Prediction of positive social behaviors based on norm-activation model in female students

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Abstract

Keeping order in the classroom, modifying students' behavioral problems, and implementing regulations codified at schools are among the issues in education involving the minds of headmasters and teachers. Following adolescence appropriate behavioral patterns plays a key role in bringing about the adolescents' positive social behavior. This study aimed to investigate the predictors of adolescents' positive social behavior using the Norm Activation Model (NAM). This study was conducted on 200 female students between 12 and 13 years old studying in the third educational district of Shiraz, Iran, that were selected through cluster random sampling method. The study data were collected as self-report using a questionnaire composed of demographic items and items measuring positive social behavior based on NAM. The findings showed that among the NAM constructs, personal norm was the strongest predictor of positive social behavior followed by awareness of consequences and ascription of responsibility. The relation of awareness of consequences to birth order, ascription of responsibility to father's occupation and birth order, personal norm to father's occupation, number of brothers, and birth order, and positive social behavior to number of brothers, birth order, non-classmate friends, and number of intimate non-classmate friends was statistically significant. It was concluded that NAM could be utilized to predict the factors affecting positive social behavior. Moreover, the results can be used by authorities and policymakers to develop appropriate plans and behavioral interventions.

Keywords: Adolescents, Awareness, Norm, Social Behavior, Responsibility

Introduction

Socialization is the ground for establishment of norms and individual behaviors which can be influenced by other group' norms, behaviors, and acceptances [1]. In the socialization process, individuals gradually acquire norms, values, customs, and rules of a community, and picture them as a part of their character. In case the process is gone through properly, individuals show a tendency towards obeying the rules. What is of utmost importance, especially in terms of social psychology, is the individuals' voluntary compliance with the rules. Therefore, it can be stated that compliance with law is a part of socialization process

[2]. During life, socialization is formed within complex relationships between institutions, such as family, school, and neighborhood. These institutions are considered as the first channels which affect the adolescents' behaviors. These institutions' behavioral patterns include ways of managing behaviors and behavioral abnormalities [3]. School is the first social institution influencing adolescents' life, which determines their opportunities, life quality, and behaviors. It has a unique and deep impact on their life, and the core of defining an adolescent's general feeling towards the community [4]. Adolescence is one of the sensitive periods of life and adolescents are considered as valuable assets in every society. They comprise more than half of Iran's population. Adolescence starts with a kind of aggressive tendency towards unconditional freedom. Adolescence, as a transition from childhood to youth, is a sensitive and important period; such a way that following appropriate behavioral patterns plays a key role in introducing positive social behaviors [5]. Adolescence is a growth and development period which is determined by significant changes. This development is particularly related to the social environment [6]. In Iran, females comprise about half of the youth population. Because of the role they play in the family as well as in raising children, girls need more attention. Therefore, efforts made concerning their problems in adolescence promise having a healthy, creative, and active generation in future. The girls' role, as future mothers, is of great importance in society and in case they do not go through this stage safe and sound, they will not be able to play their role as mother in society in future. Women's role in society is undeniable due to their potential in transmission of culture [5].
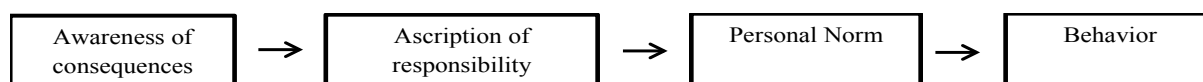
Social behavior is a behavior which occurs in facing social stimulus [7]. Currently, many researchers unanimously believe that since children who have raised in unsuitable environments exert socially inappropriate behavior, social behavior can be taught. Acquiring social skills is the core of an individual's social development, establishment

of social relations, quality of social interactions, social adjustment, and even psychological health [8]. Social skill is defined as the ability to communicate with others in a particular social environment through specific ways which are socially valuable and adoptable [9]. Some of these skills can be defined as a perfect pattern of behaviors which an individual shows during interpersonal interactions [10]. The main issues addressed in educational systems which have involved teachers' and headmasters' minds include keeping order in the classroom (training aspect), modifying students' behavioral problems, and implementing regulations codified at schools (regulatory aspect) [11]. On the other hand, individuals having basic behavioral problems can be attracted by antisocial behaviors in the long run. Risk factors are the predictors of anti-social behaviors. They are classified on the basis of their effects on different places, including communities, families, schools, peer group, and an individual's own characteristics. Moreover, society factors include legal and normative expectations of a behavior, severe economic deprivation, and highly disorganized social environment. At the family level, these factors include familial conflicts and parents' positive attitudes towards anti-social behaviors. At the school level, however, behavioral problems are basic and continuous. Individual and peer group factors include positive attitude toward anti-social behavior, having contact with anti-social peer groups, and early occurrence of behavioral problems [12]. According to Pouryousefi et al. [5], parents' level of education, social class, and peer group behavioral patterns were significantly related to girls' social behaviors. Moreover, based on a study conducted by Mercken et al. [13], selection and effects of friends were significantly associated with behaviors such as smoking among adolescents.

In general, utilizing patterns and theories in researches can provide answers to the following questions: Why do not individuals exert a positive and appropriate behavior,

how can their behaviors be changed, and when evaluating, what factors should be considered as the core of the plan [14]. According to Judith_De Groot and Linda Steg [15], Norm Activation Model (NAM) variables were appropriate predictors of different kinds of social purposes. Also, the evidences have shown that by increasing knowledge, taking responsibility for problems, and reinforcing moral obligations, pro-social behaviors can be increased.

Some researchers believe that awareness of consequences has priority over ascription of responsibility and the latter has priority over personal norm. Therefore, personal norm can affect the behavior. However, some researchers believe that the effect of personal norm on prosocial behavior is adjusted by awareness of consequences and ascription of responsibility. For instance, with regard to the first assumption, if policymakers and administrators pay attention to knowledge and information about the problem before focusing on the responsibility and norms, the results would be more fruitful. On the other hand, with regard to the second assumption, when prosocial behaviors are improved, just an increase in the responsibility can be resulted. Also, attraction by prosocial behaviors can establish

knowledge, responsibility, and norms through social-psychological processes [15].

According to NAM, personal norms are determinants of behaviors. In fact, they are considered as strong inherent motivations for development of prosocial behaviors. NAM has three variables which can predict pro-social behaviors: [16]

1) Personal norm. It is defined as the feeling of moral obligations required for exhibiting or avoiding certain behaviors.

2) Awareness of consequences. This means whether or not an individual is aware of the negative consequences of his/her behavior on other individuals and their values.

3) Ascription of responsibility. It is defined as the responsibility for negative consequences of exhibiting anti-social behaviors [15]. (Figure 1)

According to Bamberg et al. [17], personal norms about using public transportation can be considered as one of the important predictors of the behavior. Moreover, the study conducted by Van Kesteren et al. [16] demonstrated that personal norms, awareness of consequences, and ascription of responsibility were correlated to using protective tools for preventing sexually transmitted diseases.

| Awareness of consequences | → | Ascription of responsibility | → | Personal Norm | → | Behavior |

Figure 1 *Norm activation model [15]*

In the present study, the main constructs of NAM, including Personal norm, Awareness of consequences, and ascription of responsibility were assessed. The aim of this study, therefore, was to evaluate the effect of NAM constructs to perform positive social behavior in female students.

The current study aimed to determine the degree to which NAM variables can predict exhibiting or avoiding positive social behaviors among female adolescents in school environment.

Method

This cross-sectional study was conducted on 200 female students between 12 and 13 years

old studying in the third educational district of Shiraz city. This study was conducted in 2014. In this study, one out of four educational districts of the city was selected using cluster random sampling method. Then, 2 out of 32 state female schools in the given district were selected using random sampling. Next, 12 classes, i.e. 6 classes in each selected school, were participated in another cluster random sampling. Afterwards, 8 second grade classes compose of 200 female students were included in the final sample.

The second grade students were targeted as the statistical population under the study

because they are experiencing a change in educational grade and because of sensitivity and significance of establishing positive social behaviors in this age group. The study data were collected through a researcher-made questionnaire designed based on NAM. The NAM includes three types of variables to predict positive social behavior. The first of these is personal norms, referred to as feeling a "moral obligation to perform or refrain from specific actions". The second one, awareness of consequences, is defined as whether someone is aware of the negative consequences on others or one's values when not acting positive socially. The third one, ascription of responsibility, is described as feelings of responsibility for the negative consequences of not acting positive socially. The reliability of the questionnaire was evaluated using Cronbach's alpha. Also, the reliability of questionnaire was confirmed by experienced professors. This questionnaire was based on the variables of the research model. Therefore, it contained 13 questions regarding awareness of consequences (scored on a Likert scale ranging from completely agree to completely disagree with total score in range of 13 to 65) and Cronbach's alpha of 0.79, 10 questions concerning ascription of responsibility (scored on a Likert scale ranging from completely agree to completely disagree with total score in range of 10 to 50) and Cronbach's alpha of 0.56, 10 questions concerning personal norms (scored on a Likert scale ranging from completely agree to completely disagree with total score in range of 10 to 50) and Cronbach's alpha of 0.81, 10

questions about self-report of exhibiting or avoiding positive social behaviors (scored on a Likert scale ranging from completely agree to completely disagree with total score in range of 10 to 50) and Cronbach's alpha of 0.89, and 17 demographic questions. It should be noted that the correlation coefficient values ranged from 0.59 to 0.38. After all, the collected data were entered into the SPSS 19 statistical software, and analyzed using one-way ANOVA and linear regression analysis.

Results

Out of 200 female students, 199 fully completed the questionnaires. The frequency distribution of the participants on the basis of demographic variables Includes is as follows: 83 participants' fathers had diploma (41.7%), and 72 participants' mothers had primary school degree (36.2%). Concerning the parents' occupation, the highest frequency was related to homemaker mothers (N=179, 89.9%) and self-employed fathers (N=98, 49.2%). With regard to family income, the highest frequency was related to low income (46.2%). Considering birth order, 67 participants (33.7%) were the first. Besides, 183 out of 199 participants lived with their both parents (92%). Finally, 157 students (78.9%) had no responsibility at school. The students' mean scores of all the NAM variables have been presented in Table 1. As the Table depicts, the students' highest scores were related to social behavior, personal norms, ascription of responsibility, and awareness of consequences.

Table 1 *Descriptive data on the scores of NAM constructs*

Variable	Mean	SD
Awareness of consequences	56.18	7.89
Ascription of responsibility	43.70	6.45
Personal norm	44.90	6.66
Behavior	45.40	7.03

According to the results of correlation analysis presented in Table 2, a strong direct relationship was found among NAM variables (r=0.66, p<0.001). Besides, a stronger direct linear correlation was found between personal norms and ascription of responsibility, social behavior, and awareness of consequences. According to the results of linear regression analysis, all the variables of NAM were the predictors of pro-social behaviors.

Moreover, according to Table 3, personal norms, awareness of consequences, and ascription of responsibility had the highest predictability.

Table 2 *The correlation between NAM variables and positive social behaviors*

Variable	Awareness of consequences	Ascription of responsibility	Personal norm	Behavior
Awareness of consequences	1	0.666*	0.705*	0.698*
Ascription of responsibility		1	0.819*	0.735*
Personal norm			1	0.780*
Behavior				1

*p<0.05

Table 3 *Linear regression analysis** for determining the effect of NAM variables on positive social behavior*

	Unstandardized coefficients		Standardized coefficients	t	p
	Std Error	Beta	Beta		
Constant	2.512	1.349	.	0.537	0.592
Awareness of consequences	0.058	0.205	0.227	3.536	0.001*
Ascription of responsibility	0.087	0.209	0.198	2.393	0.018*
Personal norm	0.090	0.521	0.483	5.767	<0.001*

*p<0.05
**Linear regression

The results of one-way ANOVA indicated a significant relationship between birth order and awareness of consequences (p=0.01), ascription of responsibility (p=0.012), personal norms (p=0.006), and pro-social behaviors (p=0.036). Moreover, the number of brothers was significantly associated with personal norms (p=0.014). Also, a significant relationship was observed between personal norms and father's job (p=0.037). Accordingly, the students whose fathers had official jobs obtained higher scores in personal norms (47.96) compared to other students. Furthermore, a significant relationship was found between social behaviors and the number of none-classmate friends (p<0.001) and the number of intimate friends (p<0.001).

The effects of univariates on NAM constructs were determined using one-way ANOVA. In addition, the effects of multivariate on NAM constructs were assessed through multiple regression analysis. The obtained results of analysis have been shown in Table 4. According to the findings, after adjusting other variables, father's job, family income, and average score had a significant relationship with all the NAM variables. Additionally, a significant association was observed between behavior and the number of none-classmate friends in the presence of other variables.

Discussion

According to the obtained results, the students gained lower scores in r ascription of responsibility and awareness of consequences compared to social behavior and personal norms. This indicates the necessity of training with regard to positive social behaviors and their outcomes and ascription of responsibility. According to the results obtained, strong positive relationships were found among all the NAM variables. Yet, among the NAM variables, personal norms had the strongest linear correlation with other variables. Furthermore, according to the findings, all the NAM variables were the predictors of pro-social behaviors. Compared to the other variables of NAM, personal norm was the strongest predictor of positive social behaviors. These findings clarify the need for training with respect to establishment, maintenance, and improvement of positive personal norms.

The findings of the present study revealed a significant relationship between positive social behaviors and the number of non-classmate friends and non-classmate intimate friends. Other studies have demonstrated a strong correlation between having relationship with bad friends and being attracted by anti-

Table 4 *The effective factors in female adolescents' pro-social behaviors based on the constructs of NAM*

	Awareness of consequences				Ascription of responsibility				Personal norms				Behavior			
	Unstandardized coefficients		t	Sig.	Unstandardized coefficients		t	Sig.	Unstandardized coefficients		t	Sig.	Unstandardized coefficients		t	Sig.
	B	Std. Error			B	Std. Error			B	Std. Error			B	Std. Error		
Father's education	–	–	–	–	–	–	–	–	0.606	0.433	1.400	0.164	–	–	–	–
Father's job	-1.685	0.724	-2.327	*0.021	-1.572	0.547	-2.873	*0.005	-1.397	0.547	-2.554	*0.012	-1.321	0.587	-2.249	*0.026
Mother's job	–	–	–	–	–	–	–	–	–	–	–	–	-1.194	0.824	-1.448	0.150
Family income	-2.031	0.962	-2.110	*0.037	-2.197	0.775	-2.835	*0.005	-2.512	0.734	-3.423	*0.001	-2.394	0.776	-3.085	*0.002
Average of education	1.010	0.451	2.238	*0.027	1.354	0.341	3.966	*<0.001	1.284	0.320	4.008	*<0.001	1.173	0.362	3.236	*0.002
Number of brother	-0.412	0.714	-0.577	0.565	-0.533	0.511	-1.043	0.299	-0.642	0.504	-1.274	0.205	-1.034	0.606	-1.706	0.090
Order of birth	–	–	–	–	–	–	–	–	–	–	–	–	0.305	0.420	0.726	0.469
Number of intimate classmate friends	-0.127	0.148	-0.859	0.392	–	–	–	–	–	–	–	–	–	–	–	–
Number of non_classmate friends	–	–	–	–	–	–	–	–	-0.150	0.087	-1.727	0.086	-0.211	0.093	-2.260	*0.025
Ascription of responsibility at school	-0.461	1.747	-0.264	0.792	0.125	1.324	0.094	0.925	–	–	–	–	0.587	1.396	0.420	0.675
Adjusted R square	0.080				0.151				0.181				0.169			

*p<0.05

social behaviors [18]. Besides, making friends and their influences played a critical role in adolescents' smoking behavior [13]. Also, a significant relationship has been reported between girls' social behaviors pattern and type of their friends and peers [5].

On the other hand, the results of the current study showed a significant relationship between the number of brothers, birth order, and positive social behaviors. Some researchers have revealed that the quality of relationship between brothers and sisters (conflicts and intimacy between them) was among the important predictors of anti-social behaviors [19]. However, large families and anti-social peers were considered as the risk factors for anti-social behavior [20]. The results of our study indicated a significant relationship between birth order and awareness of consequences, ascription of responsibility, and personal norms. positive social behavior, as the output of these three variables, also had a significant relationship with birth order.

Among the demographic variables, father's job was significantly associated with the students' personal norms towards positive social behaviors. However, in a study conducted by Knecht et al. [21], parents' job was considered as an indicative of the socio-economic status of the adolescents. In that study, no significant relationship was found between adolescents' socio-economic status and their abnormal behaviors. Nonetheless, in a research by Pouryousefi et al. [5], social class (based on social, economic, and cultural indices taken into account by the researchers) had a significant relationship with girls' pattern of social behaviors. Yet, it has been shown that the students coming from low social classes had better behavioral patterns compared to those from middle and high social classes. That study demonstrated no significant relationships between parents' job and girls' pattern of social behaviors.

As the results showed, father's job, family income, and students' average grade were significantly related to social behavior, while no significant relationship was found

between father's education level and NAM variables. However, Pouryousefi et al. [5], reported a significant relationship between parents' education level and girls' patterns of social behavior. Of course, this significant relationship might be due to the parents' low education level. It seems that the lower the parents' education level, the more the children prefer to imitate their behaviors or at least respect and follow their values. On the other hand, Laible et al. [22] found no significant relationships between parents' education level and their children's social behaviors. It should be noted that in Farrington's study [20], family income was considered as a risk factors for anti-social behaviors.

Based on the obtained results, a significant correlation was observed between all NAM variables and average grade or educational success. Morin et al. [23] also stated that adolescents' educational success was one of the factors predicting their anti-social behaviors; such as smoking.

In the current study, the strongest predictor of positive social behaviors was personal norms followed by awareness of consequences and ascription of responsibility. In two studies conducted by Harland et al. [24] also, personal norms had a strong relationship with pro-environment behaviors. In these studies, personal norms played a mediatory role in the influence of other factors on pro-environment behaviors. In the same line, the study conducted by Van Kestern et al. [16] disclosed the role of personal norms as the mediatory factor affecting condom use in high-risk behaviors.

Conclusion

According to the results of the present study, when students are not aware of the consequences of their behaviors and without feeling responsible for the consequences of their behaviors, they set personal norms for their behaviors. These norms can be established as a result of the relationship with peer groups and friends, or other demographic variables; such as parents' education level,

occupation, etc. They can also occur following the individuals' social norms.

Since; this study was conducted in one of the educational districts in Shiraz, We cannot generalize the results to other areas with different demographic characteristics. On the other hand, this study was carried out on female students. Consequently, the results cannot be generalized to male students.

Contribution

Study design: MN, ZP, MHK
Data collection and analysis: ZP, SK
Manuscript preparation: MN, ZP

Conflict of Interest

"The authors declare that they have no competing interests."

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