. This subscale consists of 18 true and false items. Examples of items are “*I need reassurance that I have made the right choice of occupation*” and “*I am not sure of myself in many areas of life*”. Due to the reverse direction of these scores, a lower score on MVS indicates higher levels of vocational identity. Holland reported an internal consistency for college students on the VI scale of .88 for females ($n=301$) and .89 for males ($N=288$) (Holland, Gottfredson & Power, 1980). Overall, support for the validity of the VI subscale was provided, along with a reported test-retest reliability of the VI subscale at $r=.75$ over 1-3 months (Holland, 1993).

The Adult Scale of Parental Attachment-Short Form

The Adult Scale of Parental Attachment-Short Form (Michael & Snow, 2019) measures the type and degree of parental attachment perceived by an individual based on childhood experiences with a mother and father figure. The five subscales of the ASPA-SF are Safe, Dependent, Parentified, Distant, and Fearful. Responses are rated on a Likert-type scale and included: 1) never, 2) seldom, 3) sometimes, 4) frequently, and 5) constantly. Examples of items from the ASPA-SF are “*I had my mother with me when I was upset*” and “*I put my father’s needs before my own*”. A psychometric analysis conducted by Michael & Snow (2019) revealed acceptable levels of internal consistency reliability for all subscales. Similarly, the factor structure of the ASPA-SF revealed a good model fit through a wide array of indices in a confirmatory factor analysis.

Procedure

All the procedural steps were approved by the Institutional Review Board (IRB) at the local institution. Participants were students enrolled in a midsize university in the southeastern United States. Students were recruited by contacting various departments, organizations, and offices that serve sub-populations. Brief presentations to classes and organizations were conducted to enhance participation. Participants had the potential to be entered into a raffle for one of four \$15 gift cards. To ensure participants’ confidentiality, rights, and privacy, a two-level system of identification numbers was utilized. Participants were unable to be identified in any part of the data collection and analysis. Responses were gathered electronically through Qualtrics.

Analysis

Structural equation modeling (SEM) has been shown to be at least as precise in analyzing variables as traditional models of statistics, with an additional benefit of optimizing tools used for connecting theoretical models to reality (Tarka, 2018). A Path Analysis Model using AMOS was used to determine correlations between attachment style and career decision making. The Path

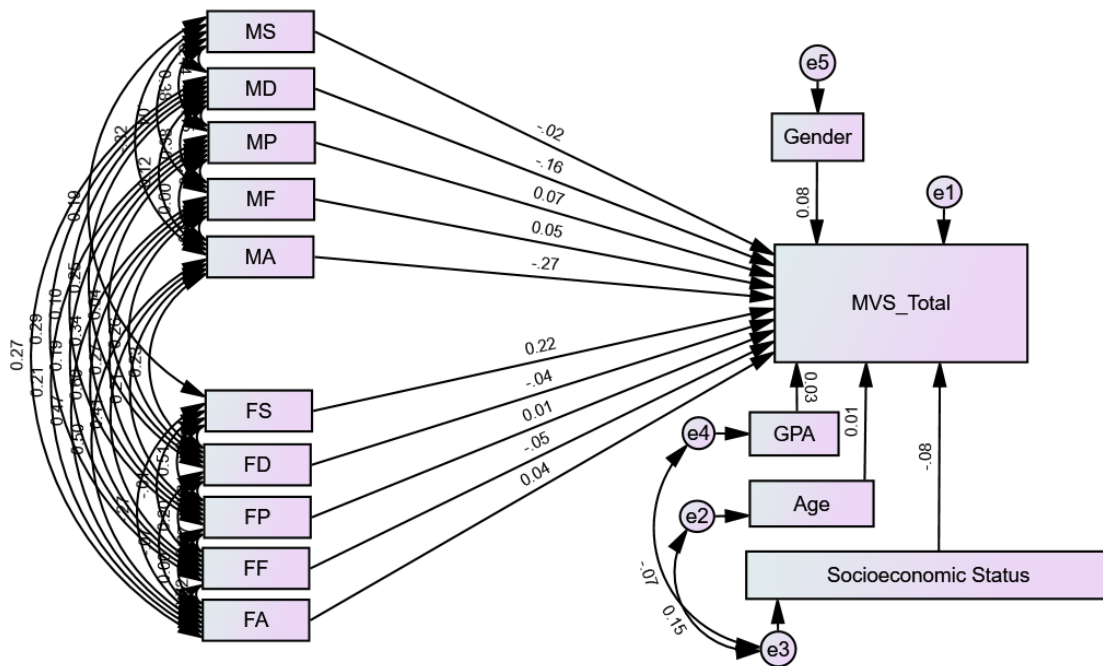


Figure 1. SEM for Parental Attachment and Career Decision-Making

Analysis Model was selected because it shows the way those two variables interact with each other. The Maximum Likelihood Estimation was used to confirm the latent variable measurement model. It has been recommended (MacCallum, Browne & Sugawara, 1996; Hair, Black, Babin & Anderson, 2010) to use the following indicators to assess for model fit indices: (1) the Chi-Square (χ^2) Goodness of Fit Analysis based on a significance test and the ratio of χ^2 and degree of freedom (a good fit is indicated by a value less than three); (2) the Comparative Fit Index (CFI) to compare the identified model with alternative models (an excellent fit is indicated by a value above .95); (3) the Tucker-Lewis Index to assess for model fit (a score above .90 indicates a good fit), (4) and the Root Mean Square Error of Approximation (RMSEA; .05 - .08 indicates an acceptable fit).

RESULTS AND DISCUSSION

Results

The hypothesized model is presented in Figure 1. The model contained five observed, endogenous variables: MVS_Total (My vocational situation – total score), socioeconomic status, age, GPA (Grade Point Average), and gender. Observed, exogenous variables included parental attachment style measured through each subscale (mother-safe (MS), mother-dependent (MD), mother-parentified (MP), mother-fearful (MF), mother-distant (MA); and the equivalents for the father subscale (i.e., FS, FD, FP, FF, and FA). Variables to account for errors in measurement are displayed in Figure 1 (e1, e2, e3, e4, and e5). The assumptions of multivariate normality and linearity were assessed through IBM SPSS. Structural equation modeling analyses were conducted with the data from 309 participants. Maximum Likelihood Estimation was utilized to estimate the model. $X^2 = <.01$ indicated a rejection of the null hypothesis, providing support for the hypothesized model $X^2 =$, CFI = . Overall, the indices for the measured model indicated a good fit. A summary of the values for each measure is displayed in Table 1. The benchmarks discussed previously were reached and indicated this model is a good fit for examining the theoretical structural model.

To examine the interpretations of this model, parameter estimates were used to compare the relationship among the latent variables. According to Cohen (1988), standardized path coefficients with absolute values less than .10 indicate a small effect, those with a value of .30 a medium and values above .50 a large effect. The results indicated that MS, MD, MP, and MF

Table 1. Model Fit Indices and Benchmarks

Goodness-of-fit indices	Benchmarks	Value
Chi-square		114.65
Chi-square/degrees of freedom	≤ 3	2.20
Comparative Fit Index (CFI)	$\geq .95$.96
Root Mean Square Error of Approximation (RMSEA)	.05 - .08	.06
Tucker-Lewis Index (TLI)	$\geq .90$.91
Normed Fit Index (NFI)	$\geq .90$.93

Note. Model Fit Indices and Benchmarks, adapted from Hair, Black, Babin & Anderson (2010) and MacCallum, Browne & Sugawara (1996).

Table 2. Subscales of Parental Attachment and Career Decision-Making showing standardized coefficients

Attachment Style	Females	Males
Mother – Safe	-.15	-.04
Mother – Dependent	-.16	-.11
Mother – Parentified	.15	.01
Mother – Fearful	-.14	.16
Mother – Distant	-.15	-.37
Father – Safe	.15	.30
Father – Dependent	-.12	-.08
Father – Parentified	.05	.06
Father – Fearful	.27	-.27
Father - Distant	-.17	.28

all had small effects (MS = -.02, MD = -.16, MP = .07, MF = .05) and MA had a medium effect (.27). For the attachment to the father all styles showed small effects (FS = .22, FD = -.04, FP = .01, FF = -.05, FA = .04).

After examining the overall fit of the model, the model was tested on two different samples, one including only male participants and the other only including females. The purpose was to test the hypothesis whether individuals with a safer relationship to the opposite-sex parent will have lower scores on the MVS scale. The results showed a good model fit for both samples (Male: $c^2/df = 2.18$, RMSEA = .088, CFI = .97, NFI = .93; Female: $c^2/df = 1.60$, RMSEA = .64, CFI = .97, NFI = .93). The individual standardized coefficients of the different samples can be viewed in Table 2.

Discussion

In contrast to previous studies that found an overall negative relationship between a secure attachment style to their parents and career-decision making difficulties, this study found differing results. No overall relationship indicating a safe relationship resulted in fewer difficulties was found, however, this was true for the relationship to the mother. Students with a perceived safe relationship with their mother-figure generally had higher levels of vocational identity. While this relationship had a small negative effect, a positive medium effect was found for the safe relationship to the father. This suggests that a perceived safe relationship to the father results in more difficulties regarding vocational identity. There are no similar findings reported by previous research, which leads to speculations about underlying reasons to these findings. An explanation as to why these findings differ from previous studies finding this effect for both parents are the differences in measures used to assess parental attachment. The ASPA-SF is an adapted newer version for assessing the perceived parental attachment in childhood with high internal consistency.

Another explanation for these findings is the emergence of career decision-making to cope with unresolved multigenerational issues. The child may find themselves wanting to fulfil the expectations set by the parents, which could lead to indecision if it conflicts with their own values and aspirations. Previous research has started to explore the effect of personality on career decision self-efficacy, and it would be relevant to explore this idea in relation to the difficulties experienced by students.

Another explanation proposed by Lopez and Andrews (1987) focused on the functions of career indecision in a family system. When looking at career indecision to postpone a transformation that would affect the family system, it would seem desirable for the parents to get more involved with the task of finding a career if the child struggles with indecision to keep the family's equilibrium. This could also explain why this study did not find a bigger effect of SES and career decision-making difficulties. Because of what is known about the way family systems operate, privilege may not influence career decision-making in the way that a higher SES would lead to more difficulties because of more readily accessible resources. However, this effect's size could also be due to the possibility that the sample was mostly homogenous, and participants were attending a university which often may not include a representative sample of lower SES families. Similar implications could be drawn for age and GPA, indicating either that those factors do not influence career decision-making difficulties to the extent that was expected or that the sample was not diverse enough for significant differences to be apparent.

Gender differences

Overall, gender had a small effect on MVS, and each subscale shows the differences as presented in Table 2. The hypothesis that individuals with a safer relationship to the opposite-sex parents will have lower scores on the MVS scale was not supported by these findings. Furthermore, the findings suggest an opposite relationship, with a safer relationship to the same-sex parent leading to a higher influence on vocational identity. However, the findings show that for mothers this results in a negative effect (safer relationship leads to fewer difficulties) but for the father it results in a medium positive effect (safer relationship leads to more difficulties). The effect found for males and a safe relationship to the father was stronger than for females, indicating that males are more negatively influenced by their father than females. An attempt to explaining these results could be that more expectations are put on the males by the father than they are on females, which may lead to more difficulties

in deciding while also fulfilling those expectations. Whiston and Keller (2004) reviewed the relationship of family on career development and proposed that the intensity of males' identification with one or both parents had a direct influence on the traditionality of their vocational interest patterns. This may explain part of the difficulties males experience when they have a close relationship with their father but do not identify themselves with the traditional role that is expected of them.

A perceived fearful relationship to the parents resulted in a medium positive effect for males and a medium negative effect for females. These results are partly in agreement with a study conducted by Larson and Wilson (1998), who found the degree to which college students experienced intimidation in their families was directly predicted by the number of difficulties they had towards career decision-making. For males in this study, however, a fearful relationship to the parents was associated with fewer difficulties. This may suggest that male college students have a higher level of self-reliance when their relationship to the parents is characterized by fear. However, further research is needed to investigate this relationship.

The effects for a dependent relationship to each parent were negative across both samples, which indicates that dependency might lead to fewer difficulties in career decision-making when the child relies on their parents to make decisions for them. The relationship between a distant relationship to the parents showed negative effects for the mother (females -.15, males -.37) but differed for females and males for the relationship to the father. These findings indicate that students have fewer difficulties if they perceived the relationship to the mother as absent; males experienced more difficulties if they perceived the relationship to the father as absent. An explanation for these findings could be that in traditional families the son is expected to provide for the family and having a distant relationship with their father may lead to conflicting role expectations.

Limitations and Future Research

One of the limitations in this study is regarding the sample. The majority of the participants were White/Caucasian, which leads to restrictions in generalizability for other ethnic and minoritized groups. It has been proposed that culture plays a role in the barriers associated with career (Lopez & Ann-Yi, 2006; Wright, Jenkins-Guarnieri & Murdock, 2013). This investigation does not include enough cultural diversity to offer generalizability to other ethnic groups. Future research should include young adults from outside the university setting to explore a more representative sample of the population.

Another factor to consider in future research is cultural diversity and how parental attachment relationships are manifested in distinct cultures. There may be differences in the way that relational support is used and provided during career decision-making processes in diverse cultures. Likewise, researchers should be knowledgeable about those differences to draw accurate conclusions. As well as cultural differences such as nationality or beliefs, the parents' relationship status should be included in future research (Scott & Church, 2001). The relationship status of the parents may influence their attachment to the child, and therefore, indirectly influence career decision-making as a confounding variable. Additionally, it is important to identify how shifting gender roles might influence the accessibility of attachment figures in early life and the function of attachment in career.

Future research should also assess mindfulness as a contributing factor to effective career decision making. Findings have suggested that mindfulness may lead to fewer difficulties in career decision-making (Galles, Lenz, Peterson & Sampson, 2019; Brown & Ryan, 2003; Jacobs & Blustein, 2008). Identifying factors that reduce those difficulties is crucial, as everyone may be affected by career decisions at some point during their life.

Finally, future researchers could evaluate attachment and vocational identity over a longitudinal period to gain a more in-depth understanding of the extended impact of the early child-parent relationship. As Blustein, Prezioso, and Schultheiss (1995) proposed, the development of a research program for attachment and career decision-making over the lifespan may lead to more qualitative insight into the direction of this effect.

CONCLUSION

This investigation contributes to the literature of attachment styles and vocational identity in the way that more differentiated results were presented for different genders, as well as new insight that ties into previous research and supports the relationship between parental attachment and vocational identity. The results indicated an overall acceptable model fit regarding the path analysis of attachment, age, and gender with vocational identity. As referenced, the findings supported previous research and conceptualizations in attachment and vocational identity. While the examination had areas of limitations, the findings have provided insight into opportunities for future investigations.

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AUTHOR CONTRIBUTION STATEMENT

All authors agree to the final version of this article.

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