

Improving Teacher Preparedness: A Study on the Role of Structured Teaching in Adolescent Crisis Management

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Abstract

Adolescence is a crucial developmental stage (ages 10-19) marked by significant physical, emotional, and cognitive changes, often leading to internal conflicts and behavioural challenges. Educators play a vital role in supporting adolescents, yet many lack formal training in adolescent psychology and crisis management. This study aimed to assess the effectiveness of a **Planned Teaching Program (PTP)** in enhancing high school teachers' knowledge and responsiveness to adolescent developmental crises.

A pre-experimental one-group pre-test post-test design was employed, involving a sample of 30 high school teachers from a private co-educational high school in Mangalore, selected via non-random purposive sampling. A structured knowledge questionnaire, validated by experts (reliability coefficient 0.95), was administered as a pre-test (O1), followed by the 45-minute PTP (X), and a post-test (O2) seven days later.

Results indicated a significant improvement in teachers' knowledge. Pre-test findings showed half of the participants had average knowledge and 23.37% had poor understanding. Post-test results revealed none with poor knowledge, and 50% achieved excellent scores. The mean pre-test score was 15.93 (53.1%), increasing to 22.33 (71.33%) post-PTP. A paired t-test confirmed a statistically significant difference between pre- and post-test scores ($t=11.25, p<0.001$), validating the PTP's effectiveness. Chi-square analysis showed no significant association between pre-test scores and demographic variables.

The study concludes that the PTP is a highly effective educational intervention for equipping high school teachers with essential skills to address adolescent issues and promote mental health. Findings suggest implications for nursing practice, education, administration, and research in preventing adolescent mental health issues.

Keywords: Adolescent crisis, Teacher knowledge, Planned teaching program, Mental health, High school, Intervention.

Introduction

Adolescence, derived from the Latin term *adoloscere* meaning "to grow to maturity," is a critical stage of human development signifying the transition from childhood to adulthood. It involves rapid biological, psychological, and social changes, forming the basis for adult identity and maturity. G. Stanley Hall, often regarded as the father of adolescent psychology, highlighted adolescence as a distinct developmental stage in his 1904 work, characterizing it as a time of "storm and stress" and a reawakening of a higher self [2].

According to the World Health Organization (WHO), adolescence spans ages 10 to 19 years and is marked by physical growth, cognitive advancement, emotional volatility, and a search for identity [4]. Adolescents undergo significant changes including sexual maturation, emotional independence, and the development of moral reasoning and future goals [5]. During this period, emotional intensity and behavioral fluctuations are common, often manifesting as identity confusion, anxiety, or even rebellion [11]. Adolescents can behave

alternately like children and adults, reflecting the internal conflict and uncertainty experienced during this phase [3].

Peer groups gain importance as adolescents seek acceptance and belonging, often leading to a shift away from parental influence [13]. Erikson emphasized that establishing a stable identity is the central developmental task of adolescence, and failure in achieving this can result in role confusion [10]. Emotional experiences are deeply felt, making adolescents vulnerable to affective disorders, identity crises, and social stress [14][15].

Support systems, including schools and families, play a vital role in helping adolescents navigate these challenges. Teachers, in particular, are strategically positioned to influence adolescents positively. However, the effectiveness of their support depends on their understanding of adolescent issues and crises [5][6]. Hence, adolescence must be seen as a unique developmental period requiring informed and sensitive guidance from significant adults.

Need for the Study

Adolescence is a time of considerable transformation, characterized by physiological, intellectual, and psychosocial changes. These changes often bring about developmental tasks such as achieving emotional independence, establishing a personal identity, and preparing for future careers and relationships [7]. Failure to accomplish these tasks may result in crises, including emotional instability, low self-esteem, and behavioural issues [8].

The adolescent's ability to cope with these challenges is influenced by past experiences, support systems, and role models [9]. Increasingly, adolescents rely more on peer groups for support rather than parents or teachers, who they often perceive as lacking understanding of their problems [13]. Research shows that many adolescents struggle with identity issues and respond to failures with anger, social withdrawal, or substance abuse [11]. Consequently, adolescents require reassurance, appropriate guidance, and informed interventions.

Teachers spend considerable time with adolescents and have a significant influence on their development. Yet, evidence suggests that many teachers lack adequate knowledge about adolescent crises and how to handle them effectively [16]. This highlights the need to assess teachers' understanding and provide them with planned education to equip them for this critical role. Enhancing teachers' knowledge can promote healthier adolescent development and reduce emotional and behavioural problems in schools [17].

The conceptual framework of the present study is based on General System Theory with input, process, output, and feedback, first introduced by Ludwig von Bertalanffy (1968) [18]. demographics and prior knowledge. The process involves administering the planned teaching programme (PTP). Output refers to the improvement in knowledge post-intervention. Feedback indicates the need to modify or reinforce the program based on post-test results.

The objectives are:

- To assess the knowledge of high school teachers on adolescent crisis before and after the planned teaching program.
- To evaluate the effectiveness of the PTP in terms of gain in post-test knowledge score.
- To identify associations between pre-test knowledge scores and selected demographic variables such as age, gender, marital status, education, teaching experience, and place of residence.

Hypotheses

- H1: There will be a significant difference between pre-test and post-test knowledge scores.
- H2: There will be a significant association between pre-test scores and demographic variables.

Delimitations and Scope

The study was limited to teachers available and willing to participate during the data collection phase. The planned teaching program on the management of adolescent crisis can serve as a useful educational tool for both teachers and students.

Psychosocial problems of Adolescents

Psychological disturbance was found in 6.42% of Bangalore adolescents, mainly 13-year-old boys. Disturbed students had poor adjustment and higher behavioural issues. Factors included academic struggles and physical disabilities [21]. Adolescents identified peer pressure, violence, and school attitudes as major stressors. These perceptions can guide tailored mental health interventions [22]. An Australian coping intervention had limited impact. Only females showed improved coping and mental health, revealing the need for targeted approaches [23]. Educating girls about menstruation and body functions improves hygiene, attitudes, and reduces anxiety, highlighting the importance of integrated biological and health education [24]. Sex education significantly improved adolescent girls' knowledge, attitude, and menstrual hygiene behaviours, with lasting impact after four months [25]. Positive teacher behaviours (honesty, punctuality) correlated with higher student achievement, showing the importance of faculty conduct in academic success [26]. Bullying types (verbal, cyber, physical) were related to age and gender. Cyberbullying was more common in older boys, requiring focused prevention programs [27]. Occupational therapy using Instrumentalism helped adolescents with behavioural disorders plan for adulthood and shift toward productive activities [28]. Risky and passive coping strategies negatively affected adolescent health. Girls sought more support, but boys benefited more from it [29]. Dutch students' psychosocial problems were linked to behaviours like gaming, cannabis use, and being bullied, stressing the value of targeted behavioural interventions [30]. 21.7% of Saudi adolescents used waterpipes. Misconceptions about its safety and social motivations contributed to use, especially among boys [31]. 12.8% of Ahmedabad adolescents had Social Anxiety Disorder, affecting academics, friendships, and mental health. Early support is crucial [32]. Socially anxious adolescents had poor peer acceptance and higher victimization, especially boys. Coping support and social skills training are needed [33]. 43% of youth experienced trauma by age 18. Adolescents are highly vulnerable, requiring trauma-informed care and early psychological intervention [34]. Parental separation in childhood raised risks of emotional and behavioural issues in adolescents, underlining long-term psychological consequences [35].

Suicide and other behaviour problems

Most high school students lacked knowledge about suicide warning signs and held negative attitudes toward suicidal peers, showing poor response capability. These findings stress the need for adolescent-focused suicide education programs to promote awareness and sensitivity [36]. Media reports of suicide were found to be inconsistently reliable in portraying risk-enhancing features like sensationalism or glorification. The study supports improving media guidelines to reduce suicide contagion among youth [37]. A national survey found 7.6% of adolescents had attempted suicide. Only a small portion received professional help, particularly boys. Help was more often provided by peers than family or professionals, raising concerns about aftercare accessibility [38]. In Geneva, psychiatric patients assigned to emergency-only care had significantly higher suicide rates. Suicide risk was underestimated in acute psychiatric cases, emphasizing the need for early identification and follow-up [39]. A systematic review highlighted that adolescents with deliberate self-harm (DSH) often lacked proper psychosocial assessment and aftercare. Positive psychosocial support was suggested as a protective factor against repeated self-harm episodes [40]. Adolescent suicide attempts are linked to hopelessness, family conflict, and exposure to others' suicide. However, limited understanding of post-attempt trajectories hampers intervention development, signalling a need for long-term follow-up research [41]. Girls with early conduct problems faced later risks such as educational failure, delinquency, substance abuse, and mental health issues. A causal link through adolescent risk behaviours was observed [42]. A cross-sectional study in Pune identified early sexual activity among adolescents as linked to peer influence, lifestyle habits, and sexual abuse. It emphasized the urgency for structured sexuality education [43]. Empirical studies confirm that child sexual abuse leads to long-term issues like depression, low self-esteem, re-victimization, and substance abuse. Abuse involving force or father figures was most damaging [44]. In Columbia, self-esteem was found to mediate the relationship between socio-environmental experiences and adolescent emotional/behavioural problems. Stressful events and low support increased mental health issues [45].

Measures to reduce adolescent crisis

A small survey found adolescents spent excessive time on screens and some engaged in substance use. Poor sleep and mental fatigue were common. Media exposure was linked to aggression, substance use, and poor academic outcomes [46]. Only 15% of adolescents who seriously considered suicide disclosed to adults and sought help. Positive attitudes toward help-seeking and adult support increased disclosure. School-based support systems were suggested for suicide prevention [47]. Coping styles are critical in child and adolescent psychopathology. Traits like extraversion/introversion and coping efficacy influence how adolescents manage stress. Supportive interventions can improve personal conflict resolution [48]. Training school personnel in crisis response enabled them to provide triage, counselling, and referrals post-crisis. Schools play a crucial role in adolescent mental health support after traumatic events [49]. Although most teachers believed they had a role in suicide prevention, only 9% felt capable of identifying at-risk students. Training programs are needed to build teacher confidence and skills [50]. Counsellors with SOAR training showed high confidence in recognizing suicidal risks and responding appropriately. Training enhanced their readiness to support suicidal students and apply intervention steps [51]. A literature review noted a rise in youth suicide, particularly among girls. Prevention should target suicidal ideation, attempted and completed suicides using structured crisis models like Bohme's intervention [52]. A Rorschach-based study attempted to differentiate adolescent crisis from schizophrenia. Prognostic indicators and specific test syndromes were explored, suggesting adolescent crisis has unique diagnostic features requiring follow-up [53]. A study found social support positively correlated with health practices in adolescents. Loneliness and hopefulness were weak mediators but emphasized the importance of peer and adult connections for health promotion [54].

Effectiveness of planned teaching program

A study assessed the effectiveness of a planned teaching program (PTP) on knowledge regarding adolescent adjustment problems among 30 schoolteachers in Mangalore, using a pre-experimental one-group pre-test post-test design. The mean knowledge score increased significantly from 13.2 ± 2.034 (pre-test) to 23.6 ± 2.817 (post-test), with a highly significant t -value ($t_{29} = 18.07$), indicating the effectiveness of the PTP. No significant association was found between pre-test knowledge and demographic variables. The study concluded that PTP effectively improves teacher knowledge [54].

Methodology and research design

The study employed a pre-experimental one-group pre-test post-test design to assess the effectiveness of a planned teaching program on the knowledge of high school teachers regarding adolescent crisis. The design was: O1: Pre-test assessment using a structured knowledge questionnaire, X: Administration of the planned teaching program, O2: Post-test assessment after 7 days using the same tool. The setting of the study was in a private co-educational high school in Mangalore. The independent variable was a planned teaching program on adolescent crisis. Knowledge of high school teachers was the Dependent variable. The Extraneous variables were age, gender, marital status, education level, and years of teaching experience, as these could influence knowledge outcomes. The population included high school teachers, and a sample of 30 teachers was chosen using non-random purposive sampling, technique was used to select the sample from the population. Inclusion criteria were Teachers available at the time of data collection, willing to participate, and literate in English or Kannada. Exclusion criteria were Teachers who had received any prior specialized training on adolescent crisis.

Development and Description of the Tool

The data collection instrument was a structured knowledge questionnaire, and a blueprint was developed, categorizing the items into knowledge (50%), comprehension (30%), and application (20%) domains. The structured knowledge had two sections: demographic proforma with 6 items: age, gender, marital status, education, experience, and residence, and a Structured knowledge questionnaire with 30 multiple-choice items on adolescence, developmental changes, crisis features, risk factors, and preventive strategies. Each correct response was awarded one mark, with 33 items. Content validation was obtained by 13 experts, including professionals from psychiatry, clinical psychology, medical social work, and psychiatric nursing. Items with less than 70% agreement were discarded. Scores were interpreted as follows: Poor: 0–12, Average: 13–18,

Good: 19–22. Excellent: 23–30. The Reliability was tested on six teachers using the split-half method and assessed using Karl Pearson's correlation and the Spearman-Brown prophecy formula. The tool yielded a reliability coefficient of 0.95, indicating high consistency. Pilot, study was conducted from July 4 to July 10, 2013, in St. Mary's High School, Mangalore, the pilot study aimed to test feasibility, refine tools, and familiarize the researcher with procedures. Six teachers participated and followed the same process as the main study.

Data Collection Procedure

Data collection occurred from July 29 to August 9, 2013. After obtaining institutional permission and informed consent, the investigator explained the study to participants. Using purposive sampling, 30 teachers were selected. The pre-test was administered, followed by the teaching session using PowerPoint (45 minutes). Post-test data were collected on the 7th day using the same questionnaire. The participants were cooperative, and no issues were encountered during the process. Ethical clearance was obtained from a relevant committee. Each participant was given adequate information about the study and provided written informed consent. Code numbers were used to maintain confidentiality.

The research methodology describes the structured plan used to evaluate the **effectiveness of a Planned Teaching Program (PTP)** on the **knowledge of high school teachers regarding adolescent crisis**. This chapter elaborates on the **research approach, design, setting, population, sampling, tool development, pilot study, and plan for data analysis**.

Research Approach and Design

Given the nature of the problem, an **evaluative research approach** was chosen. Evaluative research is applied in nature and aims to determine the success of a program, policy, or intervention [56]. The purpose of this study was to assess whether a PTP could enhance teachers' knowledge about adolescent crisis.

The research adopted a **pre-experimental one-group pre-test post-test design**, which is widely used to assess the effectiveness of educational interventions [55]. The structure of the study involved a pre-test (**O1**), followed by the intervention (**X**), and a post-test (**O2**) after seven days. This design allows for measurement of knowledge improvement following the intervention. The process was conducted in three distinct phases: baseline assessment, intervention (PTP), and post-intervention assessment.

Setting, Population, and Sampling

The study was conducted in a **selected private high school in Mangalore**, Karnataka, which provides co-education from grades 1 to 12. The **population** comprised all high school teachers in that school, approximately 40 in total [57]. A **sample of 30 teachers** was selected using a **purposive sampling technique**, which relies on the researcher's judgment to select participants who are typical of the population [61].

Inclusion criteria included teachers who were present during data collection, willing to participate, and proficient in Kannada or English. Teachers who had received prior training on adolescent crisis were excluded from the study.

Variables Under Study

The **independent variable** was the **Planned Teaching Program (PTP)** on adolescent crisis, which was developed and administered by the investigator. The **dependent variable** was the **knowledge of teachers** regarding adolescent crisis. **Extraneous variables** included demographic factors such as age, gender, marital status, educational qualification, and years of teaching experience, which could influence the study outcome [58].

Tool Development and Description

A structured tool was developed in two parts:

- **Part I:** Demographic proforma with 6 items to capture baseline characteristics.
- **Part II:** A 30-item structured knowledge questionnaire covering various aspects of adolescent crisis, including physical, emotional, and social development, risk factors, and preventive strategies.

The tool was developed based on an extensive **review of literature**, expert consultation, and investigator experience. A **blueprint** was created to ensure balanced representation across cognitive domains (knowledge, comprehension, and application) [61]. Initially, 33 items were constructed, of which 3 were removed after content validation, leaving 30 items in the final tool.

Validation and Reliability

Content validity was established by 13 subject experts from psychiatry, psychology, social work, and nursing [62]. Feedback was collected using a checklist covering relevance, accuracy, and clarity. Items with less than 70% agreement were discarded or modified. All demographic items received 100% agreement.

Reliability of the tool was tested on 6 teachers using the **split-half technique**. **Karl Pearson's correlation coefficient** and the **Spearman-Brown prophecy formula** were used to measure internal consistency. The final reliability coefficient was **0.95**, indicating high reliability of the tool [64].

Planned Teaching Program (PTP)

The PTP was designed to educate high school teachers about adolescent developmental changes, crisis identification, risk factors, and supportive strategies. The PTP was validated by 12 experts and showed 100% agreement. The content was presented in English and covered theoretical and practical aspects of adolescent crisis management.

Pilot Study

A **pilot study** was conducted from **4th to 10th July 2013** at **St. Mary's High School, Mangalore**, to assess the feasibility of the tool and procedure. Six teachers participated, meeting the inclusion criteria. Pre-test was followed by administration of the PTP and a post-test on the 7th day. The study found the tool and PTP feasible, effective, and well-received by participants. The average completion time was 15–20 minutes for the questionnaire and 45 minutes for the teaching program. No difficulties were reported during the data collection process.

Plan for Data Analysis

Data analysis was planned using both descriptive and inferential statistics, such as Frequency and percentage for demographic data. The mean knowledge score was calculated by mean, standard deviation, and percentages to describe pre- and post-test results. Inferential statistics was calculated by a paired t-test to evaluate the effectiveness of the planned teaching program. Chi-square test to determine associations between demographic variables and pre-test knowledge scores [45].

Results

The results of the study provide a comprehensive understanding of the effectiveness of a planned teaching program in enhancing high school teachers' knowledge regarding adolescent crisis. The data were analyzed using both descriptive and inferential statistics to meet the study objectives and test the hypotheses.

SECTION 1: Demographic Characteristics of Participants**(n = 30)**

Sl.No	Variable	Categories	Frequency	Percentage
1	Age	Below 25 years	6	20%
		25–35 years	11	36.67%
		35–45 years	7	23.33%
		Above 45 years	6	20%
2	Gender	Male	7	23.33%
		Female	23	76.67%
3	Marital Status	Single	11	36.67%
		Married	19	63.33%
4	Educational Qualification	BA/B.Sc with B.Ed	8	26.66%
		MA/M.Sc/ M.Com with B.Ed	22	73.34%
5	Years of Teaching Experience	Below 5 years	14	46.67%
		5–10 years	4	13.33%
		10–15 years	4	13.33%
		Above 15 years	8	26.67%
6	Place of Residence	Rural	12	40%
		Urban	18	60%

Table 1: Demographic Profile of High School Teachers

The majority of teachers were aged 25–35 years (36.67%), female (76.67%), married (63.33%), and postgraduates (73.34%). Nearly half (46.67%) had less than five years of teaching experience, and 60% resided in urban areas.

SECTION-2: a) Level of knowledge regarding adolescent crisis

Table-2: Grading of pre-test and post-test knowledge scores of the high school teachers regarding Adolescent Crisis

(n = 30)

Sl.NO	Grading	Percentage Score	Pre-test		Post test	
			Frequency	Percentage	Frequency	Percentage
1	Poor	<40%	7	23.33%	0	0%
2	Average	41-60%	15	50%	5	16.67%
3	Good	61-73%	8	26.66%	10	33.33%
4	Excellent	74-100%	0	0	15	50%

Table 2: Grading of Knowledge Scores

Data in Table 2 shows that in the pre - test half of the subjects (50%) had average knowledge and 23.33% had poor knowledge, where as in the post-test 50% of the subjects had excellent knowledge score.

SECTION 2: b) Difference in mean pre-test and post-test knowledge score

Table 3: Range, Mean, Standard deviation and Median scores of pre-test and post-test knowledge scores

(n = 30)

Test	Range	Mean $\pm$ SD	Median	Mean % Score
Pre-Test	8–22	15.93 $\pm$ 3.70	16.5	53.1
Post-Test	13–28	22.33 $\pm$ 3.50	17	74.33

Table 3: Comparison of Pre-Test and Post-Test Scores

Table 3 shows a significant increase in the mean knowledge score from pre-test to post-test suggests that the planned teaching was effective, that the mean post-test knowledge score (22.33 $\pm$ 3.50) is higher than the mean pre-test knowledge scores (15.93 $\pm$ 3.70)

SECTION 3: Area-Wise Analysis of Knowledge Gains

Sl. No	Area	Max. score	Pre-test		Post-test		Actual gain
			Mean	Mean %	Mean	Mean %	
1	Introduction and meaning of adolescence	3	1.76	58.67%	2.5	83.33%	24.66%
2	Developmental changes that take place during adolescence	12	5.63	46.91%	8	66.94%	20.03%
3	Adolescent crisis	6	3.33	55.55%	4.7	78.33%	22.83%
4	Risk factors in adolescents	6	3.33	55%	4.7	78.33%	23.33%
5	Preventive mechanism of adolescent crisis	3	1.76	58.67%	2.36	78.88%	20.21%

Maximum score: 30

Table 4: Area-Wise Mean Scores and Knowledge Gain

Table 4, shows the highest gain in knowledge was seen in the domain of "Introduction and Meaning of Adolescence" (24.66%), while all other domains also showed substantial improvement. Area wise analysis shows that in the pre- test maximum score was in the area of meaning of adolescence (58.67%) and preventive mechanism of adolescent crisis (58.67), minimum was in the area of developmental changes that takes place in adolescence (46.91%). In the post-test maximum score was in the area of meaning of adolescence (83.33%). Maximum gain in knowledge score in the post-test was in the area of meaning of adolescent (24.66%)

SECTION 4: Effectiveness of the Planned Teaching Program of gain in knowledge scores

The computed t-value (11.25) exceeds the critical value ($t_{(29)} = 2.05$), and $p < 0.001$, indicating a highly significant difference. Thus, **H₁ is accepted**, confirming the effectiveness of the teaching program in enhancing knowledge [51].

					(n = 30)
Group	Mean Knowledge Score	Mean Difference	SD Difference	t-Value	Inference
Pre-Test	15.93				
Post-Test	22.33	6.40	0.2	11.25	Significant

$T_{29} = 3.66$ $p < 0.001$

Maximum. Score 30 ($t_{29}=2.05$, $p<0.05$)

Table 5: Paired t-Test Analysis

Data in Table 5 shows that the mean post-test knowledge score (22.33) is higher than the mean pre-test knowledge scores (15.93). The computed 't' value (11.25) is higher than the tabled value ($t_{29} = 3.66$ at $p<0.001$) at 0.001 level of significance. Hence the null hypothesis is rejected, and research hypothesis is accepted. The findings show that planned teaching was highly effective in increasing the knowledge of subjects regarding adolescent crisis.

Section 5: Association Between Knowledge and Demographic Variables

(n = 30)

Sl.No	Variable	χ^2 Value	Inference
1	Age	0.67	Not Significant
2	Gender	1.63	Not Significant
3	Marital Status	0.04	Not Significant
4	Educational Qualification	0.007	Not Significant
5	Teaching Experience	0.27	Not Significant
6	Place of Residence	0.61	Not Significant

$$\chi^2 = 3.84(df-1) \text{ at } P \leq 0.05$$

Table 6: Chi-Square Test for Association

No demographic variables were significantly associated with pre-test knowledge scores at the 0.05 level. Therefore, **H₂ is rejected** and the null hypothesis is retained [52]

Discussion

The rapid advancement in knowledge and technology has significantly influenced adolescent life, making it critical for educators to understand adolescent crises and their preventive measures. This study aimed to evaluate the effectiveness of a Planned Teaching Program (PTP) in enhancing high school teachers' knowledge on adolescent crises. The objectives included assessing teachers' knowledge before and after the PTP, determining the program's effectiveness through knowledge gain, and exploring any associations between pre-test scores and demographic variables.

The study was guided by two hypotheses: (H1) there is a significant difference between pre- and post-test knowledge scores, and (H2) there is a significant association between pre-test scores and selected demographic characteristics such as age, gender, marital status, education, and teaching experience. The findings were discussed under four parts.

Part 1: Demographic Variables

The majority (36.67%) of teachers were aged between 25–35 years, followed by 23.33% in the 35–45 age group. A smaller portion (20%) were under 25 or over 45 years. Most participants were female (76.67%), married (63.33%), and had a postgraduate degree with B.Ed (56.66%). Nearly half (46.67%) had less than five years of teaching experience, while 26.67% had more than 15 years. The urban population accounted for 60%, whereas 40% resided in rural areas.

Part 2: Knowledge on Adolescent Crisis

Prior to the PTP, half of the participants exhibited average knowledge, while 23.37% demonstrated poor understanding. Post-test results showed that none had poor knowledge, and 50% achieved excellent scores. The mean pre-test score was 15.93 (53.1%), which increased to 22.33 (71.33%) in the post-test, indicating a substantial knowledge gain. Area-wise analysis revealed that the highest pre-test score was in understanding the concept of adolescence (58.67%), while the lowest was in developmental changes (46.91%). Post-test scores showed the highest knowledge gain in adolescent crisis content (78.33%)

Part 3: Effectiveness of the PTP

The paired 't' test analysis confirmed a statistically significant difference between pre- and post-test scores ($t = 11.25$, $p < 0.001$), validating the effectiveness of the PTP. This outcome aligns with previous studies that reported similar benefits of PTP in improving teachers' understanding of adolescent issues, including adjustment problems.

Part 4: Association with Demographic Variables

Chi-square analysis found no significant association between pre-test scores and demographic variables such as age, gender, marital status, education level, teaching experience, or place of residence, at a 0.05 level of significance. This suggests that baseline knowledge on adolescent crisis was relatively independent of these factors [95].

Summary

In conclusion, the study established the PTP as an effective tool in enhancing teachers' knowledge about adolescent crises. The results are in agreement with findings from similar research, although some studies showed minor contradictions. Overall, the positive impact of PTP supports its continued use as a strategic educational intervention for high school teachers [96].

The study concluded that high school teachers initially had poor knowledge about adolescent crises, but the Planned Teaching Program significantly improved their understanding [97]. This has implications across nursing practice, education, administration, and research. Nurses can use the findings to deliver school-based care and health education to prevent adolescent mental health issues [98]. Nursing students should be trained on adolescent crises through integration with school health programs [99]. Nurse administrators can organize staff development and awareness campaigns, while researchers can create targeted tools for teacher education [100]. Limitations include a small sample, restricted setting, and lack of follow-up [101].

The study assessed the effectiveness of a Planned Teaching Program (PTP) in improving high school teachers' knowledge about adolescent crises [102]. Teachers initially had limited knowledge, but the PTP significantly enhanced their understanding, confirmed by a statistically significant gain in post-test scores ($p < 0.001$) [103]. Using a one-group pre-test post-test design, 30 teachers from Mangalore were selected through purposive sampling [104]. A structured questionnaire was used to assess knowledge before and after the intervention [105]. The study confirmed that PTP is an effective educational strategy to equip teachers with essential skills to handle adolescent issues and promote mental health [106].

The findings of the study demonstrate that the planned teaching program was **highly effective** in improving the knowledge of high school teachers regarding adolescent crisis. There was a statistically significant gain in knowledge post-intervention. However, demographic factors such as age, gender, marital status, education, experience, and residence showed no significant association with pre-test knowledge levels. This may be attributed to the small sample size, as suggested by the application of Yates correction in the chi-square analysis [53].

Findings of the study

The conclusions were drawn on the basis of the findings of the study such as Pre-test findings showed that teachers had poor knowledge regarding adolescent crisis and the planned teaching program was effective in improving the knowledge of teachers.

Implications

The findings of the study have certain important implications for the nursing profession such as in nursing practice, nursing education, nursing research and nursing administration.

Nursing practice

The present study findings can be utilized in nursing practice by giving school based care to protect, promote and preserve the students especially adolescents from adolescent crisis induced mental illness. The art of nursing lies in the nursing practices, so the nurse can act as care provider, organizer, leader, educator, counselor, motivator, supervisor, and team member. Nurses working in the community and focusing on the preventive aspects will build up a better investment for the healthy students. The planned teaching program will help to improve the knowledge as well as to protect the mental health.

Findings of the present study have an implication in nursing education. The nursing students should get a thorough knowledge regarding adolescent crisis its prevention and management and the importance in minimizing mental illness especially depression and suicidal ideation. There should be provision for learning of emerging adolescent crisis and how can it be prevented by having a good linkage with School health program. The students should have adequate exposure to the school health program.

Nursing administration

Nurse administrators play a pivotal role in supervision and management of nursing profession and management of nursing profession. They may involve in policy making and budgeting of the in-service education programs.

- School health administration authorities should initiate nurses and other health personnel for educating teachers on adolescent crisis and its mechanism of prevention
- Nurse administrator in hospital, community and in education can organize and conduct health awareness campaigns by using common and simple methods.
- Nurse administrators can bring awareness among public in general and specific focus groups regarding nature and prevention of adolescent crisis.
- Nurse administrators can organize staff development programs for nurses to update their knowledge regarding adolescent crisis and emerging mental health problems.
- The nurse administrators can mobilize the available resource person towards health education to the teachers, parents and students regarding adolescent crisis and how to prevent mental illness induced by adolescent crisis.

Nursing research

This study helps the nurse researchers to develop appropriate health education tools for educating teachers regarding adolescent crisis according to their demographic, socio-economic, cultural and political characteristics.

The present study would help nurses and other health personnel to understand the level of knowledge of teachers on adolescent crisis. Based on this study nurse researcher can undertake similar studies to assess the knowledge of teachers and other groups regarding different problems faced by adolescents.

Limitations

- This study was conducted only in selected high schools at Mangalore which imposed limits in generalization of findings.
- The structured knowledge questionnaire restricts the amount of information that can be collected from the respondents.
- No follow-up was done after the post-test.
- The study was conducted only for the high school teachers so that all the teachers in the schools were not able to participate in the study.

Suggestions

Based on the findings, the following recommendations are stated;

- A similar study can be conducted with a larger sample to generalize the findings.
- Replication of the study can be done on parents.
- A descriptive survey can be conducted to assess the adolescent crisis leading to suicide.
- Comparative study can be conducted with control group.

- Comparative study can be conducted to find out the effectiveness between various teaching methodologies.

Summary

This chapter has brought out the various implications of this study and also has provided suggestions for future studies. Studies of this kind should be an ongoing process to make adequate awareness to the teachers which may help to prevent the mental illness related to adolescent crisis. Since teachers are the main source of information for students more studies should be conducted regarding various problems of adolescents. Such type of study will add to the body of knowledge of nursing profession.

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