

Investigating the Mediating role of Academic Motivation in the Relationship between Basic Psychological Needs, Educational justice, and Cheating Behavior

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Abstract

Background: Characteristically, dishonest learners lack maturity and dedication; and prefer to rationalize their cheating conduct. Therefore, the aim of the present study was to provide a model for explaining the impact of academic motivation on the relationship between basic psychological needs and educational justice with cheating behavior.

Method: Structural equation modeling was the method used in this research. Sample of the study consisted of 400 students selected from all female senior high schools in 4 districts of Tehran, Iran, in the academic year 2017-2018. The sample size was chosen according to Morgan table, using cluster random sampling method. Harter et al.'s Academic Motivation scale (1981), questionnaire of Basic Psychological Needs (2010) educational justice Questionnaire (2010), and Newstead et al.'s cheating Behavior Questionnaire (1996) were used for data collection. Data analysis was performed through SPSS software version 22 and Amos 23 ($\alpha = 0.05$).

Results: Most of the participants were 16-year-old students, studying in the 10th grade. The results showed that the basic psychological needs and educational justice have a significant indirect effect on the cheating behaviors through the educational motivation ($\beta = -0.29$; $P = 0.001$) and the mediating role of educational motivation in the relationship between basic psychological needs and Educational justice ($\beta = -0.26$; $P = 0.001$) is confirmed by cheating behaviors with 95% confidence ($p < 0.05$).

Conclusion: The results obtained in this study indicated that educational needs and educational justice have a significant indirect effect on cheating behaviors through educational motivation and the mediating role of educational motivation is supported by cheating behaviors in the relationship between psychological needs and educational justice.

Key Words: Academic motivation, Psychological needs, Educational justice, Cheating.

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1- INTRODUCTION

Cheating is one of the most common immoral phenomena in the education system, which often occurs in homework or exams. According to Murdoch, this phenomenon is not specific to a course, a school or a country, and occurs in the entire educational systems of the world, in various ways of carrying booklets, manuscripts, and tools such as calculators and electronic tools during the exam session (1). Research findings indicate that more than 90% of people have cheated in some way during their school years in different types of copying and showing the assignments and articles of others instead of themselves (2). There are several reasons for the occurrence of cheating, and a review of studies shows that educational justice, as a process that all educators have thought about and want to establish in their own environment, is a variable that can predict academic cheating (3).

According to the definitions, educational justice includes the observance of justice and fairness in interactions, training, guidance, and teaching; and in contrast to educational injustice are discriminations, negligence of equality in treating with different students(4). Academic ethics is a mediating variable in the relationship between educational injustice and academic cheating. The theoretical reason that academic ethics can potentially mediate the effects of educational justice or injustice with academic deception is related to the role of the presence of moral values in educational settings.

This means that justice itself, as a very important moral value for people who experience its impacts, is considered as an important of moral value in various environments, including the educational settings (5). This importance of moral values first strengthens the level of students' academic ethics and then the academic ethics reinforced by educational justice provide the basis for strengthening

ethical civic-educational behaviors. It then provides a platform for decreasing academic deception (6). In fact, educational justice is the foundation of the society's thought and culture, and when educational justice prevails in an educational system, the culture of that society will be balanced and stable, and in the context of this balanced culture, intellectual, economic, political and educational growth will grow (7).

Basic psychological needs are one of the most important internal resources of an individual that, if satisfied, have a protective role against much harm (8). In the field of education, research results show that basic psychological needs have a positive and significant relationship with student relationships, student-teacher relationships, normative expectations and educational opportunities (9). Failure to meet these needs can affect students' behavior in various ways. In other words, satisfaction in the basic psychological needs can directly predict many of the individual's motivations, behaviors and emotions; and the emotional variables can mediate his/her life satisfaction (10). For example, the need for excitement and showing strength and courage, or more generally the need for assertiveness, can be expressed and satisfied in the form of cheating behavior (11). Academic motivation can also affect the occurrence of cheating behaviors in education (12).

According to the theoretical perspectives and research, motivation plays an important role in students' cognitive, behavioral and emotional outcomes. Accordingly, in recent decades, researchers have been concerned with recognizing and understanding motivation in the field of education and its role in educational outcomes. Academic motivation occurs when a person engages in a particular task or behavior for the pleasure and satisfaction that results from that task, due to its being optimally

challenging (13). Academic motivation is spontaneously derived from psychological needs, curiosity, and innate efforts to grow (14).

Sabzian et al. showed that individual factors (academic engagement; academic ethics; academic motivation; practice of religious beliefs; religious attitude; perceptions of class quality; educational justice; family emotional atmosphere; family flexibility; family cohesion) affect self-efficacy; and academic cheating has a direct and indirect mediating effect on cheating (15). Abedini et al. mentioned the following themes as causes of cheating: 1- Individual and internal motivational factors: having academic weakness, lack of trust in knowledge, not being humiliated in front of friends and not getting low grades, enjoying cheating Feeling proud after cheating, an easy way to get a grade, raise grades and exam level, etc. 2- External and situational motivational factors: the difficulty of homework and lessons, the impact of classroom atmosphere and classmates, Parental pressure, etc.(16)

Essentially, studies that have examined the relationship between academic motivation and academic cheating have shown that academic motivation has an effect on student cheating behavior (11). The researchers found that students who were internally motivated to learn homework were less likely to cheat. Given that in the educational system, cheating-based behaviors are considered immoral and the occurrence of cheating for any reason and in any form is considered a crime, this study aims to predict cheating behavior based on social support, basic psychological needs and educational justice mediated by motivation, Education and attitudes toward cheating among female high school students. For this purpose, the present study attempts to check the fitness of the following conceptual model of academic motivation in the relationship between basic psychological needs and educational justice on student cheating behavior (**Fig. 1**).

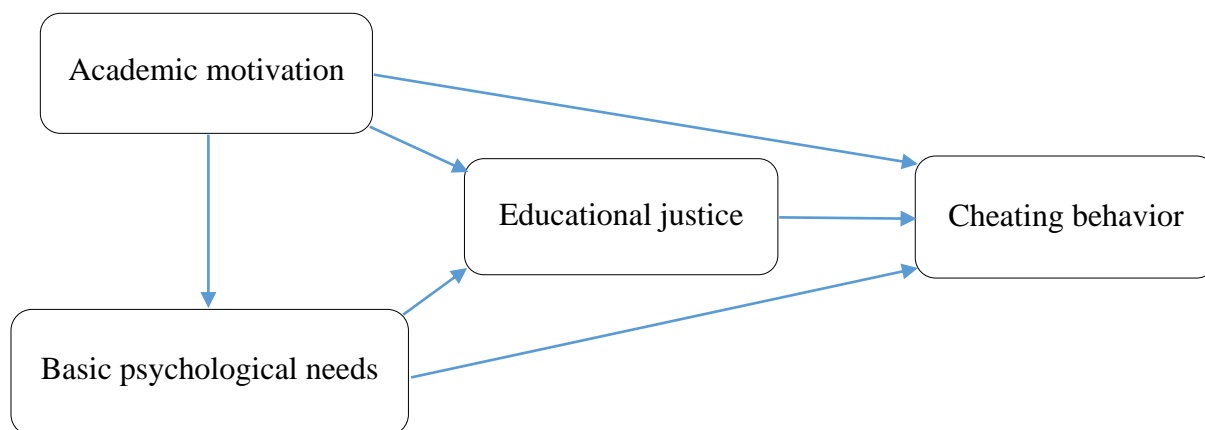


Fig. 1: The conceptual model of the research

2- MATERIALS AND METHODS

2-1. Study design and population

The present study is a cross-sectional correlation. The statistical population consists of all female senior high school students (secondary school) in Tehran who

were studying in the first semester of 1397-1398 academic year (N = 120,000). Due to the large population and the impossibility of conducting research on the whole population, multi-stage sampling method has been used to select the sample. Regarding the estimation of the sample

size required for the present study, Morgan table was used. By referring to the mentioned table, it was determined that 400 people as a sample is sufficient for this population size (17).

2-2. Measuring tools: validity and reliability

The following scales were used for collecting data in the present study:

Educational Justice Questionnaire: This scale, developed by Golparvar et al., is answered on a seven-point Likert scale. This 14-item questionnaire is based on the native culture of Iranian schools. Each question is scored from seven to one (strongly agree 7 and strongly disagree 1). The maximum score of the questionnaire is 98 (highest educational justice), the average is 56 and the minimum score is 14 (lowest educational justice) (18). The performed factor analysis had confirmed the construct validity of this questionnaire, checking the single construct of educational justice in all 14 items. The internal consistency of the scale was checked through test-retest reliability with an interval of two weeks on 30 students reaching to a coefficient of .51 ($p < 0.01$) and Cronbach's alpha of .86. Based on the present research sample, the Cronbach's alpha reliability of this test was .89.

Basic Psychological Needs Questionnaire: This questionnaire developed by La Guardia et al., consists of 21 items that measure three subscales of psychological needs including needs of autonomy, competence, and communication. The items are set based on five-point Likerts from completely false with a score of 1 to completely true with a score of 5 (19). On this scale, questions 3, 4, 7, 11, 15, 16, 18, 19 and 20 are scored in reverse. The minimum possible score is 21 and the maximum is 147. A score between 21 and 42 indicates that the person's basic psychological needs are low. A score between 42 and 105 indicates that the

basic psychological needs are moderate; and a score higher than 105 indicates that the basic psychological needs are high. The alpha coefficient of the Basic Psychological Needs Questionnaire in Deci et al.'s research was 0.83 for the whole scale. In a later study, Deci and Ryan obtained the reliability coefficient of this scale as .66 for autonomy, .74 for competency and 0.68 for communication (20). La Guardia, in another study, reported an alpha Cronbach's of .85 for the whole scale (19). In the present study, the internal consistency coefficient of this scale for autonomy, competence and communication was .70, .71 and .72, respectively. In this study, the internal stability of this test was obtained based on the present research sample by Cronbach's alpha method of .79.

Academic Motivation Questionnaire: Harter's Academic Motivation Questionnaire (22), in which each question considers only one of the reasons for internal and external motivation, includes 33 items; and is scored in a five-point Likert scale (Never, 1; Rarely, 2; Sometimes, 3; Most of the time, 4; Almost always, 5). Its scoring method is reversed in questions 3, 4, 5, 5, 9, 10, 15, 16, 19, 21, 27 and 31. Besharat reported its reliability coefficient as 0.81 for the general scale of internal motivation, 0.52 for external motivation and between 0.58 and 0.78 for the subscales (21). In another study, the alpha coefficient was found to be 0.87 for the general internal motivation scale, 0.67 for the external motivation scale and 0.60 to 0.82 for the subscales (25). The Cronbach's alpha reliability of this questionnaire was also obtained by Zahiri and Rajabi as 0.92 (23). Based on the present research sample, its Cronbach's alpha reliability was 0.82.

Cheating Behavior Questionnaire: This questionnaire was designed by Newstad et al., in two subscales of cheating in homework and cheating in exams (24). It

has 21 five-point Likert questions, including completely agree with the score (2) agree (1), have no opinion (0) disagree (-1) and completely disagree (-2). The first factor is given 10 questions and the second factor 11 questions. These two factors have been obtained in the exploratory factor analysis of the present study. Its reliability was obtained based on Cronbach's alpha coefficient as 0.89.

2-3. Intervention

Four educational regions of Tehran (3, 7, 9, and 13) were randomly selected for data collection; and the required permissions were obtained. Two girls' high schools were randomly selected from each region, 4 classes were selected from each school, and 25 students from each class filled the research questionnaires. They were asked to answer the questionnaires according to their personal opinion. Due to the large number of questionnaires and the long time it took to complete them, it was decided that the students complete the questionnaires only during their exercise hours. In case of ambiguities about the questions, the researcher provided them with additional explanations.

2-4. Ethical consideration

Ethical considerations in this study, including students' informed consent to complete the questionnaires, maintaining confidentiality of the samples' personality were fully observed. It was not necessary for the respondents to write their names on the questionnaires. In addition, participating in the research and leaving it were voluntary. The present article is taken from the doctoral dissertation of the first author in the field of educational sciences with the approval number of 10190702971001/98, Vice Chancellor for Research, Faculty of Psychology and Educational Sciences, Islamic Azad University, Saveh Branch.

2-5. Inclusion and exclusion criteria

Inclusion criteria include: female students of senior high school, informed consent to participate in research, and full mental health based on the school counseling record; Exclusion criteria included unwillingness to cooperate; and incomplete questionnaires.

2-6. Data Analyses

In order to analyze the data, a descriptive statistical index including (frequency distribution table, mean standard deviation, skewness, and kurtosis) was used; it should be noted that SPSS-22 statistical software was used to analyze descriptive statistics. In the inferential part, by research type, the Kolmogorov-Smirnov Data Normality Test and confirmatory factor analysis and structural equation modeling (SEM) in Amos were performed to verify the validity of the research tools and to test the research model. The Sobel test was used to analyze the mediating effect of educational motivation on the connections between basic psychological needs and educational justice with cheating behaviors.

3- RESULTS

As **Table 1** shows that most of the research participants were in the 10th grade and 16-year-old students.

Table 2 shows the means and standard deviations of the research variables. Furthermore, the values of skewness and kurtosis, in this table, show that the research variables have a normal distribution.

In **Table 3**, the tolerance index is close to 1; thus, like other predictor variables, none of the predictor variables have a linear effect. The value of the variance inflation factor is also less than 2, so there is no linear relationship among the variables of the predictor. The normality of the multivariate distribution is among the assumptions of the path analysis model. In

AMOS software 23, the coefficient of Mardia multivariate kurtosis is used for this reason.

which indicates that the assumption of multivariate normality is established.

The value of Mardia coefficient for the data of the present study is equal to 3.72,

Table-1: Demographic information of the participants

Variables	Statistics	Frequency	Percent
Educational grade	10th grade	137	34.2
	11th grade	131	32.7
	12th grade	132	33.1
Age, year	16	137	34.2
	17	131	32.7
	18	132	33.1

Table-2: Descriptive statistics of the research variables

Variables	Mean± SD	Skewness	Kurtosis
Basic psychological needs	79.48±14.78	0.44	0.61
Educational Justice	124.54±29.14	0.27	1.41
Educational motivation	94.23±15.91	-0.78	-0.56
Cheating behaviour	83.23±16.91	1.10	0.49

Table-3: Tolerance index and variance inflation factor (VIF) to evaluate the absence of collinearity effect between the independent variables

Variables	Tolerance	VIF
Basic psychological needs	0.88	1.29
Educational Justice	0.89	1.12
Educational motivation	0.88	1.32

Table-4: Description of model fit indices

Fitting indices	Model Value	Acceptable Value
$\frac{\chi^2}{df}$	1.98	Less than 3
RMSEA	0.08	Less than 0.1
CFI	0.95	More than 0.90
NFI	0.91	More than 0.90
GFI	0.92	More than 0.90
AGFI	0.93	More than 0.90

(χ^2/df): chi-square divided by the degrees of freedom
 RMSEA: Root Mean Square Error Approximation
 CFI: Comparative Fit Index
 NFI: Normed Fit Index
 GFI: Goodness of Fit Index
 AGFI: Adjusted Goodness of Fit Index

Given that none of the obtained indicators of model fit can, solely, confirm the suitability of the model or its inappropriateness, it is necessary to interpret these indicators together and with a holistic view. The results of **Table 4** shows that the model fit indices are generally in a favorable condition and, therefore, the answer to the research

hypotheses is unobstructed. In the following, the final model is reported with non-standard (**Fig. 1**) and standard coefficients (**Fig. 2**).

The pattern in the case of non-standardized coefficients is equivalent to regression weights based on raw scores.

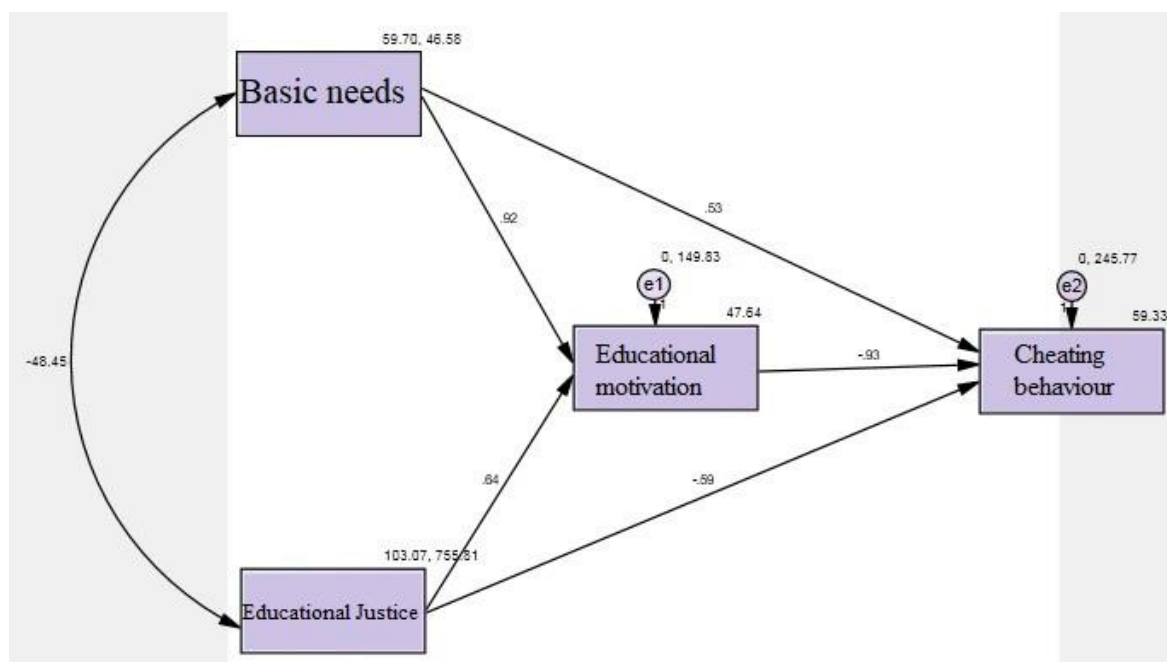


Fig. 1: Non-standardized coefficients of the final pattern paths explaining Cheating behaviors

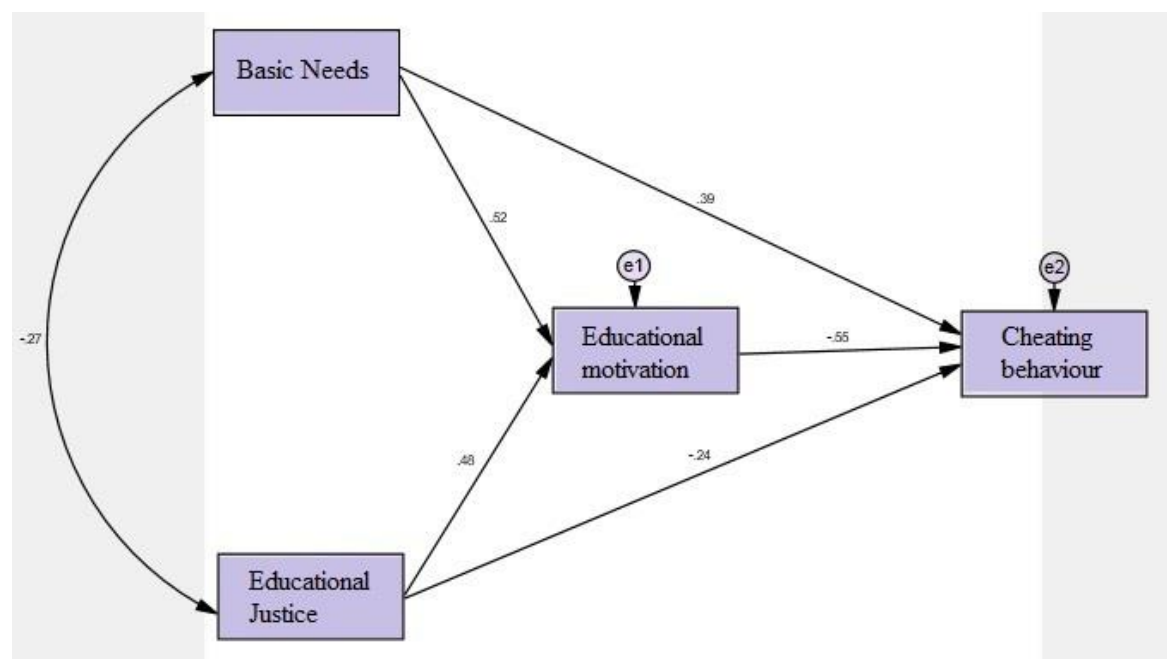


Fig. 2: Standardized coefficients of the final pattern paths explaining Cheating behavior

The pattern in the case of standardized coefficients is limited between positive one to negative one and is used to indicate the strength and direction of the relationship.

As shown in **table 5**, basic psychological needs and educational justice have a significant indirect effect on the cheating

behaviors through the educational motivation ($\beta=-0.29$; $P=0.001$) and the mediating role of educational motivation in the relationship between basic psychological needs and Educational justice ($\beta=-0.26$; $P=0.001$) is confirmed by cheating behaviors with 95% confidence ($p < 0.05$).

Table-5: Sobel Statistic of indirect effects of basic psychological needs and educational justice on cheating behaviors

Dependent	Independent	Mediator	Non-Standardized coefficients	β	Sobel Statistic	P
Cheating behaviour	Basic psychological needs	Educational motivation	-0.85	-0.29	3.74	0.001
Cheating behaviour	Educational Justice	Educational motivation	-0.60	-0.26	3.48	0.001

4- DISCUSSION

The purpose of this study was to investigate the fitness of the structural model of the predictive effects of academic motivation, basic psychological needs, and educational justice on students' cheating behavior, conceptualized based on the literature. The results revealed that basic psychological needs and educational justice have a significant indirect effect on cheating behavior, through affecting academic motivation. Thus, the hypothesis regarding the mediating role of academic motivation in the relationship between basic psychological needs and educational justice with cheating behavior was confirmed with 95% of confidence. However, the indirect relationship between social support and cheating behavior was not significant. Anderman and Koenka (11) and Newstead et al. (24) also achieved similar noting that academic motivation mediates the effects of social support, basic psychological needs, and educational justice on cheating behavior.

The results of path analysis Hejazi et al. showed that the needs for self-obedience,

competence and belonging are directly related to intrinsic motivation (25). The needs for self-obedience and competence, through internal motivation, had an indirect and positive effect on life satisfaction; however, the indirect effect of belonging need on life satisfaction was not significant. Their results indicated that there is a significant positive relationship among basic psychological needs, intrinsic motivation, and external motivation. Furthermore, there was a significant negative relationship between basic psychological needs and lack of motivation (26). Another research study manifested that basic psychological needs and motivation for academic achievement can explain 33% of the variance of academic achievement. Based on this, it was concluded that achievement motivation plays a mediating role in the variables of basic psychological needs and academic achievement (27).

To explain these results, it can be stated that academic motivation as one of the requirements of learning is the universal desire to do a good job in a certain educational field. The behaviors

representative of academic motivation include insistence on doing difficult tasks, hard work, striving to learn to the level of mastery, and choosing tasks that require effort. Motivation for academic achievement is, thus, a psychological state that can be achieved when a person believes in his adequacy and autonomy of perception (25). An academically motivated person does not engage in deceptive behaviors and instead seeks better and more efficient learning. Study findings also indicate that motivation and academic achievement interact with each other, so that high motivation leads to more effort to learn and, consequently, academic achievement (26-28).

Based on previous findings (28-26), intrinsic motivation seems to play a mediating role in the relationship between basic psychological needs and life satisfaction. It can therefore be argued that academic motivation may be improved by considering variables such as basic psychological needs and efforts to increase intrinsic motivation (24). These results show the importance of basic psychological needs; so, to improve academic satisfaction, students must have a sense of independence and competence along with experiencing a real relationship with their classmates, school staff and teachers (29)

As for the limitations of the present study, we can mention the large population of the research which led to the difficulty of collecting and analyzing the data, the withdrawal and refusal of some students to participate in the research, and the small size of the research sample. Another limitation of this study is the inclusion of only one gender, which limits the ability to generalize the results to male adolescents.

5- CONCLUSION

According to the results of this study, the existence of academic motivation can be attributed to the non-occurrence of

cheating behaviors among students. Therefore, it is necessary for the educational system to behave in a way that motivates students to learn and in this way, to prevent the occurrence of cheating behaviors. Accordingly, the following suggestions can be effective: Students should be provided with the freedom to express their ideas and opinions in the classroom. Rewards should be considered for the students' success. How to learn and at the same time how to work should be clearly specified for them. Their academic problems can be rooted out, through clear friendly talks. Giving responsibilities to the students can help in highlighting their positive behaviors.

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