



Group Counseling Using Assertive Training Techniques with Virtual Reality Based on Artificial Intelligence Video to Improve Assertiveness in Students with Nice Girl Syndrome: A Quasi-Experimental Study

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Abstract: The nice girl syndrome is a phenomenon that has a negative impact on individuals' lives, causing teenage girls to have poor interpersonal relationships. One way to overcome this problem is to practice assertiveness. This study aims to test the effectiveness of group counseling using assertive training techniques with virtual reality based on artificial intelligence video to improve the assertiveness of students with nice girl syndrome. This research uses a quasi-experimental method with a non-equivalent control group design. The sample consists of 20 female students selected using purposive sampling. The instruments used in this study were an assertive behavior scale that had been tested for validity and reliability, and a nice girl syndrome scale developed by Beverly Engel. Data analysis was performed using the Wilcoxon formula (Signed Rank Test), Mann-Whitney U, and N-gain score test. The results of the study showed that the application of group counseling services using assertive training techniques, combined with virtual reality based on artificial intelligence video in the experimental group, can improve the assertive behavior of students with Nice Girl Syndrome more effectively. This can be seen from the two tests conducted, namely using the Mann-Whitney U formula and the N-gain Score test. The results of this study provide new directions and effective innovations in the implementation of group counseling in the digital technology era, and further development is needed for a wider population.

Keywords: Artificial intelligence video; Assertive training; Assertiveness; Group counseling; Nice girl syndrome; Virtual reality

Introduction

Adolescents have various developmental tasks that need to be completed, one of the most important of which, according to Havighrurst (1972) is how they are able to form, create, and accept more mature relationships with their peers of any gender. During adolescence, as it is a transitional period (Avedissian & Alayan, 2021; Bunda et al., 2025; Crone & Achterberg, 2022; Salmanzadeh et al., 2021), people begin to experience things they have never experienced before,

start relationships with close friends, have friends who always share their joys and sorrows, and gain colorful experiences (Purnamasari, 2021). While fulfilling developmental tasks during adolescence, various obstacles and difficulties will arise that will bring unpleasant things. That is why this period is known and referred to as the "storm and stress" period (Arnett, 1999; Buchanan et al., 2023; Casey et al., 2010; Hall, 1904; Krishnaveni et al., 2021; Zimmermann et al., 2022).

One phenomenon currently experienced by some teenage girls in building relationships with their peers is

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the nice girl syndrome. This condition describes a woman who constantly tries to prioritize others and be kind to them, to the point that she often forgets her own feelings or rights (Engel, 2008). The emergence of this syndrome in young women leads them to have painful, shocking, and strange experiences (Yudith et al., 2024). According to Engel (2008), young women with the nice girl syndrome are obedient, they do what they are told, they find it easier to do what someone asks of them than to risk an argument, they tend to be passive, they are too afraid to defend themselves, they are very afraid of confrontation, they please everyone all the time, and they tend to be fake.

Currently, there are still quite a number of teenagers who experience the nice girl syndrome. Bruno (2000) states that many people suffer from anxiety, depression, and other reactions of unhappiness because they are unable to defend their personal rights and interests. The results of research conducted by Devina & Murdiana (2024) on teenagers in South Sulawesi show that there are still teenagers who have a habit of pleasing others even if it means sacrificing themselves, namely 55.22% of teenagers in the high category, 35.07% of teenagers in the medium category, and 9.70% of teenagers in the low category. The results of preliminary data collection conducted on November 18, 2024, on 25 female students at SMA Negeri 10 Padang using the nice girl syndrome instrument developed by Engel (2008) show that there are currently students who have been identified as experiencing nice girl syndrome. Data processing shows that 20 students experience nice girl syndrome in the extreme category, or 80%. Furthermore, 3 students were identified as experiencing nice girl syndrome in the moderate category, with a percentage of 12%. In addition, 2 students were in the low category, with a percentage of 8%. The rate is very high compared to previous studies, and this is likely influenced by various factors, such as different parenting styles and cultural differences between the two regions.

Based on this data, it can be observed that there are still quite a number of teenagers who experience this problem. This needs to be taken into consideration, because this syndrome causes most teenage girls to tolerate unacceptable treatment from others for too long, whether from family, lovers, or friends, in their efforts to be kind, tolerant, and compassionate. This makes them easy to take advantage of, manipulate, and even abuse (Engel, 2008; Yudith et al., 2024), which leads to anxiety, stress, and loss of self-identity (Yudanti & Ikko, 2022). Another potential consequence is sexual abuse, as indicated by Ahyun et al. (2022) and Hasan et al. (2023) research, which states that one of the internal factors contributing to sexual abuse is an overly naive and innocent attitude, making individuals susceptible to

manipulation. This characteristic is often associated with those exhibiting the "nice girl syndrome."

This problem is serious because these impacts will lead to negative aspects in the lives of teenagers. Therefore, it is necessary to find solutions to reduce the tendency of the nice girl syndrome among students. One solution to reduce the tendency of the nice girl syndrome among students is to learn how to be assertive (Engel, 2008). According to Lazarus (Speed et al., 2018), assertive behavior here has four meanings, namely the ability to communicate openly about one's desires and needs, the ability to say no, the skill to be able to express feelings openly, whether positive or negative, and the ability to establish contact and relationships, maintain them, and end conversations with others.

The current situation is that there are still some students who exhibit low assertive behavior. Research conducted by Bulut et al. (2019) in the city of Trabzon, Turkey, shows that 50.6% of students exhibit good assertive behavior, while 49.3% exhibit non-assertive behavior. From this data, it can be interpreted that half of the sample still exhibits low assertive behavior. Furthermore, research conducted by Husnah et al. (2022) at SMAN 1 Ciampea Bogor presented data showing that 24% of students had low assertive behavior, 5% were in the very low category, 57% of students had moderate assertive behavior, and only 13% of students had high assertive behavior. Then, research conducted by Fahmi & Aswirna (2020) at UIN Imam Bonjol Padang states that there are still many individuals who have low assertive behavior, namely 73.1%, and only 26.6% have high assertive behavior.

Based on the data from several studies, it can be clearly observed that there are still many teenagers who exhibit low assertiveness. Low assertive behavior in individuals has various negative impacts. Some of these impacts include mental health disorders (Golshiri et al., 2023; Pfafman, 2017; Pourjali & Zarnaghash, 2010), the risk of victimization (Rowe et al., 2015) and sexual violence (López-Barranco et al., 2023), difficulties in adjusting to the social environment (Azhari et al., 2015; Mardani et al., 2013; Rahmadiana et al., 2023), and a tendency to develop the nice girl syndrome (Engel, 2008). Considering these various impacts, it is clear how urgent it is to improve assertive behavior. However, to date, there has been no specific guidance and counseling service implemented to improve the assertive behavior of students with nice girl syndrome. There are various ways to improve a person's assertive behavior, one of which is through assertive training. As stated in a study conducted by Avşar & Alkaya (2017) assertive training can increase students' assertiveness. Assertive training is a technique found in the behavioral approach (Fuspita et al., 2018) which is a specific skill used to teach

individuals how to express positive and negative feelings openly and directly (Corey, 2012; Hojjat et al., 2015; Prabowo & Asni, 2018). The implementation of assertive training can be integrated into guidance and counseling services, such as group guidance (Lianasari et al., 2018; Sulistyarningsih & Setiowati, 2019), classical guidance (Wijayanti, 2022) and one of them is by implementing group counseling services (Afri et al., 2019; Wahid et al., 2024).

Group counseling is counseling that utilizes group dynamics and the use of techniques or methods professionally trained by counselors to design activities in small groups or teams to help members obtain relevant information (Shen et al., 2024). The use of this intervention is supported by several studies that conclude from their research findings that treatment in the form of group counseling using assertive training techniques is effective in improving individuals' assertive behavior (Afri et al., 2019; Bulantika & Sari, 2019). Then, the implementation of assertive training group counseling can be done by integrating media that can encourage the effectiveness of the service. One type of media that has positive potential for use in this case is virtual reality media. The use of this virtual reality media is based on various previous studies and research. According to Alkoyak-Yildiz et al. (2019), virtual reality (VR) technology allows students to practice new behaviors in an authentic learning context that is appropriate for the surrounding environment. As stated in several previous studies, the use of virtual reality (VR) during individual counseling significantly helps improve public speaking skills (Oktariani et al., 2024), and reduces public speaking anxiety (Sarpourian et al., 2022). Based on this, it can be seen that the use of virtual reality in counseling has a positive impact on solving clients' problems.

To provide greater benefits, artificial intelligence video media will then be used. In this study, the concept of artificial intelligence video refers to videos that are generated or generalized using an artificial intelligence platform. The integration of both in the educational environment has gained significant attention in recent years, offering promising opportunities to create immersive and adaptive learning environments (Shabir et al., 2025). The main contributions and roles of artificial intelligence in virtual reality lie in four key areas: creating intelligent virtual characters such as videos, improving education and training, and generating dynamic scenes (Wang et al., 2025). This indicates that this medium is suitable for use in the process of resolving the problems experienced by clients.

Meanwhile, the implementation of group counseling services at the research site, namely SMA Negeri 10 Padang, still tends to use conventional

methods, without being accompanied by approaches, techniques, and media that are relevant to student problems. This makes the service process less than optimal. Seeing this condition, the researcher was then interested in testing the effectiveness of group counseling services using assertive training techniques with the help of virtual reality based on video artificial intelligence. Another novelty of this study is the specific characteristics of the sample, which consists of students experiencing nice girl syndrome. Currently, there are no studies that specifically examine individuals with this syndrome. Based on the previous explanation, to provide guidance and direction for this study, several research questions were formulated as follows.

- RQ1. How does the assertive behavior of students with nice girl syndrome in the experimental group differ before and after treatment?
- RQ2. How does the assertive behavior of students with nice girl syndrome in the control group differ before and after treatment?
- RQ3. How effective is the implementation of group counseling services using assertive training techniques with virtual reality based on video artificial intelligence in improving the assertive behavior of students with nice girl syndrome?

Method

The research approach is quantitative and experimental, using a non-equivalent control group design. The population in this study was all female students in grade X at SMA Negeri 10 Padang, totaling 218 students (Table 1). The sample was selected using purposive sampling with predetermined criteria so that the sample given the treatment would be in accordance with the objectives and scope of this study. These criteria were: students identified as having extreme nice girl syndrome; students with nice girl syndrome who had the lowest assertive behavior. After conducting a pre-test on the entire research population, 20 students were selected as the sample for this study. This number was then divided equally into control and experimental groups. In this case, the samples in each group were not randomly selected, as each group consisted of students from the same classes, namely classes X E6 and X E7. To see more clearly how this research was designed, please refer to the following figure.



Figure. 1. Research design

The instruments used in this study were the nice girl syndrome scale developed by Engel (2008) and the

assertive behavior scale developed by the researcher and tested for validity and reliability. Data analysis in this study used the Wilcoxon and the Mann-Whitney U. The data analysis process used the SPSS version 26.00 program.

Table 1. Population characteristics

Participant	Frequency	Percentage (%)
Ethnic		
Minang	172	79
Batak	10	4.5
Melayu	23	10.5
Jawa	10	4.5
Sunda	1	0.4
China	1	0.4
Mentawai	1	0.4
Living with		
Parents	204	93
Without Parents	14	7
Total	218	100

Results

Differences in Assertive Behavior Among Students with Nice Girl Syndrome in the Experimental Group Before and After Treatment

Results should be clear and concise. The discussion should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

Based on the research questions that have been formulated, we will first examine the differences that arise in students' assertive behavior after being given

group counseling on assertive training techniques using an artificial intelligence-based virtual reality video. Based on the implementation of these treatments, the following describes the assertive behavior of students with nice girl syndrome in the experimental group before and after being given the services.

Table 2. Pre-test-post-test scores of the experimental group

Name	Pre-test		Post-test	
	Score	Category	Score	Category
MPW	84	Low	141	Very High
SSR	89	Moderate	128	High
BR	108	Moderate	129	High
AR	84	Low	137	High
ZKP	107	Moderate	134	High
QNSA	93	Moderate	135	High
SSH	100	Moderate	135	High
KNPR	107	Moderate	129	High
SB	101	Moderate	129	High
LHZ	96	Moderate	137	High
Mean	96.9	Moderate	133.4	High

Based on Table 2, it can be observed that the assertive behavior of students with nice girl syndrome in the experimental group increased significantly after receiving treatment. This is clearly seen from the mean scores shown, which increased significantly. Initially, all students in the experimental group generally had moderate assertive behavior. Then, after the intervention, all students generally improved to the high category, which occurred in both groups. For a more detailed observation, see the graph in Figure 2.

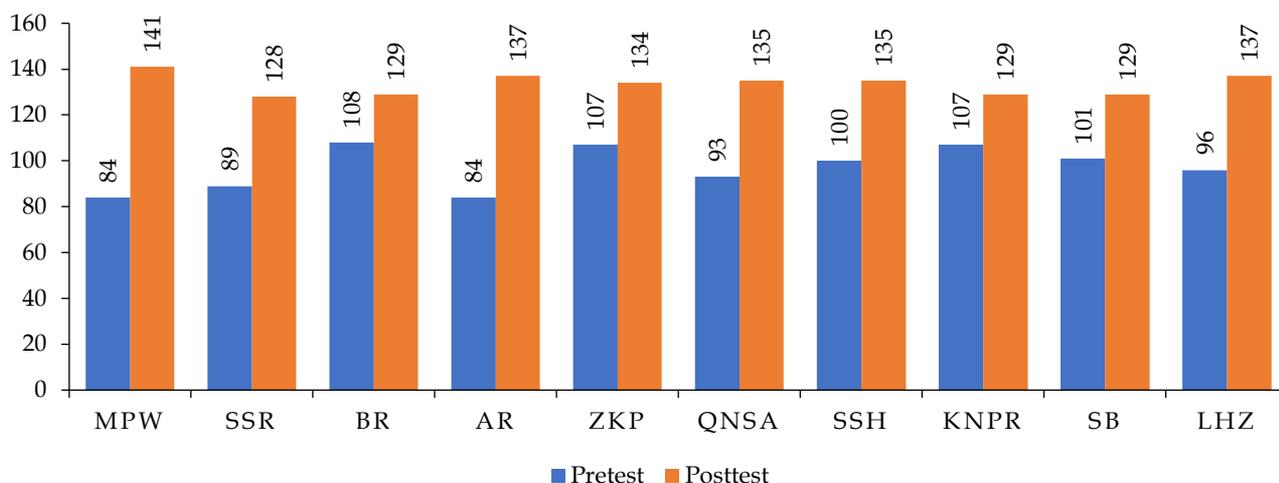


Figure 2. Results of the pre-test-post-test for the experimental group

Based on the above data, we can then observe the results of testing using statistical analysis regarding differences in assertive behavior among students with

nice girl syndrome in the experimental group, before and after treatment was administered.

Table 3. Significance test of differences in pre-test-post-test experimental groups

	Posttest - Pretest
Z	-2.803 ^b
Asymp. Sig. (2-tailed)	0.005

In Table 3 above, to see the significance level of the difference in assertive behavior of students with the nice girl syndrome in the experimental group before and after participating in the treatment process, look at the Asymp.Sig (2-tailed) assertive behavior section. The score obtained is 0.005, which is a probability smaller than the alpha level of 0.05. Therefore, based on this score, it can be concluded that there is a significant difference in the assertive behavior of students with the nice girl syndrome in the experimental group before (pre-test) and after (post-test) receiving group counseling services using assertive training techniques with virtual reality based on video artificial intelligence.

To provide a broader picture of this test, the direction of the differences in the assertive behavior of students with nice girl syndrome will then be explained. The direction of the differences is as follows (Table 4).

Table 4. Direction of change in assertive behavior scores for the experimental group

	N	Mean Rank	Sum of Ranks
Posttest - Pretest	10 ^a	0.00	0.00
	10 ^b	5.50	55.00
	0 ^c		
	10		

Table 4 shows the direction of change in scores for all students in the experimental group. In the positive ranks section, the values indicate that all 10 students experienced an increase in assertive behavior scores from the pre-test to the post-test. Based on the results of the hypothesis testing, it can be interpreted that the

assertive behavior of students with nice girl syndrome increased significantly after the treatment.

Differences in Assertive Behavior Among Students with Nice Girl Syndrome in the Control Group Before and After Treatment

The control group was also observed in this study, where the research question sought to observe how the assertive behavior of students with nice girl syndrome changed in the control group before and after receiving treatment. The following is a description of the data that can be observed (Table 5).

Table 5. Pre-test-post-test scores for the control group

Name	Pre-test		Post-test	
	Score	Category	Score	Category
AMS	107	Moderate	135	High
MA	105	Moderate	134	High
CFAH	88	Moderate	121	Moderate
MPR	107	Moderate	125	High
SBM	111	Moderate	127	High
NRA	106	Moderate	139	High
SAA	98	Moderate	119	High
KA	100	Moderate	132	High
ZLY	108	Moderate	119	High
KNP	81	Low	102	High
Mean	101.1	Moderate	125.3	High

Based on Table 5, it can be examined and analyzed that the assertiveness of students with the nice girl syndrome in the control group, as in the previous group, increased significantly after treatment. This is clearly seen from the mean scores shown, which increased significantly in statistical terms. Initially, all students in the experimental group generally had moderate assertive behavior. Then, after the service was implemented, all students in the control group generally increased to the high category. For a more detailed observation, see the graph in Figure 3.

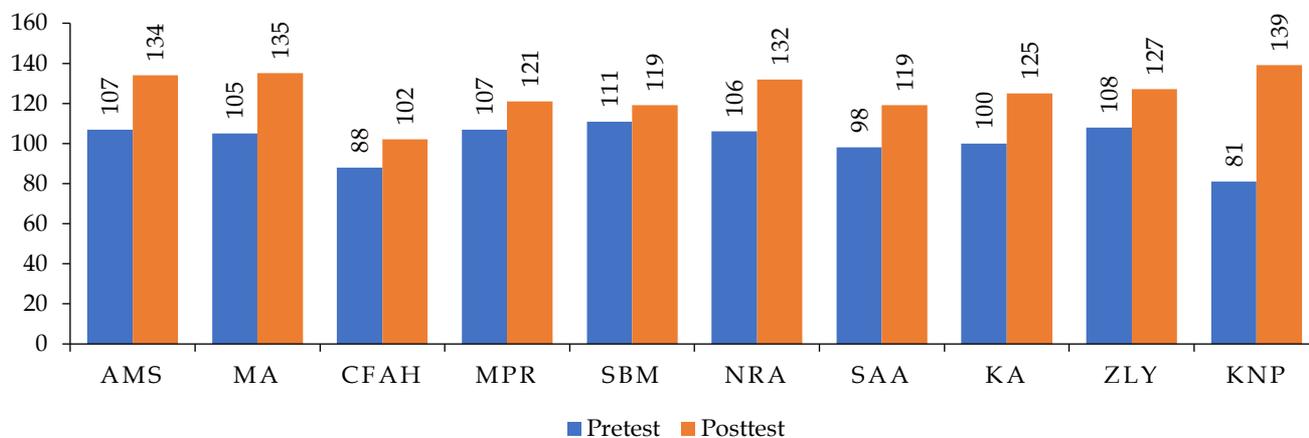


Figure 3. Results of the pre-test-post-test control group

Then, to conclude the answers to the research questions that have been formulated, it is necessary to analyze the test results using statistical analysis, which will be explained below.

Table 6. Significance test of pre-test-post-test differences in the control group

	Posttest - Pretest
Z	-2.807 ^b
Asymp. Sig. (2-tailed)	0.005

In Table 6, the answer to the hypothesis can be observed in the Asymp.Sig (2-tailed) assertive behavior figure, which is a score of 0.005 or a probability below alpha 0.05. This value clearly shows that there is a difference in the assertive behavior of students with the nice girl syndrome in the control group before (pre-test) and after (post-test) being given group counseling services using assertive training techniques without using virtual reality based on video artificial intelligence. Then, it is also necessary to see the direction of change that occurred in the assertive behavior scores of students with the nice girl syndrome in the control group. The direction of change that occurred is described below.

Table 7. Direction of change in assertive behavior scores for the control group

	N	Mean Rank	Sum of Ranks
Posttest - Pretest			
Negative Ranks	0 ^a	0.00	0.00
Positive Ranks	10 ^b	5.50	55.00
Ties	0 ^c		
Total	10		

Based on Table 7, the direction of change in the control group can be observed. Similar to the experimental group, the positive ranks also received a score of 10^b, which means that all students experienced an increase in assertive behavior in a positive direction. It can be concluded from this hypothesis testing that there was a significant increase in the assertive behavior scores of students with nice girl syndrome in the control group.

The Effectiveness Group Counseling Using Assertive Training Techniques with Virtual Reality Based on Artificial Intelligence Video

Table 8. Significance test of differences between experimental and control groups

	Assertiveness
Mann-Whitney U	23.500
Wilcoxon W	78.500
Z	-2.012
Asymp. Sig. (2-tailed)	0.044

The main objective of this study is to examine the effectiveness of assertive training group counseling using artificial intelligence-based virtual reality to improve the assertive behavior of students with nice girl syndrome. This will be analyzed based on the results of testing the differences in assertive behavior of students with nice girl syndrome in both groups that received treatment. To clearly observe the test results, the following table is presented (See Table 8).

From Table 8, we can interpret the score of Asymp. Sig. (2-tailed), which is 0.044, which in this case is below alpha 0.05. Based on these results, the researcher concludes that there is a significant difference between the assertive behavior of students with nice girl syndrome in the experimental group and the control group after participating in the treatment process.

Table 9. Mean rank differences

	Group	N	Mean Rank	Sum of Ranks
Assertiveness	Experimental Group	10	13.15	131.50
	Control Group	10	7.85	78.50
	Total	20		

The significance of the difference between the two research groups can be observed in Table 8. Meanwhile, Table 9 illustrates the difference between the two groups based on the mean rank (average score). From the table, it can be seen that the experimental group has a mean rank of 13.15, while the control group has a mean rank of 7.85. There is a striking difference in scores, which then leads to the interpretation that the treatment given to the experimental group can improve the assertive behavior of students with the nice girl syndrome. Similarly, in the sum of ranks section, it can be observed that the scores are very different, namely 131.50 for the experimental group and only 78.50 for the control group.

Based on the test results, it seems insufficient to see the difference in the effectiveness levels of the two interventions. Therefore, to see more clearly how the effectiveness levels of the services provided to the experimental group, namely, assertive training group counseling using video-based artificial intelligence virtual reality, differ from the treatment given to the control group, an N-gain test was then conducted as follows (Table 10).

Based on the N-gain test Table 10, it is clear to see the effectiveness of each treatment in both groups. Next, to see the level of effectiveness based on the N-gain score, it was analyzed using the N-gain score criteria according to Hake (1999), which was deemed valid by the researchers. In the experimental group, it can be seen that the average N-gain percentage obtained was 57%, which, based on the test criteria, falls into the moderately effective category. Meanwhile, in the control group, the

N-gain score percentage was 41.79%, which falls into the less effective category. Based on the presentation of these data, it can be concluded that the treatment given to the experimental group, namely group counseling

using assertive training techniques with virtual reality-based artificial intelligence video, has a higher level of effectiveness in improving the assertive behavior of students with nice girl syndrome.

Table 10. N-gain score difference

Name	Experimental Group		Control Group		
	N-gain Score	N-gain Score (%)	Name	N-gain Score	N-gain Score (%)
MPW	0.75	75.00	AMS	0.53	52.83
SSR	0.55	54.93	MA	0.53	52.73
BR	0.40	40.38	CFAH	0.46	45.83
AR	0.70	69.74	MPR	0.34	33.96
ZKP	0.51	50.94	SBM	0.37	36.54
QNSA	0.63	62.69	NRA	0.61	61.11
SSH	0.58	58.33	SAA	0.34	33.87
KNPR	0.42	41.51	KA	0.53	53.33
SB	0.47	47.46	ZLY	0.21	21.15
LHZ	0.64	64.06	KNP	0.27	26.58
Mean	0.57	57	Mean	0.42	41.79

Discussion

The results of the study presented above answer the research questions set out. In this case, there is a significant difference in the assertive behavior scores of students with nice girl syndrome in both groups before and after treatment. It can be observed that the significance value obtained in both groups is 0.005. When compared to the hypothesis acceptance criteria, which is below alpha 0.05, it can be clearly concluded that the assertive behavior of students with the nice girl syndrome increased significantly in both groups.

During the pre-test, the assertive behavior of students in both groups was generally in the moderate category. This prompted the researchers to follow up on this issue, as poor assertive behavior can have a negative impact on various aspects of students' lives. Various studies indicate that assertive behavior in adolescents affects their psychological well-being (Abdelaziz et al., 2020; Gevorgyan et al., 2024; Mahmoud & Zaki, 2014; Sarkova et al., 2013). Relevant to this, research conducted by Jandhyala & Kumar (2024) concluded that assertive behavior plays a major role in improving overall mental well-being.

In addition, previous studies have also found that assertive behavior affects a person's potential to become a victim of violence/sexual harassment (Adha & Syukur, 2024; Berg et al., 2022; Mimhamimdala & Syukur, 2025). Higher assertive behavior in individuals can be a protective factor against experiences of sexual violence (López-Barranco et al., 2023). In addition to these impacts, other things that are also affected are self-esteem (Kumar & Rathi, 2020; Kumari et al., 2025; Tavakoli et al., 2014), interpersonal communication (Al-hawaiti et al., 2025; Tondok et al., 2023; Wijayanti & Wangid, 2023). The moderate assertive behavior of

students before the treatment was administered was undoubtedly caused by various factors. Each individual is influenced by different factors, as each individual is unique (Churnia & Neviyarni, 2021; Melé & Cantón, 2014). Several factors that are thought to influence this condition based on theory include gender (Agarwal & Pattnaik, 2024; Câmpan & Bocoş, 2020; Sequeira & Cherian, 2025; Sochukwuma et al., 2020), self-esteem (Alberti & Emmons, 2017; Cherifa et al., 2022; Hamraoui et al., 2023; Madu et al., 2023; Miraucourt et al., 2022; Oducado, 2021; Syahputra et al., 2025; Vaughan-Johnston et al., 2020; Venkatesh & Sabesan, 2019), parenting and environment (Alayi et al., 2011; Bartholomeu et al., 2016; Jourshari et al., 2022), culture (Binuja & Nagarajaiah, 2020; Collier, 1986; Eskin, 2003; Florian & Zernitsky-Shurka, 1987; Parham et al., 2015; Sheinov, 2015), personality (Rathus & Nevid, 1983), and level of education (Onyeizugbo, 2003).

Then, after giving different treatments to both groups, a post-test evaluation was conducted to see how they were doing. Statistically, the data found then led to the conclusion that there was a significant spike in the assertive behavior scores of students with nice girl syndrome. It is very important for students to maintain this condition, because assertive behavior is a very important interpersonal skill in everyday (Salau et al., 2023), and should be present in individuals (Cherifa et al., 2022). With this good assertive behavior, it can be one of the efforts to reduce the level of nice girl syndrome in students (Engel, 2008). So that they are then able to build good and positive interpersonal relationships, and avoid being taken advantage of, manipulated, and even harassed.

These results are relevant when viewed from the paradigm of previous research, which stated that group

counseling using assertive training techniques with virtual reality can improve students' assertive behavior in order to prevent sexual victimization of women (Rowe et al., 2015). In addition, it is relevant to the results in the control group, where, in this case, previous studies have stated that assertive training group counseling is effective in improving assertive behavior (Afri et al., 2023; Bulantika & Sari, 2019). Research conducted by Faradita & Farozin (2020) at SMP N 18 Bengkulu showed the same results.

In addition, testing the effectiveness of assertive training group counseling services using video-based artificial intelligence virtual reality also showed positive results. The comparison data between the experimental and control groups showed an Asymp. Sig. (2-tailed) value of 0.044, which in this case was below alpha 0.05. This significance value then answered the research question. It was concluded that there was a significant difference in the assertive behavior scores of students with the nice girl syndrome between the experimental and control groups. In this case, the treatment carried out on the experimental group was able to improve the assertive behavior of students with the nice girl syndrome more effectively.

These results certainly stem from the treatment implemented, namely group counseling using assertive training techniques based on virtual reality using video artificial intelligence. Virtual reality media is one of the drivers of this effectiveness. Currently, virtual reality technology has experienced rapid development in recent years, especially in the process of psychological intervention (Kafes & Albayrak, 2024). This medium offers an up-and-coming solution in the field of counseling (Wulan, 2024). In its application to psychological interventions, virtual reality can offer a more immersive and engaging experience than traditional methods, thereby enhancing client participation. Assertive training using virtual reality media certainly brings various benefits. According to Powers & Emmelkamp (2008), the use of virtual reality media allows counselors to control and adapt the therapeutic environment to the client's needs, thereby providing better and more effective therapy. Not only that, but virtual reality, with all its advantages, can also simulate real situations with excellent accuracy. So, when it comes to simulations in assertive training, virtual reality can transport clients into real-life situations.

In addition to virtual reality, artificial intelligence video also plays an important role in the effectiveness of this group counseling. In this assertive training, artificial intelligence video becomes a medium for students to simulate assertive behavior. Based on previous research, artificial intelligence video is effective in various fields,

such as the film industry, film (Li, 2021), education (Leiker et al., 2023), health (Park et al., 2022), and counseling. Counseling integrated with AI assistance has great potential to complement or even replace traditional counseling, especially in terms of accessibility and quick response (Idaini, 2024). Furthermore, even in the field of health, research conducted by Artsi et al. (2025) stated that AI videos are very promising for use in encouraging student engagement in medical education, improving learning outcomes, and facilitating patient understanding. It can therefore be concluded that artificial intelligence videos will encourage better counseling practices.

In addition, the effectiveness of group counseling using assertive training techniques based on virtual reality and artificial intelligence video technology is reinforced by research findings conducted by Rowe et al. (2015), which states that assertive training is effective in reducing sexual violence among adolescents using virtual reality media with the MVMC program and simulations using virtual avatars. Based on the results of the research and the above review, it can be concluded that the treatment given to the experimental group had a higher level of effectiveness than the control group. This study has limitations, as it was only conducted on female students with nice girl syndrome, so in this case, it cannot be generalized to samples with different characteristics. Therefore, the recommendation for future researchers and practitioners is to implement and develop group counseling using assertive training techniques with virtual reality-based artificial intelligence video for other relevant variables and in a broader scope and individual characteristics, such as different socio-cultural backgrounds.

Conclusion

Assertive Behavior is a very important and fundamental variable for individuals to possess. With good assertive behavior, individuals can establish positive interpersonal relationships, reduce the risk of becoming victims of sexual violence, and avoid the nice girl syndrome. The results of the study show that the assertive behavior of students with the nice girl syndrome in the experimental and control groups increased significantly after the treatment was implemented. However, the improvement in the experimental group was much better. Based on the two tests conducted, namely the Mann-Whitney U test and the N-Gain test, the treatment given to the experimental group had a more positive impact than the control group. Based on this, it can be concluded that group counseling services using assertive training techniques with virtual reality based on video artificial intelligence

are effective in improving the assertive behavior of students with the nice girl syndrome. Based on the findings of this study, the researchers recommend that practitioners and future researchers implement and develop assertive training group counseling services using video-based artificial intelligence virtual reality with different settings, both in terms of broader sample characteristics and more innovative media use.

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Author Contributions

Conceptualization, formal analysis, writing—original draft preparation, project administration, A.W. and Y.S.; methodology, A.W. and A.; software, data curation, funding acquisition, A.W.; validation, Y.S., A., and P.G.H.; investigation, A.W. and P.G.H.; resources, supervision, Y.S.; writing—review and editing, A. and P.G.H.; visualization, P.G.H. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

This study has no conflicts of interest.

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