

Self-Resilience Model of Drug Initiation and Drug Addiction (A Structural Equation Model Approach)

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Abstract - This study aims to find a model of students' self-resilience to drug initiation and addiction. Samples taken were 130 street children respondents who were assumed to be vulnerable to drug initiation and addiction. Data were collected using a questionnaire containing questions from 5 latent variables (unobserved variables) with 26 indicators and 288 questions that had been tested for validity and reliability. Data analysis was performed using Structural Equation Model. This study shows that the Technology Utilization variable has a significant influence on the variables of Drug Danger Awareness, Spiritual Guidance, and Life Skills. In addition, the Spiritual Guidance variable also has a significant influence on the Self-Resilience variable, while the Technology Utilization variable does not have a significant effect on the Self-Resilience variable. Drug Danger Awareness variable also does not have a significant influence on the Self-Resilience variable, as well as the Life Skills variable on the Self-Resilience variable. To build adolescent resilience begins with increasing spiritual guidance with information technology media. Optimizing the role of educators in building children's self-resilience by utilizing information technology is very helpful in strengthening students' self-resilience.

Keywords: self-resilience, drug initiation, drug addiction, structural equation model

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Introduction

Drugs are transnational, organized and serious crimes. Because all components of society need to fight this problem, parents, teachers, students must be involved. The Head of the National Narcotics Agency (BNN) of

DKI Province, said that in the past year the prevalence of drug abuse in the education environment, ranging from junior high school, senior high school to tertiary level, was 4.7 percent. The results of the study were surprising that 92% of children under the age of 18 in Central Jakarta and West Jakarta turned out to be drug users and drug traffickers [1].

The results of the International Labor Organization (ILO) study were conducted, the involvement of children in the manu-

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facture and distribution of illicit goods began when they were 13 years and 15 years old. Types of drugs that are popular among them are heroin and marijuana [2]. Factors that play an important role in drug prevention efforts for peer education groups. Drug abuse among teenagers is caused by social interaction with peers and the lack of parental role [3]. Ardian said that drug prevention is not only the duty of law enforcers, or the government, but joint responsibility, especially for parents who fail to educate their children so that children are easily affected by drugs [4]. The results of the study show that bad children and brothels generally come from broken homes. The role of parents is to educate, guide and develop their children. The results of Purwanti research revealed that 1) the higher the development of information technology, the more complex the mode of abuse of drug trafficking; and 2) there is a positive relationship between the development of information technology and the quantity and quality of abuse of drug trafficking [5].

Previous research has been done; in general the knowledge conditions, skills and abilities of school counselors are in the poor category [6]. The teacher's self-competence is still concerned that there are still very less or less categories [7]. Researchers conducted research on the progress of public and private junior high school students in Medan City using the Task Inventory Development obtained data of junior high school students experiencing poor development in religious and ethics aspects [8]. Junior and high school students in Medan have learning problems, especially learning skills and personal self needs optimal education services [9]. Students at Medan State University have the highest learning problems in aspects of

learning skills, and personal self [10]. Bully perpetrators among students in elementary and junior high are quite high, and teachers are not known especially public schools [11].

In addition to student behavior, teacher behavior in the classroom is still poor in communicating anger with unnatural words in the class cursing; denouncing, accusing children of being stupid children cannot be changed. Not a few teachers, parents who apply violence to their students with disciplinary goals. Data from previous studies means that education services for students at home and school are not yet optimal, it is suspected that bully behavior thrives at home and school. Peers as a place to get help, in fact many students easily initiate and habituate drugs through their friends. Overcoming this need to help parents, teachers and friends carry out their duties as educators.

Students 'problems continue throughout their lives in the achievement of their developmental tasks because that needs to be developed by the students' self-resilience to face difficulties (Adversity Quotient). Self-defense is meant by intelligence that a person has in overcoming difficulties and being able to survive is often called Adversity Quotient (AQ). Stoltz said intelligence faced difficulties or obstacles and the ability to survive in various life difficulties and challenges experienced [12]. A person's self-defense is measured by his ability to overcome every life problem. The dominant factor forming self-resilience is the attitude of never giving up. Self-sufficiency will be a determining factor for success. Individuals who have high self-resilience have the characteristics of 1) commitment love to carry out work well; 2) Have the will to achieve goals, work hard, believe, and never give up and willingness to achieve the goals they want; 3) Always dif-

ferent from others. Two of the three characters of successful people revealed by Handy in *The New Alchemist* are closely related to one's ability to face challenges called self-resilience. Individuals who have the ability to survive and continue to struggle diligently when faced with a life problem, full of motivation, enthusiasm, encouragement, ambition, enthusiasm, and high tenacity, are seen as figures who have high self-resilience, while individuals who easily give up, surrender just like that on destiny, pessimistic and has a tendency to always be negative, it can be said as individuals who have low self-resilience. Turn their failures into stepping-stones capable of seeing negative errors or experiences as part of life, learning from them and then moving forward.

Individual types seen from self-resilience are 3, namely: 1) *Quitters*, people who lack the will to accept challenges in their lives. Characteristics: (a) the lifestyle is unpleasant or flat; (b) working just enough to live, tends to avoid the tough challenges that arise from real commitment; (c) rarely have true friendship, in the face of change they tend to fight or run and tend to resist change. (d) skilled in using restrictive words, such as "do not want", "impossible; (e) they do not have the vision and belief in the future and their contribution is very small. 2) *Campers*, people who have the will to try to deal with the problems and challenge that exist, but they see that the journey is enough to get here. Their characteristics are: (a) satisfied enough to have reached a certain stage; (b) have a number of initiatives, a little enthusiasm, and some efforts; (c) sacrificing the ability of the individual to get satisfaction and be able to foster relationships; (d) refrain from change, even though sometimes they do not like big changes because they feel comfort-

able with the conditions; (e) using compromise language and words, for example, "this is good enough", or "we can just get here"; (f) achievement is not high and its contribution is not large, the group has struggled to deal with various problems in certain fields, but because of the challenges and problems that continue to crash, they choose to stop in the middle of the road and camp. 3) *Climbers*, people who choose to continue to struggle to face various kinds of things that will continue to crash, in the form of problems, challenges, obstacles, and other things. Their characteristics are: (a) thinkers who always think of possibilities; (b) his life is "complete" because he has passed and experienced all the previous stages; (c) realize that there will be many rewards obtained in the long run through the "small steps" that are being passed; (d) welcomes challenges, motivates oneself, has a high spirit, and strives to get the best in life; (e) tend to make everything happen; (f) not afraid to explore the unlimited potentials between two people; understand and welcome the painful risks caused by being willing to accept criticism; (g) welcomes every change, even contributes to every change in a positive direction; (h) language and words full of possibilities; they talk about what can be done and how to do it; they talk about actions, and are impatient with words that are not supported by actions; (i) contributing quite large because it embodies the potential that exists in itself; (j) no stranger to difficult situations because difficulties are part of life. This group chose to continue to struggle regardless of their background and abilities, they continued to climb and climb.

Research in the field of psychoneuroimmunology proves that there is a direct and measurable connection between what a per-

son thinks and feels about what is happening in the person's body. Nuwer said that the learning process takes place in the conscious area [13]. Eventually, if the pattern of mind or behavior is repeated, the activity will move to the subconscious brain region that is automatic. So, the more often someone repeats destructive thoughts or actions, the thought or action will also be deeper, faster, and more automatic. So on the contrary, the more often someone repeats constructive thoughts or actions, the thought or action will also be deeper, faster, and automatic. To change bad or destructive habits, one must start in the conscious area of the brain and start a new neural pathway. Changes can be immediate, and old destructive patterns disappear because they are not used.

Based on the theory of psychoneuroimmunology the initiation and habituation of drugs can be prevented through education services for parents, teachers, and friends. Variables that are estimated to build self-resilience to drug initiation and habituation: 1) effectiveness of the use of information technology; 2) awareness education about the dangers of drugs; 3) production and economic skills; 4) spiritual guidance; and 5) self potential. The effectiveness of the use of information technology influences awareness education of the dangers of drugs, and self-potential directly affects the initiation and habituation of drugs. Balsa and associates found that the use of e-mail and Short Message Service significantly affected the level of caution about the dangers of drugs, but was not significant in changing drug use habits [14]. Furthermore, Johnson and associates stated that information technology is very influential on health worker cooperation with patients for the management of chronic conditions and drug addic-

tion [15]. Hussain and Safdar said that information technology is effectively used in the development of the potential to directly influence the development of students' self-potential [16]. Amin said the use of ICT in information technology improves the quality of learning, broadens the reach of education [17].

The effectiveness of using information technology influences production and economic skills through video phone e-mail, chat, webcam, social networking, and so on. Students can learn to improve production and economic skills. Through production and economic skills affect the development of individual potential. Thus the effectiveness of the use of information technology can affect self-resistance to drug initiation and habituation through self-potential. The effectiveness of the use of information technology influences spiritual guidance because it accelerates, attracts, motivates to do good in accordance with the teachings of their respective religions and beliefs. Thus the use of information technology effectively influences self-resistance to drug initiation and habituation through spiritual guidance.

Locus of control means how far individuals believe that they master their own destiny [18]. Rotter states that locus of control is an action in which individuals connect events in their lives with actions or forces beyond their control [19]. Locus of control is a concept that points to individual beliefs about events that occur in his life. The locus of control describes how far a person views the relationship between an action done and the effect / outcome.

Locus of control can be increased through exercise and individual awareness factors them. It is important for someone to understand stable and unstable conditions. A per-

Table 1. Descriptive Statistics of Research Respondents Characteristics

	Variable	Category	Frequency	%	% of Valid Answers
1	Gender	Male	88	67.7	91.7
		Female	8	6.2	8.3
		No Answer	34	26.2	
2	Age	5 – 10 years	3	2.3	3.4
		11 - 15 years	12	9.2	13.8
		16 - 20 years	56	43.1	64.4
		21 - 25 years	12	9.2	13.8
		26 - 30 years	3	2.3	3.4
		30 - 35 years	1	0.8	1.1
		No Answer	43	33.1	
3	Education	Primary School	1	0.8	1.1
		Junior High School	12	9.2	13.5
		Senior High School	42	32.3	47.2
		No School	34	26.2	38.2
		No Answer	41	31.5	
4	Marital Status	Not Married	90	69.2	95.7
		Married	4	3.1	4.3
		No Answer	36	27.7	
5	Residence	Parent	64	49.2	68.1
		Family	11	8.5	11.7
		Friend	2	1.5	2.1
		Rent House	9	6.9	9.6
		Others	8	6.2	8.5
		No Answer	36	27.7	

(X3.8), Self-Esteem (X3.9), and Personal Responsibility (X3.10). Variable Spiritual Guidance is a latent variable formed by 4 manifest variables, namely: Communication (X4.1), Patience (X4.2), Tranquility (X4.3) and Existence (X4.4). Self-Resilience variable is a latent variable formed by 5 manifest variables, namely: Tenacity (X6.1), Resilience (X6.2), Ability to Develop Self Strength (X6.3), Abil-

ity to Face Challenges (X6.4) and Capability Interference (X6.5).

Results

Description of Characteristics of Respondents

The sample used for testing in this model is 130 people. All of these samples are found

Table 2. Descriptions of Respondents' Answers

Variables	Indicators	Mean	Standard Deviation
Technology Utilization	Ease of accessing data	3.20	0.44
	Ease of Accessing Data	3.17	0.51
	Number of Individual Users	3.26	0.53
	Area Coverage Area	3.21	0.44
Drug Hazard Awareness	Resources	3.08	0.86
	Information on Hazards, Impacts and Types	3.18	0.66
	Behavior Avoiding the Dangers of Drugs	3.10	0.73
Life Skills	Communication	3.03	0.75
	Altruism	2.52	0.82
	Make decision	2.94	0.67
	Responsible Citizenship	2.63	0.81
	Teamwork	2.88	0.84
	Critical thinking	2.96	0.71
	Leadership	2.94	0.78
	Solution to problem	3.01	0.64
	Pride	3.05	0.51
	Personal Responsibility	3.07	0.75
Spiritual Guidance	Communication	3.00	0.85
	Patience	3.01	0.75
	Calmness	2.99	0.76
	Existence	3.11	0.64
Self-Resilience	Tenacity	2.82	0.86
	Toughness	2.90	0.78
	Ability to Develop Self Strength	2.71	0.92
	Ability to face challenges	2.69	0.91
	Ability to Face Disorders	2.77	0.81

in various places and have a variety of backgrounds. A complete description of the characteristics of the research sample can be seen in Table 1.

From Table 1. it can be seen, based on valid data filled by respondents, that male respondents are more dominant than female

respondents where as many as 91.7% of respondents were male. Characteristics of respondents when viewed from their educational background, 38.2% of respondents were school dropouts but 47.2% had high school education equivalent, only around 14.6% had education under high school

equivalent. Characteristics of respondents based on marital status showed that 95.7% of respondents were not married while the rest were married. Respondent's residence also varied, but 68.1% of respondents still lived and stayed at their parents' house.

Respondent's Answer Description

The instrument in this study uses a closed question with a Likert scale of 5 answer options. When viewed from the answer pattern of the research respondents, out of the 5-answer option options offered, the average respondent's choice of answers ranged from the choice of hesitation or normal to the score of the answer 3. Although the answers of respondents in general are in option 3, but from 130 Respondents, the highest answer choice is on the Individual User Number indicator on the variable Technological Utilization with a mean value of 3.26 on a scale of 5. Meanwhile, the answer with the lowest average value is in the Altruism Indicator in the Life Skill variable, with a mean value of 2.52. Respondents' answers that are very varied can be found in the Ability to Develop Self Strengths on the self-resilience variable that is equal to 0.864, while the answers of respondents with the smallest variation can be found in the indicators of ease of accessing data on the variable Technology Utilization that is equal to 0.440.

When viewed based on respondents' answers to the research variables, in general respondents have the ability to use technology that is not different, this is seen from the four indicators of the use of technology variables that have the lowest standard deviation from other variables. It also shows that native respondents to technology so that technology is not something that is unfamiliar to respondents and indirectly able to be used by respondents for various positive and negative things.

Unlike the case with self-resilience variables where the average self-defense value of all indicators is less than three or classified as low. The lowest average is in the ability to face challenges then successively the ability to develop self-strength, ability to face interference, tenacity and toughness. In addition to having low self-defense, variations in ability also have high variations.

Goodness of Fit Evaluation Model

Model evaluation is one of the most difficult topics on SEM and has a lot of diversity among experts [20-23]. This is not surprising because there are many parameters that can be used. However, there are at least 4 parameters that need to be known and commonly used to interpret the evaluation of a model, namely: Comparison between chi-square and

Table 3. Testing of SEM Models Using Chi-Square

Parameter	CMIN/DF	Ratio between chi square with degree of freedom		
		RMSEA	P	
Cut off	Closely 1	Between 1 - 3	< 0.08	> 0.05
Model	2.806	2.81	0.118	0.000

degree of freedom, CMIN / DF, RMSEA and P value.

In this parameter, the ratio between Chi Square and degree of freedom must range between 3 and 1 so that the model constructed can be expressed according to the data sample [24]. Other experts are also making looser thresholds, by recommending this ratio as low as 2 and highest 5 to indicate the suitability of the model [25]. From the test results of the goodness of the model using Chi-square shows the value of the ratio between chi square and degree of freedom of 2.81, so that the model built in this progress report can be accepted.

Impact Between Variable

After the model is declared to meet the requirements of goodness of fit, it can be seen

how much the loading factor is between the manifest and latent variables and the coefficient path between latent variables.

The first thing in SEM model analysis is Confirmatory Factor Analysis (CFA). This analysis is used to confirm between indicators with variables (manifest variables and latent variables). From Figure 2., it can be seen that each manifest variable has a significant loading factor in forming latent variables. So that all manifest variables used as indicators in the research can be used.

After CFA is done, next is to see how the coefficient paths between latent variables. Of the 7 relationships of latent variables in the model, four of them have significant path coefficients, namely: X1 to X2, X1 to X4, X1 to X3, and X4 to X5. The effect of X1 on X2 has an estimate value of 1.614; X1 against X4

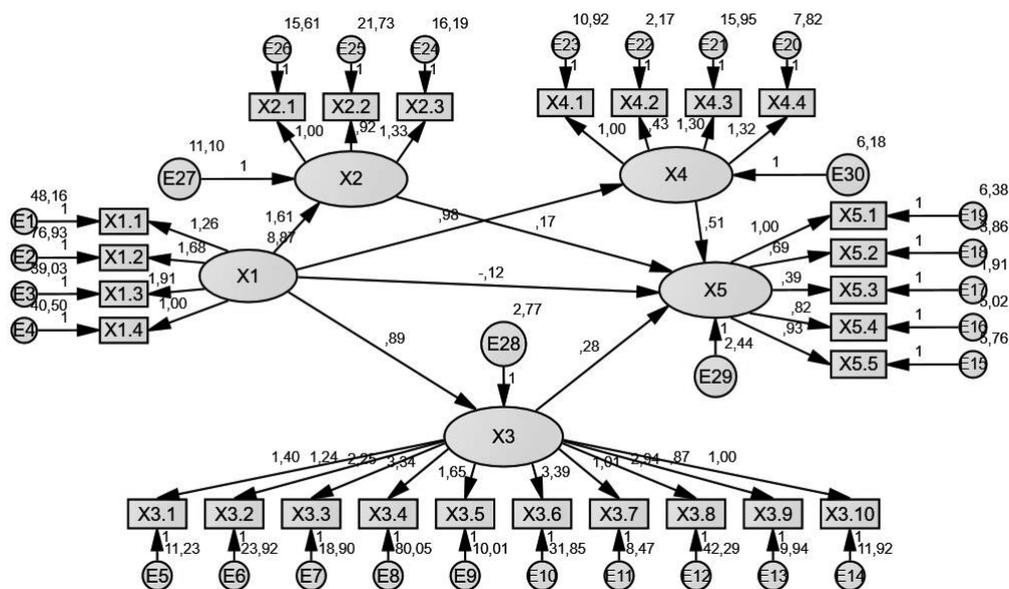


Figure 2. Relationship Between Variable Research

Table 4. Effect of Research Variables Using a Structural Equation Model

			Estimate	P
X2	<---	X1	1.614	***
X4	<---	X1	0.982	***
X3	<---	X1	0.890	***
X5	<---	X1	-0.120	0.717
X5	<---	X2	0.173	0.053
X5	<---	X3	0.279	0.095
X5	<---	X4	0.512	***
X1.4	<---	X1	1.000	
X1.3	<---	X1	1.908	***
X1.2	<---	X1	1.681	***
X1.1	<---	X1	1.260	***
X2.1	<---	X2	1.000	
X2.2	<---	X2	0.917	***
X2.3	<---	X2	1.328	***
X4.1	<---	X4	1.000	
X4.2	<---	X4	0.433	***
X4.3	<---	X4	1.304	***
X4.4	<---	X4	1.315	***
X5.1	<---	X5	1.000	
X5.2	<---	X5	0.687	***
X5.3	<---	X5	0.388	***
X5.4	<---	X5	0.823	***
X5.5	<---	X5	0.933	***
X3.10	<---	X3	1.000	
X3.9	<---	X3	0.873	***
X3.8	<---	X3	2.943	***
X3.7	<---	X3	1.014	***
X3.6	<---	X3	3.393	***
X3.5	<---	X3	1.650	***
X3.4	<---	X3	3.337	***
X3.3	<---	X3	2.247	***
X3.2	<---	X3	1.244	***
X3.1	<---	X3	1.397	***

has an estimated value of 0.982; X1 against X3 has an estimate value of 0.890; and X4 against X5 has an estimate value of 0.512. While the remaining 3 have insignificant path coefficient, namely: X1 to X5, X2 to X5, and X3 to X5.

From the results of the analysis, it can be indicated that the Technology Utilization variable has a significant influence on the variables of Drug Danger Awareness, Spiritual Guidance, and Life Skills variables. In addition, the Spiritual Guidance variable also has a significant influence on the Self-Resilience variable. While the Technology Utilization variable does not have a significant effect on the Self-Resilience variable, besides, the Drug Danger Awareness variable also does not have a significant influence on the Self-Resilience variable, as well as the Life Skills variable on the Self-Resilience variable.

Discussion

Technology Utilization Variables have a significant influence on the drug hazard awareness variable. Subjects using technology in high classification support their knowledge about drugs, get drugs, meet friends to get together through technology. The desire to know about drugs comes from technology, the subject wants to experiment because of curiosity, because of the desire to follow the trend or style, the desire to be accepted by his friend's environment, there is a wrong understanding that using it occasionally will not cause addiction. While the Technology Utilization variable does not have a significant effect on the Self-Resilience variable, besides, the Drug Danger Awareness variable also does not have a significant influence on the Self-Resilience variable, as well as the Life Skills variable on the Self-Resilience variable. Therefore, based on the results of data anal-

ysis for subjects outside of school to build self-resilience, it starts from increasing spiritual guidance by utilizing information technology.

Based on the results of the interview, the main causes of subjects who tried drugs lacked the attention of parents, the economy was affluent, children were too spoiled, lack of learning guidance or spirituality. Utilization of technology without clear and concrete guidance about the dangers of drugs subject to drugs. Teenagers who have tried this can be categorized as wanting to know more about drugs. Judging from the technology variables teenagers who are initiated by drugs use a lot of cellphones to get to know drugs. Whereas education about hazards, impacts and types of drugs is not clearly given by parents and teachers. Invitations from friends through teen cellphones get drugs.

The results of the study showed that drug initiation adolescents had a low life skill rate which had an impact on teenagers to initiate and narrate drugs. Although all indicators are almost the same, the leadership indicator looks higher than other substances which means that if someone is really involved in drugs, indicators of leadership are low as a result of low life skills. Other indicators of life skills are low ability to solve problems and confidence. Teenagers who want to try the drugs are difficult to solve the problems they face and do not have confidence so they make drugs become transitional. Indicators of youth decision-making are low, very dependent on friends.

America is trying to change education to meet the demands of twentieth century by incorporating life skills, various intellectual skills, and social skills. There is agreement between leaders in both industry and academia that students must learn to be innova-

tive, solve problems, and interact successfully with people from various cultures [26].

On the other hand spiritual guidance has a significant number with self-resilience, meaning that religious education at home and school must be improved. The spiritual guidance variable shows the lowest indicator of tranquility in numbers, meaning that teenagers feel their lives worrying, and in patience the patience is also reduced. Teenage children who initiate drugs tend to be difficult to control emotions.

Variable self-resilience on the indicator of the ability to develop self-strength, low toughness. this means that this condition causes adolescents to be easily affected by social partners with drug users.

Conclusion

Teenagers have low life skills, especially altruism, this is the reason peers easily influence them without realizing it. On the part of the teenagers themselves do not know the consequences, the weak mental consequences of adolescents experimenting with the invitation of friends then addicted. Technology Utilization variables have a significant effect on the variables of Narcotics Hazard Awareness, Spiritual Guidance, and Life Skills variables. In addition, the Spiritual Guidance variable also has a significant influence on the Self-Resilience variable. While the Technology Utilization variable does not have a significant effect on the Self-Resilience variable,

besides, the Drug Danger Awareness variable also does not have a significant influence on the Self-Resilience variable, as well as the Life Skills variable on the Self-Resilience variable. To build adolescent resilience begins with increasing spiritual guidance with information technology media. The role of parents plays an important role in preventing teenagers from initiating drugs, from children's education. Optimizing the role of educators to build children's self-resilience by utilizing information technology does prevention. Teachers in schools in basic education also carry out the role of educators optimally, the role of mentoring and educators is different from that of teachers to build students' self-resilience. Religious education is very important in schools to build self-resilience. The use of educational tools is not optimal, meaning examples of example, authority, affection, reinforcement, and educators must do decisive actions that educate at home and at school. If educational tools are applied to all educators in carrying out the role of educators, it is expected to help develop children's life skills.

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Conflict of interest

None to declare

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Model samootpornosti za početak uzimanja droga te ovisnosti o drogama (Pristup modelom strukturalne jednadžbe)

Sažetak: Ova studija ima za cilj pronaći model za studentsku samootpornost za inicijaciju droge i ovisnost. Uzet je uzorak od 130 ispitanika s ulice za koje se pretpostavljalo da su osjetljivi na uzimanje droge i ovisnosti. Podaci su prikupljeni pomoću upitnika koji je sadržavao pitanja iz 5 latentnih varijabli (neopažene varijable) sa 26 pokazatelja i 288 pitanja koja su testirana na valjanost i pouzdanost. Analiza podataka izvedena je korištenjem modela strukturalne jednadžbe. Ovo istraživanje pokazuje da varijabla tehnološke upotrebe ima značajan utjecaj na varijable svjesnosti opasnosti droga, duhovnog vođenja i životnih vještina. Uz to, varijabla duhovnog vođenja također ima značajan utjecaj na varijablu samootpornosti. Varijabla tehnološke upotrebe nema značajan utjecaj na varijablu samootpornosti, osim toga, varijabla svjesnosti opasnosti droge također nema značajan utjecaj na varijablu samo-otpornosti, kao i varijabla životnih vještina. Izgradnja otpornosti adolescenata počinje povećanjem duhovnog vodstva s medijima informacijske tehnologije. Optimizacija uloge odgajatelja u izgradnji dječje samootpornosti korištenjem informacijske tehnologije vrlo je korisna u jačanju samo-otpornosti učenika.

Glavne riječi: samootpornost, inicijacija droga, ovisnost o drogama, SEM