

GARDENING: A FEASIBILITY TESTING OF INTERVENTION FOR PSYCHOLOGICAL WELL- BEING AND ATTITUDE TOWARDS SCHOOL AMONG SCHOOL-GOING ADOLESCENTS



by

Sania Afzal
BSP191034

A Research Thesis submitted to the
DEPARTMENT OF PSYCHOLOGY
in partial fulfillment of the requirements for the degree of
BACHELOR OF SCIENCE IN PSYCHOLOGY

Faculty of Management and Social Sciences
Capital University of Science & Technology,
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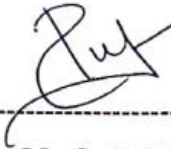
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CERTIFICATE OF APPROVAL

It is certified that the Research Thesis titled “**Gardening: A Feasibility testing of intervention for Psychological well-being and Attitude towards school among school-going Adolescents**” was carried out by **Sania Afzal, Reg. No. BSP191034**, under the supervision of **Ms. Sadaf Zeb**, Capital University of Science & Technology, Islamabad, is fully adequate, in scope and quality, as a Research Thesis for the degree of **BS Psychology**.

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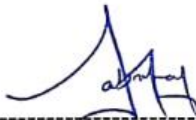
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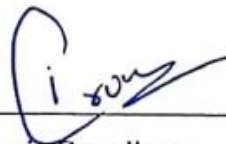
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DEDICATION

I dedicate this research to my creator, my pillar of support, and, my source of comfort, through his guidance, I have found my way. I would also like to dedicate this thesis to my Parents and my brothers Saam and Rohan and my best friend for bearing my exasperation but still supporting me emotionally and patiently throughout this journey. I couldn't reach this point without them and I would not be where I am today. Also, I would like to dedicate this thesis to the future asset of Pakistan.

DECLARATION

It is declared that this is an original piece of my work, except where otherwise acknowledged in text and references. This work has not been submitted in any form for another degree or diploma at any university or other institution for tertiary education and shall not be submitted by me in the future for obtaining any degree from this or any other University or

Institution.

A handwritten signature in blue ink that reads "Sania Afzal". The signature is written in a cursive style with a large initial 'S' and 'A'.

Sania Afzal

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February, 2023

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All praises & heights to **ALLAH ALMIGHTY**, the one and only creator of the universe, and the peace & blessings of ALLAH be upon the **Prophet Muhammad** whose Prophet-hood is the climax of revealed guidance.

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Abstract

Mental health is a growing public health concern, especially for school-going adolescents. The lives of individuals particularly school-going adolescents provide insight into the impact of the academic environment on their psychological well-being and attitudes toward school. Prior studies suggest the positive effect of gardening intervention on adolescents' well-being, however empirical evidence on psychological well-being is limited. This study aimed to successfully incorporate the gardening intervention to determine its impact on school-going adolescents' psychological well-being and attitude toward school. A quasi-experimental research design with a control group was used to test the intervention's feasibility. The sample includes 60 (N=60) school-going adolescents from a government school of Rawat, in Islamabad under 14-16 years. The participants were recruited through a convenient sampling technique. The psychological well-being questionnaire (PWB) and attitude towards school questionnaire (ATS) were used. Pre- and post-testing were done and data was analyzed using SPSS. The findings of the research provide significant evidence that gardening plays a major role in improving adolescents' attitude toward school ($p=.04$) but no significant difference was found in their psychological well-being ($p=.66$). The study makes some recommendations in order to improve the psychological well-being of future human resources by conducting high-quality gardening-based studies.

Keywords: Psychological well-being, academic environment, attitude toward school, gardening

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Chapter-1 Introduction

The school has been identified as one of the most important institutions concerning developmental contexts in which students can acquire skills and competencies that will help them to adapt to the environment and enhance their well-being (Hamilton, 2009). There has been very little research on student well-being at the school level (Henrich, 2007). According to the World Health Organization (WHO), one in five young people under the age of 18 suffer from developmental, emotional, and behavioral problems, and one in eight suffer from a mental disorder. International studies show that physical activity among adolescents has declined over time and is responsible for 6% of deaths worldwide and approximately 3.2 million deaths annually, including 2.6 million in low and middle-income countries (WHO, 2017). As a result, children and adolescents from different socioeconomic and demographic groups are believed to be more vulnerable to disparities affecting their health and well-being (USDHHS, 2013).

Adolescent psychological well-being is associated with being content and satisfied with life and understanding the abundance of positive emotions which when combined with the absence of psychopathology is associated with highest academic functioning, social skills and support, and physical health (Ross, 2020). It lays a strong foundation for the future personality and a critical period in human development where life goals, values, direction and meaning of life are formed (Savage & Jessica, 2011).

From a broader perspective, measuring and promoting the well-being of school-aged children is a desirable social and policy goal (Helliwell et al., 2009). According to Merrell (2002), schools provide social and emotional engagement in addition to academic education. These factors directly or indirectly affect a child's well-being. Furthermore, the quality of the school environment perceived by students influences student attitudes and participation in school activities (Lam et al.,

2014). According to positive psychology, there is a strong correlation between school environment and well-being of students. An optimistic academic environment reduces negative emotions in general and anxiety in particular, while maintaining academic motivation (Pitt, 2014).

Attitude towards school is influenced not only by social and personal factors, but also by cognitive and emotional factors (Patrick, 2002). A person's attitude towards school can be defined by how they perceive their participation in school (McCoach & Siegle, 2003). Researchers define schooling as a safe environment where students can interact with compassionate people, while at the same time being a place where they become a creative citizen, practice advanced lifelong knowledge, and strive to achieve their life goals. (Putman & Handler, 2003). Students who feel accepted and valued for their results are more likely to pursue proficiency goals. On the contrary, when students perceive themselves to be unaccepted and unappreciated for their work, they become more likely to develop performance goals, make comparisons, and become competitive (Anderman et al., 2008). Their psychological well-being, which includes contentment, optimism, well-being, love, interpersonal skills, professional skills, future orientation, wisdom, tolerance, civilization, responsibility, and many other empirically proven factors are influenced and nourished in the school environment (Synder & Lopez, 2007).

According to Hall (2011), when young people particularly students have a view of green spaces and gardening activities during school, they exhibit significantly better performance in school. Working in the garden improves dexterity and strength. The natural environment is now recognized for providing essential health care and other environmental services (Wells et al., 2014). The growing interest in therapeutic gardening reflects a broader current interest in nature's role in enhancing health and well-being. These health services have both direct and indirect consequences for physical and mental health as well as a reduction in pollution and disease vector

threats (Roe et al., 2012). Increased environmental awareness is accompanied by increased environmental knowledge and new knowledge can result in a shift in attitudes (Block et al., 2012).

School gardening was first introduced in the United States for aesthetic reasons. School gardens had the pragmatic and normative objectives of teaching by experience, introducing children to pastoral nature, and forming their moral perspectives (Bundsche & Mooney, 2003). As early psychiatric institutes in Europe and the United States incorporated horticultural activities in the 1800s, gardening has long been regarded to be therapeutic for those with mental illness (Parr, 2007). Even after adjusting for potentially confounding factors like deprivation, many studies conducted in the United Kingdom and other nations show that areas with a higher percentage of green space, particularly biodiversity habitats are linked to reduced levels of depression, anxiety, and stress (Fuller, 2008).

Many children in Pakistan lack direct exposure to living organisms and their ecosystems, forcing them to learn about their surroundings through abstract concepts from secondary sources like adults, peers, and the media (Cohen & Horm, 1993). These sources may not be as effective in teaching children about the environment because students learn better and acquire more knowledge when they are actively involved in the learning process (Cormick et al., 1989). Horticulture provides an excellent opportunity for such hands-on environmental learning as it is an approach that spans both formal and informal curriculum for students and its effects on psychological well-being and their positive attitudes towards school (Latif, 2009).

Literature Review

The term Eco-therapy was first defined by Clinebell (1996) as growth and healing that is nurtured by healthy interactions with the earth and is an application of Theodore Roszak's emerging field of Ecopsychology, which allows individual to explore their relationships with

nature and suggest the positive effect of gardening on physical and mental wellbeing (Hine et al., 2008). In the literature engagement in nature has been characterized as a multidimensional construct with three interrelated dimensions, namely emotions or affect, behavior, and cognition (Frederick et al., 2004). Young children's attraction to school is referred to as the affective or emotional dimension of engagement, which is characterized by the lack of negative feelings and the presence of positive emotions (Skinner et al., 2009).

To contrast student positivity and the dropout rate, there has been an increase in interest in educational policy and research that encourages student involvement at schools in recent years (Archambault et al., 2009). Dropping out of students in high school has detrimental effects on their well-being including, decreased lifetime learning, riskier health habits, worsened mental health, and negative attitudes toward school (Finn, 2006). According to the socio-cognitive approach, their attitude toward school are related to both school and psychological environment i.e., the importance given by students to the social environments based on individual interpretations, academic values and subjective perceptions (Habib, 2013).

According to Maehr's personal investment theory (1984), the meaning and value given to an activity are critical because they determine motivation, engagement, and the amount of time and energy invested in a task. Meaning is influenced by goals, self-efficacy, action possibilities, classroom environment, and perceived peer-teacher relationships. All of these findings suggest that there should be no threats to self-esteem, fear of being superior to others, and no undue concern about evaluation to improve well-being and promote adaptive cognitive and emotional patterns i.e., positive attitude towards school (Dweck, 1999). Such a supportive environment adjoined the student's innate and universally specified needs for relatedness, autonomy, and competence which when met determine the individual's well-being (Deci & Ryan, 1985).

The environment of school and classrooms not only influences students' academic achievements but also their well-being (Pollard et al., 2008). According to previous research interest in work and motivation to work contribute to students' well-being (Rosseel et al., 2009). Besides that, creating a sense of connectedness is an important aspect of developing student well-being. Evidence suggests that individuals who feel connected to their school are more motivated to achieve academic success and self-efficacy (Harvard, 2018). Furthermore, these individuals are less likely to engage in illegal activities and are less likely to have mental health problems (Bond et al., 2007).

There is limited evidence from previous intervention studies on gardening and social relationships and adolescent mental health. However, qualitative studies of children and a small number of adult studies suggest the existence of such a relationship (Van Den Berg & Custers, 2011). A qualitative case study was published by Chawla et al. (2014), based on interviews with 52 American youth participating in three different gardening programs. Adolescents stated that gardening gave them time to think, improved focus and reduced stress at school. Furthermore, they all stated that gardening improved their ability to focus and that they were better able to complete their school work (Chawla et al., 2014).

In this context, a growing body of research has suggested that gardening may help to address several public health concerns by enhancing social cohesion, quality of life, nutrition, physical activity, stress reduction, and depression. Researchers have advocated for a school garden in previous eras when most children had easy access to farms and nature (Rousseau et al., 2002). Aside from evidence from gardening programs in institutions like schools or health care settings, little is known about the possible health consequences of urban community gardening on free-dwelling adults, except for the data from gardening initiatives in institutions like schools or health

care settings. There is growing evidence that gardening and other outdoor activities, especially exposure to plants and greenery are good for both physical and mental health (Jansson, 2007).

According to Halai (2012), education in Pakistan is uneven and diverse, and only the privileged class received a quality education, leading to inequalities. In addition, different research studies in Pakistan depict the increase in school dropout rates over the past ten years in both rural and urban areas, especially for girls (Farah, 2009). There are 33% of females are literate in rural areas, compared to 45% of females in urban areas and 69% of males in rural areas (Akram & Shafiq, 2013). Education remains one of Pakistan's neglected fields; spending less than 2.5% of its gross domestic product (GDP) on education and is still one of the nation's underdeveloped sectors (Rahman & Uddin, 2009). The education sector in Pakistan reflects the country's struggle to solve fundamental concerns like insecurity, terrorism, cultural and religious disparities, natural calamities, and political upheaval.

Over the years there have been sporadic attempts to reform the education system, resulting in an uneven distribution of quality education. Also, education in Pakistan has allegedly exacerbated segregation and separation (Nisa et al., 2013). Researches also indicate that each government changes the curriculum to support its ideologies, and this history of the official school curriculum has contributed to intolerance (Durrani & Dunne, 2010). Current educational practices on the other hand primarily incorporate environmental education into the science curriculum with little exposure to health, arts, and physical education. Because environmental education is an issue-based subject, it lands perfectly with interdisciplinary education by incorporating new content and skills into the existing curriculum without jeopardizing the integrity of the course (Simmons, 1989).

Theoretical Framework

The concept of Gardening in the current study based on the Green Mind Theory (GMT) proposed by Pretty et al. (2017) and discusses how the human mind and body are connected, as well as how the body interacts with the natural and social contexts. The body and mind are shaped by the environment, which subsequently alters behavior. Green mind theory offers strategies to advance economic sustainability while simultaneously enhancing personal well-being. It is based on studies of environment-friendly exercise and natural remedies, as well as knowledge of neuroscience and brain plasticity.

The term dose of nature describes how exposure to green exercise is comparable to giving the body a medical dose that improves mental wellness. It was shown that populations experiencing mental stress, such as children and teens, refugees, probationers, dementia patients, office workers, and mental health patients benefitted from the purposeful therapeutic use of natural environments (Genter et al., 2015). It has been demonstrated that a green environment is more equitable, lowering social inequalities, and improving mental health in particular for better health and life span (Barton, 2017).

According to meta-analysis, examining the relationship between nature connectivity and well-being, people are happier in their lives when they feel more connected to the natural world (Joe, 2003). Previous research has shown how these connections shape their decisions in behavior and mental states which have a direct impact on health and well-being over a long period and emphasize the value of early intervention for young children whose cognitive outcomes are enhanced by regular exposure to activities in natural settings (Chawla et al., 2014).

Rationale

To prepare children for life in an increasingly complex society, schools must focus on well-organized and theoretically sound curriculum programs that take a preventive approach to the mental well-being of students in Pakistan. According to Vernon (1989), the goal of an effective gardening intervention program is to create such activities which bring a positive attitude of children toward school. As discussed earlier, there is a lack of conductance of such intervention-based programs among schools in Pakistan because many schools do not have a good infrastructure to carry out such activities as they are built in residential homes as compared to properly built campuses (Abbasi, 2014). Furthermore, the majority of the previous intervention research studies bring about limited evidence regarding gardening in schools as a part of the curriculum. Introducing positive attitudes towards school and well-being is the feasible approach through gardening as it shapes lifelong attitudes, values, and behavioral patterns.

The current research aims to create an interdisciplinary approach to environmental education by incorporating such intervention-based activities in schools as it improves their social, physical, psychological, cognitive, environmental, and spiritual well-being. Garden activities and programs can be successfully incorporated into the existing curriculum of all disciplines with very few requirements. These activities can assist teachers in incorporating environmental education into the existing curriculum in a way that makes learning fun for children of all ages and generates an academic environment that shapes their positive learning and attitudes toward school. Additionally, gardens can offer a setting where children can practice teamwork while growing plants and learning about human interactions while collaborating with peers, instructors, parents, and volunteers. Even while the number of gardening-based mental health interventions is rising, there is just a little amount of research to support their efficacy in Pakistan's school system. This

study aims to assess current evidence-based gardening interventions for mental health in educational settings.

It can also assist school administrators in developing and establishing their curriculum and school environment to improve their student's learning and positive attitudes toward school by enhancing their well-being through gardening activities that help to develop and shape their personalities. School counselors can educate school administrators and parents about the positive impact of such activities and how to improve and shape students' positive attitudes towards the learning environment which directly improves student well-being.

Objectives

The following are the objectives of the study:

1. To develop a gardening intervention that intends to improve the attitudes of adolescents toward school and their psychological well-being.
2. To explore the effectiveness of a gardening intervention on attitudes and psychological well-being of school-going adolescents at post-testing.
3. To explore the differences between the experimental group and the control group at post-testing.

Hypotheses

H1: There will be a significant difference on the attitude towards school among adolescents at post-intervention.

H2: There will be a significant difference on the psychological well-being among adolescents at post-intervention.

H3: There will be a significant difference between the experimental and control group at post-testing.

Chapter-2 Method

This chapter presents the methodology used in the thesis including the research design, sample, measure/instruments used, and the procedure used to test the intervention for pre-testing and post-testing.

Research Design

This study utilized a quasi-experimental study design with a control group to investigate the effect of gardening intervention on adolescents' psychological well-being and attitude toward school.

Population and Sample

A sample of 60 students (N=60) from primary and middle grades aged between 14-16 years was chosen, 30 assigned to the experimental group and 30 assigned to the control group during post-testing.

Inclusion Criteria

The study used the following inclusion criteria:

1. Participants aged 14-16 years were included in the study.
2. Only male participants were included in the study.
3. Participants with written parental/guardian informed consent participated in the study.

Exclusion Criteria

The study used the following exclusion criteria:

1. Participants with severely diagnosed physical disabilities and psychological disorders as reported by the parents/guardians or school were excluded from the study.
2. Participants who were absent at the time of pre-testing were not included in the study.

Sampling Technique

The participants were recruited through a convenient sampling technique.

Measure/Instruments

Demographic sheet

Background information from study participants was collected using a demographic sheet, which included their names, ages, dates of birth, educational year, place of residence, parent's monthly income, and the presence of any psychological disorder or physical disability.

Psychological well-being Scale (Ryff, 2015)

A brief Urdu version of the Psychological Well-Being (PWB) Scale translated by (Khan & Batool, 2020) was used to measure the well-being of participants. The scale consists of 18 items that measure purpose in life, self-acceptance, positive relationships with others, personal growth, autonomy, and mastery of the environment. Items are rated on a 7-point Likert scale from 1 (strongly agree) to 7 (strongly disagree). The reliability of this brief questionnaire was found to be .80 (Khan & Batool, 2020).

Attitude toward school (Seker, 2011)

A translated Urdu version of the scale was used to measure participants' attitudes towards school. In the current study, Brislin's translation method (Brislin, 1970) was used to convert the scale to Urdu for use with the Pakistani population. The scale consists of 22 items that measure testing and feedback, instruction, school affiliation, school image, school loneliness, and student dislike. Scale items are measured on a 5-point Likert scale from 1 (strongly agree) to 5 (strongly disagree). The reliability of the English questionnaire was found to be .70 (Seker, 2011).

Translation of scale

Brislin's Back- translation method was used to translate the attitude toward school scale into Urdu (Brislin,1970).

Forward Translation

Five bilinguals were assigned to provide forward translation of the scale They were provided with the English version of the scale for translation purpose.

Expert Committee

The forward translation was then evaluated in order to avoid culturally insensitive disparity by a four-member expert panel made up of CUST faculty members. The most appropriate items that had no errors in meaning for the target population was selected for back translation.

Back Translation

The back translation was given to two independent bilingual translators for greater precision of translated version. After that, the two version of the instrument (original and back translated) was reviewed by the expert in order to have the translated Urdu version of the instrument that was conceptually identical to the original English version of the scale.

Ethical considerations

The approval was taken from the Department of Psychology, Capital University of Science and Technology. Following the issuance of the university's support letter, administrative approval from the school was obtained, which included granting permission to conduct the experimental intervention-based study on students after obtaining written informed consent from their parents/guardians; which included information about the purpose of the study, their children's right to withdraw from the study and their confidentiality regarding the information gathered for the study findings. It also included the assent form, which the student signed to participate in this study.

Intervention Preparation

For the gardening intervention, various activities were chosen and modified in Urdu based on the themes related to their attitudes toward school and well-being. To ensure that students understood the instructions, the language used to deliver them was kept simple. Every session of the intervention focused on the desired behaviors of students that will improve their well-being and assist them in developing a positive attitude toward their school and learning environment. To improve their positive cognitions, the target behaviors were changed by involving them in different gardening activities. The intervention consisted of 4 sessions, based on 21 days of activities with verbal feedback being taken from students after each activity so as, to gain knowledge about their experiences while they were engaged in different activities in the garden. The 4 sessions of the intervention after pre-testing includes following activities:

Session 1: The intervention begins with the goal of stimulating participants with natural stimuli. Each participant was given a single plant to grow and were provided with the written and

verbal information about the plant they were growing i.e. Ficus, Bloodleaf Plant, and Heart-leaved Moonseed. Participants took part in the preliminary plantation for 6-day stage.

Session 2: Breathing exercises with the plant were performed during this stage. This practice was intended to encourage participants to express their negative emotions, share their deepest emotions, and engage in open dialogue with nature.

Session 3: This stage was created to help participants gain more insight. They were asked to consider the activity they exercised while they were taking care of the plants and then share the positive emotions they felt during the activity.

Session 4: This session was based on (17th -20th) day of intervention activity. The participants were asked to look after each other's plant after they were given to them. The purpose of this activity was to increase interaction and foster a sense of community among them. On the last day, participants took part in a group activity in which they discussed their experiences verbally with the experimenter.

Procedure

The study aimed to determine whether gardening interventions result in improved psychological well-being and enhance positive attitudes toward school among school-aged adolescents. A quasi-experimental study was carried out for this purpose. The intervention was carried out with permission from the school. Out of the six schools which were being approached, only one granted permission to administer the intervention. Participants meeting the inclusion criteria were selected and informed consent was obtained from parents/guardians. In addition, the participant's permission was obtained on the assent form.

Before the intervention, a sample of 60 students (N=60) was pre-tested by administering the psychological well-being scale and attitude towards school scale. The intervention was then

administered to the experimental group (n=30) for 21 days. The gardening-based intervention was administered to adolescents during their school hours on weekdays. After 21 days post-testing was carried out by administering the scales again to a control group (n=30) and an experimental group (n=30) to assess the impact of the intervention.

Statistical Analyses

Statistical Package for Social Sciences (SPSS version 25) was used for the quantitative analysis of the research study. The frequency and percentage were calculated after the data was cleaned. Scales and subscale reliability analyses were also performed. Descriptive statistics were also calculated for the mean, median, mode, standard deviation, skewness, and kurtosis. The Kolmogorov-Smirnov test was used to ensure that the data were normally distributed. The Paired-sample and independent-samples t-tests were used to test the study hypotheses.

Chapter-3 Results

The research study was conducted to observe the impact of the gardening intervention on the psychological well-being and attitude toward school of school-age adolescents. The data was collected from school-age adolescents (N = 60) using a quasi-experimental study design that included a control group through convenient sampling. This chapter presents the results of the study along with descriptive and inferential statistics including demographic characteristics, reliability statistics, descriptive scale statistics, independent sample t-test, and paired samples t-tests.

Demographic Characteristics of the sample

In the present study, a total sample of 60 school-going adolescents where 30 (n=30) participants were categorized into experimental group and 30 (n=30) in control group. All of these participants were male. The demographic characteristics of the participants of the study in control group and experimental group are demonstrated in Table 1.

Table 1*Demographic characteristics of the participants*

Demographic characteristics	Categories	Experimental Group		Control Group	
		(n)	(%)	(n)	(%)
Age					
	14	15	50.0	15	50
	15	8	26.7	12	40
	16	7	3.3	3	10
Grade					
	Primary	15	50	3	10
	Middle	15	50	27	90
Socio-economic Status					
	Low	4	13.3	9	30
	Lower-middle	13	43.3	16	53.3
	High	13	43.3	5	16.7

Note: N=60 (n= 30 for each group), % = Percentage

Table 1 represents the demographic characteristics of both experimental and control group participants. The total sample included 60 males only out of which there were 30 males in the control group (100%) and 30 in the experimental group (100%) . The age range of the sample was from 14 to 16 years. All the participants fell into the desired age range of the study in both the experimental group and control group.

In the experimental group, 15 participants had a primary school grade year (50 %) and 15 participants were in the middle grade (50%). In the control group, 3 participants had primary school grade year (10%) and 27 had middle school grade year (90%). All the study participants were from rural areas in both the experimental and control groups.

In the experimental group, 4 participants had a low socioeconomic status (13.3%), 13 participants had a lower-middle socio-economic status (43.3%) and 13 participants had high socioeconomic status (43.3%). In the control group, 9 participants had a low socioeconomic status

(30.3%), 16 participants had a lower-middle socio-economic status (53.3%) and 5 participants had high socioeconomic status (16.7%).

Figure 1 and Figure 2 illustrates the distribution of demographic characteristic (age in years) in control group and experimental group. Figure 3 and Figure 4 illustrates the distribution of demographic characteristic (school grades) in control group and experimental group. Figure 5 and Figure 6 illustrates the distribution of demographic characteristic (socioeconomic status) in control group and experimental group.

Figure 1

Distribution of control group participants age in years (n=30)

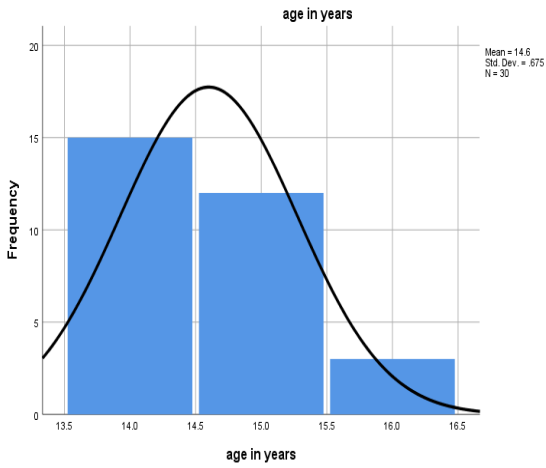


Figure 2

Distribution of experimental group participants age in years (n=30)

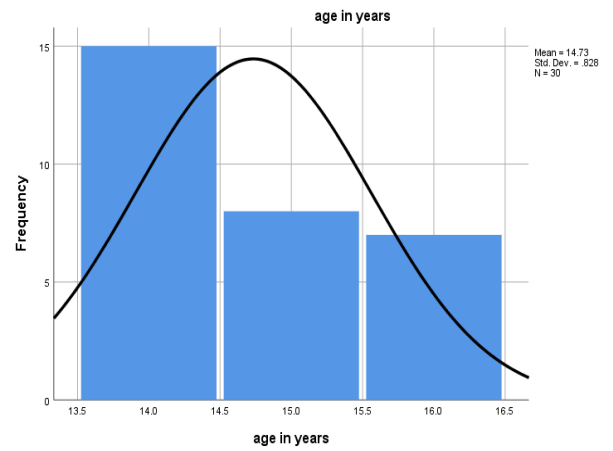


Figure 3

Distribution of control group participants school grades (n=30)

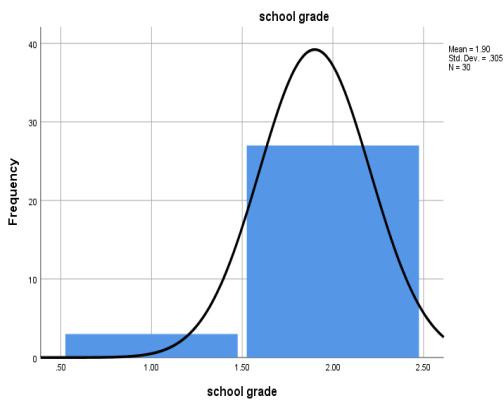


Figure 4

Distribution of experimental group participants school grades (n=30).

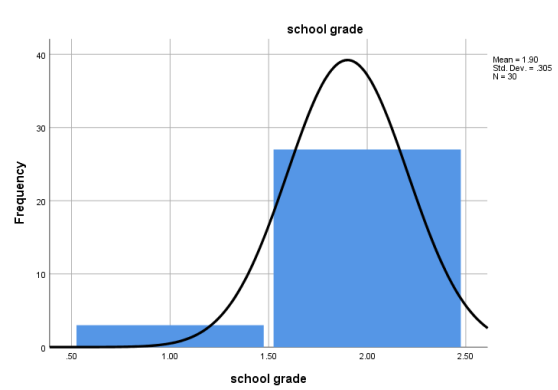


Figure 5

Distribution of control group participants socioeconomic status (n=30)

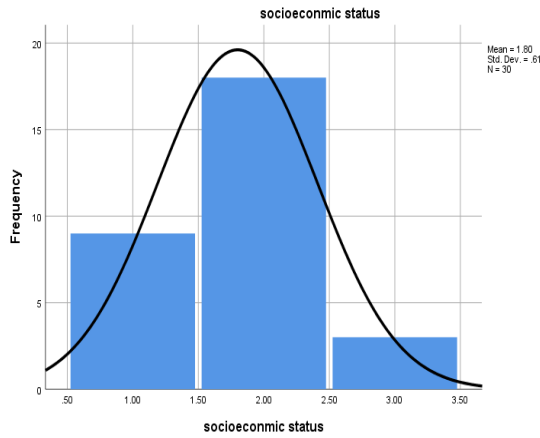
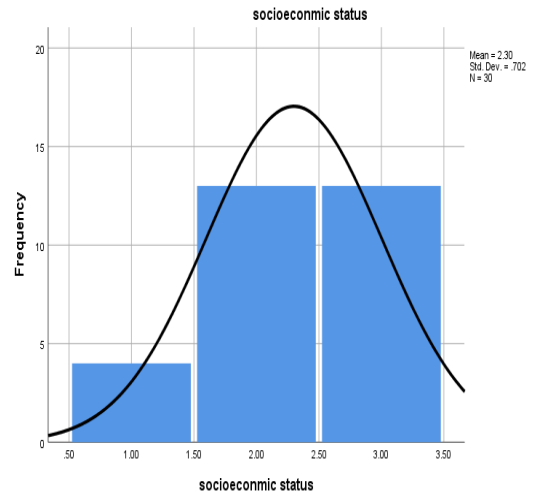


Figure 6

Distribution of experimental group participants socioeconomic status (n=30)



The histograms of participants demographic characteristics represented in the figures (Figure 1-Figure 6) shows a close to normal distribution when the values of skewness and kurtosis on both groups were considered.

Reliability of Scales and Sub-scales in terms of Cronbach's Alpha Reliability (α)

A reliability analysis in terms of internal consistency (*Cronbach's Alpha α*) of administered scales and subscales was computed.

Table 2

Cronbach's Alpha reliabilities for Attitude toward school (ATS) and Psychological well-being (PWB) Scales and Subscales

Scale	Subscale	N	M	SD	α	Range		Skewness
						Potential	Actual	
ATS		22	52.1	8.6	.06	22-110	38-80	1.1
	Teaching	3	6.8	1.5	.68	3-10	3-15	-.08
	School Image	4	8.7	3.2	.52	5-18	4-20	1.0
	Loneliness at School	3	9.1	2.4	.11	9-26	3-15	-.82
	Testing & Feedback	4	8.1	2.4	.10	2-10	4-20	.82
	Reluctance	6	15.0	4.0	.47	4-17	6-30	1.1
	Belongingness to School	2	3.8	2.2	.54	4-15	2-10	1.1
PWB		18	86.3	9.0	.46	18-126	58-106	-1.1
	Autonomy	3	13.1	3.0	.05	7-26	3-21	.05
	Environmental Mastery	3	13.9	3.2	.06	6-21	3-21	-.00
	Personal Growth	3	15.3	3.3	.06	7-21	3-21	-.67
	Positive Relations with others	3	12.7	2.4	.46	6-19	3-21	-.36
	Purpose in Life	3	16.1	3.8	.27	8-21	3-21	-.31
	Self-Acceptance	3	15.0	3.3	.24	3-21	3-21	-1.0

Note: N=Total number of items, M= Mean, SD= Standard Deviation, α = Cronbach's alpha, ATS=Attitude toward school, and PWB= Psychological well-being scale.

Table 2 presents the Cronbach alpha reliability for the scales and subscales. On the translated Urdu version of the attitude towards the school scale, the subscales including teaching, school image, loneliness at School, testing & feedback, reluctance, and belongingness to school the Cronbach's alpha was found to be overall reliable ($\alpha=.60$). The subscales of the psychological well-being scale including Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life, and Self-Acceptance were found to be overall less reliable ($\alpha=.46$) on the translated Urdu version of the scale.

Descriptive Statistics of Scales

Descriptive statistics of scales and sub-scales were computed to determine the normal distribution of scores during the pre-test and post-test of both the experimental group and control group.

Table 3

Mean, Median, Mode, Standard deviation, Skewness, Kurtosis, and Kolmogorov-Smirnov test statistics of Attitude toward school and Psychological well-being scores on control group

Scales	<i>M</i>	<i>Median</i>	<i>Mode</i>	<i>SD</i>	Skewness	Kurtosis	K-S	<i>p</i>
Attitude toward school (Pre-test)	50.6	50.0	48.0	6.6	.31	-.67	.12	.20
Attitude toward school (Post-test)	53.3	54.1	40.0	10.9	.69	.42	.13	.17
Psychological well-being (Pre-test)	86.9	89.0	89.0	9.0	-.49	.84	.12	.20
Psychological well-being (Post-test)	89.5	89.5	98.0	7.2	-.57	.20	.11	.20

Note: M= Mean, SD= Standard Deviation, K-S= Kolmogorov-Smirnov, p= K-S significance value($p>.05$)

Table 3 shows descriptive properties of the Attitude toward school and Psychological well-being scale. For the control group, the K-S value demonstrates normal distribution of the scores in both pre-test and post-test as it is not significant ($p>.05$) while taking into consideration the values of skewness and kurtosis and the shape of the histogram.

Figures 7 and Figure 8 illustrate the distribution of pretest and posttest scores across attitude toward school scale for the control group. Figures 9 and 10 illustrate the distribution of pretest and posttest scores across psychological well-being scale for the control group.

Figure 7

Distribution of scores across scale Attitude toward school (ATS) at pre-test of the control group (n=30).

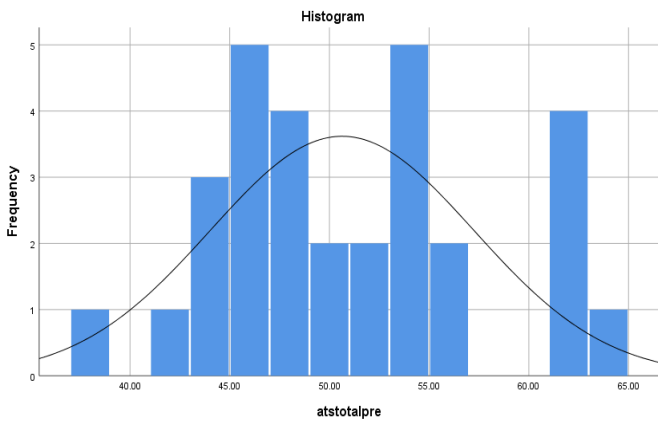


Figure 8

Distribution of scores across scale Attitude toward school (ATS) at post-test of the control group (n=30).

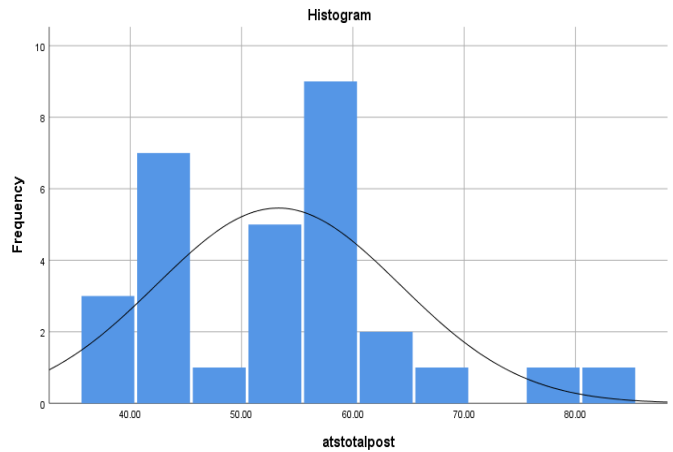


Figure 9

Distribution of scores across scale psychological well-being (PWB) at pre-test of the control group (n=30.).

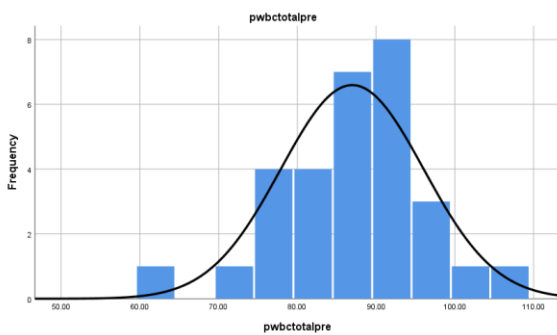


Figure 10

Distribution of scores across scale psychological well-being (PWB) at post-test of the control group (n=30).

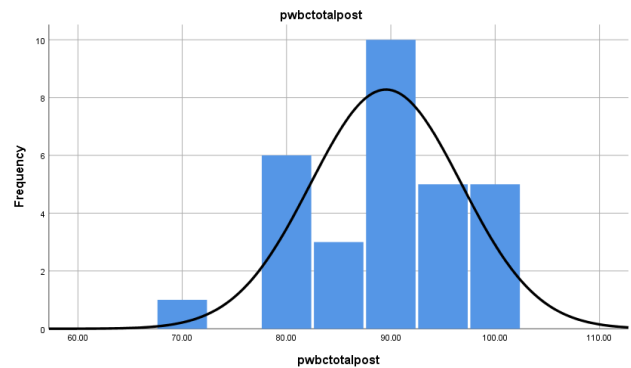


Table 3.1

Mean, Median, Mode, Standard deviation, Skewness, Kurtosis, and Kolmogorov-Smirnov test statistics of Attitude toward school and Psychological well-being scores on experimental group

Scales	<i>M</i>	<i>Median</i>	<i>Mode</i>	<i>SD</i>	Skewness	Kurtosis	K-S	<i>p</i>
Attitude toward school (Pre-test)	50.0	50.0	48.0	10.25	1.1	.76	.19	.07
Attitude toward school (Post-test)	52.6	49.0	40.0	9.21	.25	-1.2	.13	.16
Psychological well-being (Pre-test)	85.6	86.5	90.0	9.2	-.93	1.86	.16	.08
Psychological well-being (Post-test)	85.0	85.0	81.0	7.6	-.35	-.02	.07	.20

Note: M= Mean, SD= Standard Deviation, K-S= Kolmogorov-Smirnov test, p=K-S significance value($p>.05$)

Table 3.1 shows descriptive properties of the Attitude toward school and psychological well-being scales. For the experimental group, the K-S value demonstrates normal distribution of the scores in both pre-test and post-test as it is not significant ($p>.05$) while taking into consideration the values of skewness and kurtosis and the shape of the histogram.

Figures 11 and Figure 12 illustrate the distribution of pretest and posttest scores across attitude toward school scale for the experimental group. Figures 13 and Figure 14 illustrate the distribution of pretest and posttest scores across psychological well-being scale for the experimental group.

Figure 11

Distribution of scores across scale Attitude toward school (ATS) at pre-test of the Experimental group (n=30).

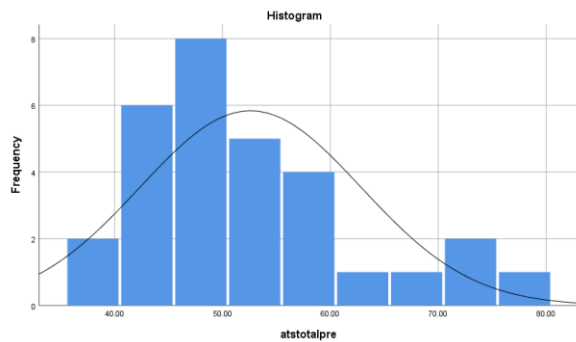


Figure 12

Distribution of scores across scale Attitude toward school (ATS) at post-test of the Experimental group (n=30).

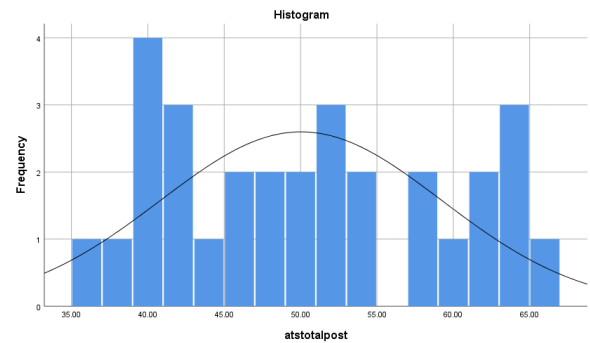


Figure 13

Distribution of scores across the scale psychological well-being (PWB) at pre-test of the Experimental group (n=30).

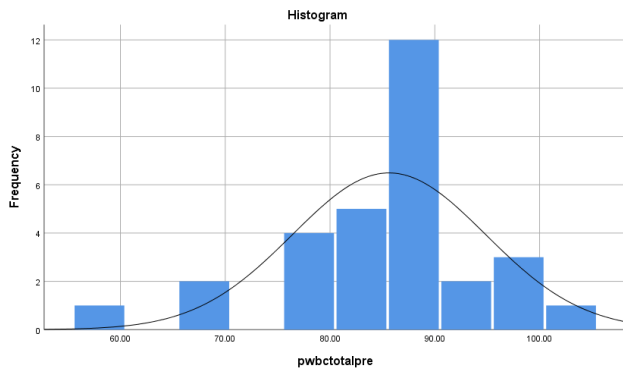
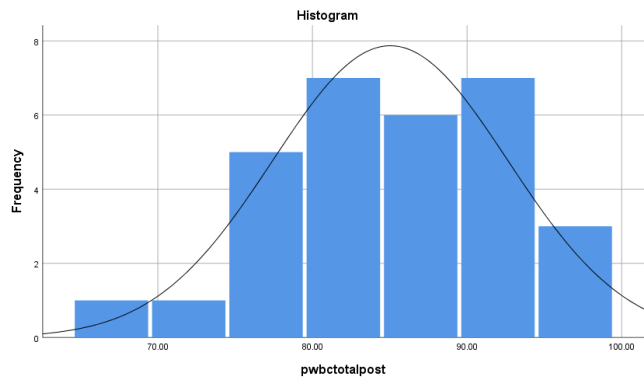


Figure 14

Distribution of scores across the scale psychological well-being (PWB) at post-test of the Experimental group (n=30).



Hypothesis Testing

Hypothesis 1(H1): There will be a significant difference on the attitude towards school among adolescents at post-intervention.

The scores for “attitude toward school” in the experimental group and control group were normally distributed as reported by K-S statistics ($p>.05$) at both pretest and posttest. Hence, to find out pre-post differences paired sample t test was performed on both groups. The table below presents the results of paired sample t-test.

Table 4

Paired sample t-test for pre-post differences in “Attitude toward school”

	Pre-test		Post-test		<i>t</i>	<i>p</i>	Cohen`s <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Attitude towards school	50.0	9.2	52.6	10.3	2.0	.04	0.26

Note: *M*= Mean, *SD*= Standard Deviation, *p*= Significance value($p<.05$)

Table 4 above indicates that there is a significant increase in “Attitude toward school” scores for post-test ($t=2.0$, $p=.04$). It also indicates that there was a slight significant increase in mean scores for pre-test ($M=50.0$, $SD= 9.2$) and post-test ($M=52.6$, $SD= 10.3$). Furthermore, Cohen`s *d* indicates a small effect size.

Hypothesis 2 (H2): There will be a significant difference on the psychological well-being among adolescents at post-intervention.

The scores for “Psychological well-being” in the experimental group and control group were normally distributed as reported by K-S statistics ($p>.05$) at both pretest and posttest. Hence, to find out pre-post differences paired sample t test was performed on both groups. The table below presents the results of paired sample t-test.

Table 5

Paired sample t-test for pre-post differences in “Psychological well-being”

	Pre-test		Post-test		<i>t</i>	<i>p</i>	Cohen`s <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Psychological well-being	85.6	9.2	85.0	7.6	.43	.66	0.07

Note: M= Mean, SD= Standard Deviation, *p*= Significance value($p>.05$)

Table 5 above indicates that there is not a significant increase in “Psychological well-being” scores for post-test ($t=.43, p=.66$). It also indicates that there was no significant difference in mean scores for pre-test ($M=85.6, SD= 9.2$) and post-test ($M=85.0, SD= 7.6$). Furthermore, Cohen’s *d* indicates a small effect size.

Hypothesis 3 (H3): There will be a significant difference between the experimental and control group at post-testing.

Due to normal distribution of data as reported by K-S statistics ($p > .05$) independent sample t-test was performed to determine differences in scores between groups.

Table 6

Independent sample t-test for differences between groups at pretest and posttest

	Group	<i>N</i>	<i>M</i>	<i>SD</i>	<i>MD</i>	<i>df</i>	<i>t</i>	<i>p</i>	Cohen`s <i>d</i>
Pretest	Experimental	30	52.6	10.9	3.2	58	1.2	.21	0.32
	Control	30	50.0	9.2					
Posttest	Experimental	30	89.5	7.2	4.5	58	2.3	.02	0.60
	Control	30	85.0	7.6					

Note: *n*= Number of participants in each group, *M*= Mean, *SD*= Standard Deviation, *MD*= Mean Difference, *df*= Degree of freedom, *p*= Significance value

Table 6 above indicates no significant differences between experimental ($M= 52.6$, $SD=10.9$) and control group ($M= 50.0$, $SD=9.2$) at pre-test ($t=1.25$, $p=.21$). Furthermore, Cohen`s *d* indicates a small effect size at pre-test.

Table 6 also indicates significant differences between the experimental ($M=89.5$, $SD=7.2$) and control group ($M= 85.0$, $SD=7.6$) at post-test ($t=2.3$, $p=.02$). Furthermore, Cohen`s *d* indicates a medium effect size at post-testing.

Chapter-4 Discussion

A quasi-experimental design with a control group was used to test the effectiveness of the gardening intervention on adolescents' psychological well-being and attitude toward school for 21 days; consisting of 4 sessions. All study participants' baseline was measured at the pretest level. The control group received no intervention at the post-test level. The intervention was given to the experimental group over 21 days. After the intervention, both the experimental and control groups' psychological well-being and attitude toward school were measured at the post-test level to see if there was a difference between the pre-test and post-test of each group.

The study's sample consists of 60 male participants (N=60) who were school-aged adolescents (14-16 years) from a government school in Rawat, Rawalpindi. Considering the quasi-experimental design with convenient sampling 30 males (N=30) were in the control group (100%) and 30 (N=30) in the experimental group (100%) at post-testing. All of the respondents in the study are from government schools and most were from lower-middle socio-economic backgrounds.

The questionnaire used in this study includes a demographic sheet, Psychological well-being scale (PWB) brief version by Ryff, and an Attitude toward school scale (ATS) by Seker. In the main study, Cronbach's alpha for the brief translated Urdu version of the Psychological well-being scale was 0.80 which is considered good reliability (Khan & Batool, 2020). The value of Cronbach's alpha of PWB was found to be 0.46 in this study, which is comparable to PWB subscales including; Autonomy=0.54, Environmental Mastery=0.65, and Personal Growth=.06, Positive Relations with Others=.46, Purpose in Life=.27 and Self-Acceptance=.24. One of the main reasons for the low reliability of the PWB scale in this study is that the translated brief Urdu

version of the scale had fewer items in the sub-scales and the precision of the reliability estimate was impacted by the small sample size (N=60) in this research study (Field et al., 2013).

In the main study, Cronbach's alpha for the English version of the Attitude toward school scale was 0.76 which is considered good reliability (Potvin, 2014). The value of Cronbach's alpha of translated Urdu version of the ATS scale was found to be 0.63 which is considered moderate to good reliability with a small sample size (N=60), comparable to ATS subscales including; Teaching=.68, School Image=.52, Loneliness at School=.11 Testing & Feedback=.10, Reluctance=.47 and Belongingness to School=.54.

Descriptive statistics were computed to determine the normal distribution of the collected data. The results indicated that the data were normally distributed as the skewness and kurtosis and Kolmogorov-Smirnov statistic was in a normal desired range for both pre and post-test conditions.

Firstly, it was hypothesized in the study that the attitude toward school of school-going adolescents would improve after gardening intervention; at post-testing. However, the findings from Paired sample t-test analysis suggested that there was a significant difference in post-testing on the measure of attitude toward school as compared to pre-testing. One of the reasons of significant results is as it was found in literature that nature-based interventions, as opposed to simply being exposed to green space, provide opportunities to connect with nature, derive social support, and engage adolescents in physical and purposeful activity thus shaping their attitudes and behaviors (Richardson et al., 2018).

The second hypothesis of study stated that the psychological well-being of school-going adolescents would improve after the gardening intervention; at post-testing. The data generated from Paired sample t-test analysis suggested that there was insignificant difference in the

psychological well being of government school students at post-testing. Literature suggested that the type of school does not affect the psychological well-being in both public and private schools but there are various other risk factors; including physical, developmental, and environmental factors which can impact an adolescent's psychological well-being (Raphael & Paul, 2014). Another reason for the insignificant finding of the hypothesis is that the literature describes that students from rural areas have higher psychological well-being than the students from urban areas (Kaur et al., 2016). Another reason for the insignificant results were the use of brief less reliable Psychological well-being measure in this study which impacted the results of second hypothesis of this research study (Peters, 2014).

An Independent sample t-test was computed to determine the statistical difference between the experimental and control group. There was a significant value for the t-test at post-testing which describes that the intervention was proven to be beneficial for achieving sufficient outcomes. However, with respect to literature the frequency and duration of gardening sessions should be considered to achieve specific outcomes for adolescents' academic motivations and optimal psychological health outcomes (Soga & Gaston, 2015).

Conclusion

The current study explored the effect of the gardening intervention on psychological well-being and attitude toward school of school-going adolescents by using a pre and post-test quasi-experimental study design. The difference of mean values in the pre and post-test for both measures show desired shifts. It was concluded that a significant difference between the experimental group's pre-test and post-test results supports the assumption that gardening can improve the adolescent's attitude toward school and can have positive impact on psychological health. Though, there were statistically insignificant results on the psychological well-being of adolescents. Based on such findings, more research is required to determine the guidelines for frequency and duration to design the gardening interventions that could be useful for fostering field research with strong scientific value and specific outcomes. Given the benefits of gardening, it is worthwhile to pursue additional high-quality studies.

Limitations and Recommendations

The current research was a quasi-experimental study conducted on school-aged adolescents (14-16 years) to observe the impact of a gardening intervention on adolescents' psychological well-being and attitude toward school. Although the study contributes to research, it has the following limitations and recommendations.

1. In this study convenient sampling technique was used, it is essential to exercise caution before generalizing the findings of this study. Random sampling should be used in future studies to achieve more generalized results.
2. The study was conducted over a specific period so the results may not be generalizable if the study's duration is extended. Further studies should take into account the time required to deliver the intervention with appropriate control.
3. In this study self-report questionnaires were used, which could result in social desirability and response bias. Because there was no way to validate the participant responses; social desirability should be considered in future studies.
4. Another limitation of the study is the scarcity of related literature on the study's core variables in Pakistan. As a result, the discussions relied heavily on cross-cultural literature, which may not reflect the dynamics of Pakistan's population.
5. The reliability of the psychological well-being brief measure for this study yielded low reliability (.46). For future studies, an alternate well-being measure with high reliability should be used.
6. The study's sample size was limited to male school-aged adolescents (14-16 years) of primary and middle grades from rural schools. More diverse educational backgrounds, a

wider age range, and the inclusion of the female gender are required to obtain more accurate generalizability of the research study.

Implications

The findings of the study provide an important contribution to the existing knowledge on the impact of gardening intervention on school-going adolescents' psychological well-being and attitude toward school. According to the current study, students from rural areas have higher levels of psychological well-being but the environment of rural educational institutions stresses them out thus negatively influencing their attitudes toward their school environment. As a result, it is suggested that a potential realization of this intervention should be developed in the educational institutions of Pakistan.

The findings of the study also suggested that gardening can enhance the positive attitudes towards the learning environment which can, in the long run, alleviate and prevent a variety of mental health issues confronted by adolescents in today's society during their school years. In Pakistan government and private educational institutions should consider gardening as a beneficial intervention and encourage students to engage in regular garden interactions. Such strategies and practices in educational institutions would help to significantly reduce mental health inequalities while at the same time sustaining the academic motivation of students toward their learning environment. Furthermore, this research also provides culturally appropriate literature for school-based gardening intervention activities that is sufficient to achieve specific outcomes to achieve adolescents' academic motivations and optimal psychological health outcomes.

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Appendices

- A:** Support Letter
- B:** Information sheet
- C:** Informed consent
- D:** Assent Form
- E:** Demographics
- F:** Attitude towards school scale (Urdu)
- G:** Psychological Well-being scale (Urdu)
- H:** Intervention
- I:** Field notes

Support Letter



Appendix B

Information sheet



معلوماتی فارم

میں سانیہ افضل، کیپٹل یونیورسٹی آف سائنس اینڈ ٹیکنالوجی میں شعبہ نفسیات کی طالب علم ہوں، اور میں آپ کے بچے کو ایک تحقیق میں حصہ لینے کی دعوت دینا چاہتی ہوں۔ آپ کو فیصلہ کرنے سے پہلے یہ سمجھنے کی ضرورت ہے کہ تحقیق کیوں کی جا رہی ہے اور اس میں کیا کرنا ہوگا۔

برائے مہربانی! مندرجہ ذیل معلومات کو احتیاط سے پڑھیں۔ اگر آپ مزید جاننا چاہتے ہیں تو آپ سوالات پوچھ سکتے ہیں۔ اس تحقیق میں شرکت کی اجازت دینے کا فیصلہ کرنے کے لیے آپ ایک دن کا وقت لے سکتے ہیں۔

تحقیق کا مقصد: باغبانی کے پروگرام کی مختلف سرگرمیوں کے ذریعے نو عمر اسکول جانے والے طلباء کی نفسیاتی صحت اور ان کے اسکول کی طرف رویوں کو بہتر بنانا ہے۔

شرکت کے لیے درکار وقت: اس تحقیق میں شرکت کے لئے 21 دن روزانہ سیشن ہوں گے۔

آپ کو تحقیق میں حصہ لے کر کیا کرنا ہوگا؟

اس تحقیق میں حصہ لینے کے لیے بچے کی رضامندی کے ساتھ ان کے والدین کی رضامندی بھی ضروری ہے۔ اس کے بعد کچھ بنیادی معلومات کا فارم (Demographic sheet) اور سوال نامے (Questionnaires) بھرنے ہوں گے۔ اجتماعی طور پر باغبانی کروائی جائے گی، جس میں بچے کو ایک پودا اگانے کے بعد 21 دن تک اُسکی دیکھ بھال کرنی ہوگی۔

اس تحقیق کی معلومات کس طرح استعمال کی جائیں گی؟

طلباء کے جوابات کو سختی سے خفیہ اور گمنام رکھا جائے گا اس کے علاوہ نتائج کے شائع ہونے کے دوران آپکی شناخت کو کسی بھی صورت میں ظاہر نہیں کیا جائے گا۔

تحقیق میں حصہ لینے کے کیا فوائد یا نقصانات ہیں؟

اس تحقیق میں حصہ لینے کے کوئی ذاتی یا تعلیمی فوائد یا نقصانات نہیں ہیں۔ طلباء شرکت سے دستبردار ہونے کا فیصلہ کر سکتا / سکتی ہے۔

سوالات یا مزید معلومات کے لئے مجھے کس سے رابطہ کرنا چاہئے؟

کسی بھی سوال یا مسئلے کی صورت میں آپ یہاں رابطہ کر سکتے ہیں۔

saniaafzal0307@gmail.com

کیپیٹل یونیورسٹی آف سائنس اینڈ ٹیکنالوجی، شعبہ نفسیات۔

مددگاروں کا پتہ:

Well-being center

رابطہ:

Ext: 051-111555666 (296)

یہاں پر آپ صبح 9 سے 2 بجے تک جاسکتے ہیں۔

پتہ: کیپیٹل یونیورسٹی آف سائنس اینڈ ٹیکنالوجی، کہوڑہ روڈ اسلام آباد

یوتھ ہیلپ لائن: 0800 22444 اس نمبر پر زیادہ تر فون لائن سے مفت کال کر سکتے ہیں (موبائل سے عام ریٹ کے حساب سے بھی کال کی جاسکتی

ہے)۔ یہ صبح 10 سے رات 8 تک کھلی رہتی ہے

Appendix C

Consent Form

(To be Filled by Parents/ Guardian of the Child)

والدین / سرپرست کا اجازت نامہ



میں تصدیق کرتا / کرتی ہوں کہ میں نے معلوماتی پرچہ پڑھ اور سمجھ لیا ہے۔ اور مجھے سوال پوچھنے کا موقع دیا گیا ہے۔ میں نے اپنے بچے کو اس تحقیق میں اپنی مرضی سے شرکت کی اجازت دی ہے اور میرے بچے کو تحقیق کے دوران کسی بھی وقت اپنی تعلیمی سہولتوں کے متاثر ہوئے بغیر دستبردار ہونے کا حق ہے۔ میں سمجھتا ہوں کہ سوالناموں سے حاصل کردہ معلومات کو گمنام رکھا جائے گا۔ اور صرف تحقیق کے مقاصد کے لیے استعمال کیا جائے گا۔ میں اس تحقیق میں اپنے بچے کو حصہ لینے کی اجازت دیتا / دیتی ہوں۔

دستخط:

تاریخ:

Appendix D

Assent Form
(To be filled by the child)



میں اس بات کی تصدیق کرتا/کرتی ہوں ہے کہ مجھے اس پروگرام کے بارے میں اور اس میں ہونے والی سرگرمیوں اور طریقہ کار کے بارے میں معلومات فراہم کی گئی ہیں۔ میں جانتا/جانتی ہوں کہ میری شرکت رضاکارانہ ہے اور میں کسی بھی وقت بغیر کسی فائدے یا نقصان کے اپنی شرکت ختم کرنے کا حق برقرار رکھتا/رکھتی ہوں۔ میں سمجھتا/سمجھتی ہوں کہ میری معلومات خفیہ رہیں گی اور صرف تحقیقی پروگرام کے مقاصد کے لئے استعمال کی جائیں گی۔ میں یہ بھی جانتا/جانتی ہوں کہ نتائج کے شائع ہونے کے دوران میری شناخت کسی بھی طرح ظاہر نہیں کی جائے گی۔ میں اس تحقیق میں حصہ لینے کے لئے رضامند ہوں۔

دستخط: _____

تاریخ: _____

Appendix E

Demographic Sheet

ڈیموگرافک شیٹ



	نام	1
	تاریخ پیدائش	2
	عمر	3
	تعلیم	4
	رہائش گاہ	5
	والدین کی آمدنی	6
	کوئی ذہنی یا جسمانی بیماری	7

Appendix F

Psychological well-being scale by (Carol D. Ryff, 2015)
Translated Urdu Version

ہدایات:

ہر بیان کے نیچے ایک رد عمل کا دائرہ اس بات کی نشاندہی کرے گا کہ آپ کتنا متفق یا متفق نہیں ہیں

بہت زیادہ متفق	کسی حد تک متفق	تھوڑا سا متفق	نہ ہی متفق ہیں اور نہ ہی غیر متفق	تھوڑا سا متفق	کسی حد تک متفق	بہت زیادہ متفق	بیانات	نمبر شمار
7	6	5	4	3	2	1	مجھے اپنی شخصیت کے بیشتر حصے / خصوصیات پسند ہیں۔	-1
7	6	5	4	3	2	1	جب میں اپنی زندگی کی کہانی دیکھتا ہوں تو مجھے بہت خوشی ہوتی ہے کہ اب تک معاملات کس طرح حل ہوئے ہیں۔	-2
7	6	5	4	3	2	1	کچھ لوگ بے مقصد زندگی گزارتے ہیں لیکن میں ان میں سے نہیں ہوں۔	-3
7	6	5	4	3	2	1	روزمرہ کی زندگی کے تقاضے اکثر مجھے پریشان کرتے ہیں۔	-4
7	6	5	4	3	2	1	بہت سے طریقوں سے زندگی میں اپنی کامیابیوں سے مایوس ہوتا ہوں۔	-5
7	6	5	4	3	2	1	قربی تعلقات کو برقرار رکھنا میرے لیے مایوس کن رہا ہے۔	-6
7	6	5	4	3	2	1	میں ایک دن میں ایک دن کی ہی زندگی سمجھ کر گزارتا ہوں اور مستقبل کے بارے میں وقتاً نہیں سوچتا۔	-7
7	6	5	4	3	2	1	عام طور پر میں یہ محسوس کرتا ہوں کہ میں جن حالات میں رہتا ہوں اس کا ذمہ دار خود ہوں۔	-8
7	6	5	4	3	2	1	میں روزمرہ کی ذمہ داریوں کو اچھی طرح نبھاتا ہوں۔	-9

7	6	5	4	3	2	1	مجھے کبھی کبھی ایسے لگتا ہے جیسے میں نے زندگی میں جو کچھ کرنا تھا سب کر لیا ہے۔	-10
7	6	5	4	3	2	1	میرے نزدیک زندگی سیکھنے تبدیل ہونے اور ترقی کا ایک مستقل عمل رہا ہے۔	-11
7	6	5	4	3	2	1	میرے خیال میں یہ ضروری ہے کہ نے تجربات ہوں جو میرے اور دنیا کے بارے میں میری سوچ کو چیلنج کریں۔	-12
7	6	5	4	3	2	1	لوگ مجھے ایک دینے والے کی حیثیت سے بیان کریں گے اور اپنا وقت دوسروں کو دینے کے لیے تیار ہوں گے۔	-13
7	6	5	4	3	2	1	میں نے بہت عرصہ پہلے اپنی زندگی میں بہتری یا تبدیلیاں لانے کی کوشش ترک کر دی۔	-14
7	6	5	4	3	2	1	میں مضبوط رائے والے لوگوں سے متاثر ہوں۔	-15
7	6	5	4	3	2	1	میں نے دوسروں کے ساتھ بہت سرگرم اور بھروسہ مند تعلقات کا تجربہ کیا ہے۔	-16
7	6	5	4	3	2	1	مجھے اپنی رائے پر اعتماد ہے یہاں تک کہ دوسرے لوگوں کی سوچ کے مطابق مختلف ہوں۔	-17
7	6	5	4	3	2	1	میں اپنے آپ کو اپنی سوچ کے مطابق جانچتا ہوں نہ کہ دوسروں کی اقدار اور رائے کے مطابق۔	-18

Appendix G

Attitude towards school scale by (Hasan Seker, 2011)
Translated Urdu version

ہدایات

برائے مہربانی نیچے دیئے گئے عشائیوں کو پڑھیں۔ جواب منتخب کریں۔ اور ہر ایک کے آگے دی گئی رد عمل کی جگہ کو اپنے جواب کے متعلق لکھیں۔

1- میں بہت زیادہ متفق ہوں

2- میں متفق ہوں۔

3- میں کسی حد تک متفق ہوں۔

4- میں غیر متفق ہوں۔

5- میں بہت زیادہ غیر متفق ہوں۔

نمبر شمار	فقرات	میں بہت زیادہ متفق ہوں	میں متفق ہوں	میں کسی حد تک متفق ہوں۔	میں غیر متفق ہوں	میں بہت زیادہ غیر متفق ہوں۔
1-	میں اپنے پڑھائی کے مسائل آسانی سے بیان کرتا / کرتی ہو۔	1	2	3	4	5
2-	طلباء کو سیکھنے کی سرگرمیوں میں مدد فراہم کی جاتی ہے۔	1	2	3	4	5
3-	میں اسباق / پڑھائی سے بیزاری محسوس نہیں کرتا / کرتی۔	1	2	3	4	5
4-	میں خود کو خوش قسمت سمجھتا / سمجھتی ہوں کہ میں اس اسکول کا طالب علم ہوں۔	1	2	3	4	5
5-	اس اسکول میں پڑھنا ایک اعزاز کی بات ہے	1	2	3	4	5
6-	میں اسکول میں دی گئی سہولیات کا مناسب استعمال کرتا / کرتی ہوں۔	1	2	3	4	5
7-	میری خواہش ہے کہ کاش میں کسی اور اسکول کا طالب علم ہوتا / ہوتی۔	1	2	3	4	5

نمبر شمار	فقرات	میں بہت زیادہ متفق ہوں	میں متفق ہوں	میں کسی حد تک متفق ہوں۔	میں غیر متفق ہوں	میں بہت زیادہ غیر متفق ہوں۔
8-	میں کمرہ جماعت میں تنہا محسوس کرتا / کرتی ہوں۔	1	2	3	4	5
9-	میں اپنے اساتذہ کے ساتھ مؤثر گفتگو (بات چیت) کرنے کے قابل نہیں ہوں۔	1	2	3	4	5
10-	اساتذہ صرف محنتی طلباء میں دلچسپی رکھتے ہیں۔	1	2	3	4	5
11-	تنقید اور سوالات کے مواقع دیے جاتے ہیں۔	1	2	3	4	5
12-	طلباء کی غلطیاں انہیں برا محسوس کروائے بغیر درست کی جاتی ہیں۔	1	2	3	4	5
13-	امتحانات میری حقیقی کامیابی کو ماپتے ہیں۔	1	2	3	4	5
14-	امتحانات کے سوالات واضح اور سمجھنے کے قابل ہوتے ہیں۔	1	2	3	4	5
15-	گھر والوں کے درمیان گفتگو کی وجہ سے میں سکول کی طرف کم مثبت محسوس کرتا / کرتی ہوں۔	1	2	3	4	5
16-	میرے گھر والے میرے اسکول جانے کو غیر ضروری سمجھتے ہیں۔	1	2	3	4	5
17-	میرے قریبی لوگوں کا اسکول کی طرف منفی رجحان میرے اسکول کے شوق کو منفی طور پر متاثر کرتا ہے۔	1	2	3	4	5
18-	میری کوششوں کو نظر انداز کیا جاتا ہے جس سے میرا پڑھائی کا شوق کم ہو جاتا ہے۔	1	2	3	4	5
19-	مجھے محسوس ہوتا ہے کہ میں بہت سی نصابی سرگرمیوں سے الگ / لا تعلق ہوں۔	1	2	3	4	5
20-	میں بہت سے کورسز میں حصہ نہیں لے سکتا / سکتی۔	1	2	3	4	5
21-	میں اسکول نہیں جانا چاہتا / چاہتی۔	1	2	3	4	5
22-	مجھے نہیں لگتا کہ میں اس اسکول سے تعلق (حصہ) رکھتا / رکھتی ہوں۔	1	2	3	4	5

Appendix H

Gardening Intervention

Gardening: A feasibility testing of intervention for Psychological well-being and attitude toward school among school- going Adolescents

Total days of program: 21

Total sessions: 4

Session 1 (Plantation)

Stimulation And Acceptance

DAYS	TIMING	ACTIVITY
1	45 minutes to 1-hour	Seedbed preparation (cleaning the site, pot preparation, cleaning, and painting the pots).
2	20 to 30 minutes	Written and verbal information will be given to the participants about the plant (its historical and traditional uses and botany of plant, etc.) they will grow. (Detailed of this information is given in the Appendix).

3	20 to 30 minutes	Soil and compost mixing (organic matter), extracting any substance from it, filling the pots, and cleaning the area.
4	20 to 30 minutes	Planting the baby plant.
5	10 to 15 minutes	Maintaining the moisture of the plant area.
6	10 to 15 minutes	Taking care of plants (cleaning the dust off, water if needed.) Have physical touch with the plant and notice the texture, and how the soil feels in your hands.

Session 2
Purification

DAYS	TIMING	ACTIVITY
7 to 11	10 to 15 minutes for each participant each day	<p>Along with taking care of plants and watering, participants will be asked to engage with plants. On all 5 days, they will be asked to release negative emotions during a breathing exercise. Participants will be instructed to notice the change in their bodies and emotions. This session will be individual-based.</p> <p>The rationale of this activity is to make them vent out their negative emotions, reveal their innermost feelings to nature, and have an honest conversation.</p>

Session 3
Insight

DAYS	TIMING	ACTIVITY
12 to 16	15 minutes for each participant each day	Along with taking care of plants, participants will be asked to engage with plants and talk about what kind of positive emotions they have felt during the process or today. What are the problems they are going through, and what can be the possible solutions?

Session 4
Recharging and Change

DAYS	TIMING	ACTIVITY
17 to 19	20 minutes	Group activity of taking care of each other's plants. The rationale of this activity is to bring them together and strengthen social interaction and group cohesiveness.
20	20 minutes	Same activity as above
21	1-hour	Group activity in the natural environment in which participants will be asked to share their experiences about what emotional, behavioral, and cognitive changes they have experienced during this time.

**Appendix
(Activities)**

پہلے دن کی سرگرمی

21 دن کا یہ پروگرام ہے جس میں ہم نے گارڈنگ کرنی ہے۔ اسے ہم آج سے شروع کریں گے۔ پہلے دن کی سرگرمی (ایکٹیوٹی) تقریباً 45 منٹ سے 1 گھنٹے تک کا وقت لے سکتی ہے یا اس سے بھی کم وقت لگ سکتا ہے۔ لیکن آپ کو یہ آرام سے کرنا ہوگا، اس میں کوئی جلدی نہیں ہے نہ ہی بہت زیادہ تھکاؤ والا کام ہوگا۔ آپ جس قدر پرسکون ہو کر اس کو کر سکتے ہیں آپ نے کرنا ہے۔ کچھ ہدایات آپ کو دی جائیں گی جس کے مطابق آپ کو یہ سرگرمی کرنی ہوگی۔

یہ ایک گروپ ایکٹیوٹی ہے جس میں ہر فرد کو ایک گملا دیا جائے گا آج کے دن کے لیے ہمارا یہی کام ہوگا کہ ہم نے سب سے پہلے گملوں کو صحیح طریقے سے صاف کرنا ہے اور رنگ کرنا ہے۔ ویسے تو یہ گملے بہت زیادہ گندے نہیں ہیں، دھلے ہوئے ہیں لیکن پھر بھی تھوڑی بہت جو گرد یا مٹی وغیرہ ہے وہ آپ گیلے کپڑوں سے صاف کریں گے پھر اسے خشک کریں گے۔ اس کے بعد تین رنگ کے پینٹ (رنگ) میں سے ہر بندہ ہوں خود منتخب کرے گا کہ وہ کونسا رنگ کرنا چاہے گا پینٹ کرنے کے لئے آپ کو دستانے دیے جائیں گے۔ اس کے بعد آپ پینٹ کریں گے اور اسے خشک کریں گے آج کے لیے ہمارا اتنا ہی کام ہے۔ آپ لوگوں میں سے کوئی بھی اگر درمیان میں تھکاؤ محسوس کرتا ہے تو وہ بتا سکتے ہیں۔ آپ کو کسی جگہ پر کوئی مشکل پیش آتی ہے تو آپ پوچھ سکتے ہیں۔

دوسرے دن کی سرگرمی

(بچھلی ایکٹیوٹی کے جائزے کے بعد)

آج ہماری اس ایکٹیوٹی کا دوسرا دن ہے۔ جس میں آپ کو بتایا گیا تھا کہ ہم پودے لگائیں گے۔ پودوں سے متعلق آپ کو کچھ لکھی ہوئی معلومات دی جائے گی جو کہ آپ نے پڑھنی ہے اگر آپ میں سے کسی کو یہ معلومات پڑھنے میں مشکل پیش آرہی ہے تو یہ آپ کو بول کر بھی بتائی جائیں گی۔ اگر آپ کو کوئی چیز سمجھ نہیں آتی تو آپ بغیر ہچکچاہٹ کے پوچھ سکتے ہیں۔ ان معلومات کا مقصد آپ کی اس پودے سے واقفیت کرنا ہے تاکہ آپ اس کو غور سے پڑھے اور سمجھنے کی کوشش کریں اور اس کو زبانی یاد رکھنے کی کوشش کریں، کہ کس قسم کا پودا آپ کو دیا جا رہا ہے۔ پودے سے متعلق دی گئی معلومات اگلے صفحے پر درج ہیں۔



بلڈلیف پلانٹ

Iresine herbstii کا تعلق گل کیش (Amaranthaceae) خاندان سے ہے۔ اسے عام طور پر بلڈلیف، چکن گیزارڈ، ہیف سٹیک پلانٹ اور ہربسٹ کہا جاتا ہے۔ یہ جنوبی امریکہ، خاص طور پر برازیل سے تعلق رکھتا ہے۔ لیکن یہ ہندوستان اور ایشیا کے کئی حصوں میں پایا جاتا ہے۔ یہ پودا چھوٹے تنوں اور چھوٹے سبز یا سفید پھولوں پر مشتمل ہوتا ہے، لیکن پھولوں کے بجائے، یہ عام طور پر گھنے پتوں کے لیے اگائے جاتے ہیں۔ یہ پودہ جنوبی برازیل میں، زخم بھرنے کے لیے استعمال کیا جاتا ہے۔ اس کے پتے کینسر کے علاج میں استعمال ہوتے ہیں۔ دوسرے پودوں کے ساتھ مل کر بیماریوں کی تشخیص یا دیگر رسمی علاج میں استعمال کیا جاتا ہے۔

اس پودے کو اگانے کے لیے ہدایات:

یہ پودا پوری دھوپ یا جزوی سایہ والی جگہ پر لگائیں، اسے اُگنے کے لیے زرخیز یا نامیاتی طور پر بھرپور مٹی کی ضرورت ہوتی ہے۔ اس کا رنگ زیادہ دھوپ میں اگانے سے بہتر ہوتا ہے۔ پودہ لگانے سے پہلے کھاد کو مٹی میں اچھی طرح سے شامل کریں، جب تک کہ مٹی میں مادے زیادہ نہ ہوں۔ عام طور پر، سردیوں میں باہر کی نسبت گھر کے اندر گرم درجہ حرارت کی وجہ سے اگانا بہترین ہے۔ یہی وجہ ہے کہ گھروں کے اندر یہ اچھی طرح پھلتے ہیں۔ بارش نہ ہونے کی صورت میں ہر ہفتے پانی دے کر تمام گرمیوں میں مٹی کو یکساں طور پر نرم رکھیں۔ نمی کو بخارات بننے سے روکنے کے لیے نامیاتی پلچ (ادھ سڑی گھاس) کی 2 سے 3 اینچ (5-8 سینٹی میٹر) تہہ استعمال کریں۔ موسم خزاں اور سردیوں میں نمی کو کم کریں۔ اگر اسکے پتے لہجے اور باریک یا کمزور نظر آئے تو شاید یہ کافی روشنی حاصل نہیں کر رہے ایسی صورت میں پودے کو زیادہ دھوپ میں رکھیں۔ سردیوں میں، پودے کی پانی کی ضروریات اتنی زیادہ نہیں ہوتی ہیں۔ آپ ہفتے میں صرف ایک بار پانی دے سکتے ہیں۔ یاد رکھیں مٹی کو مکمل طور پر خشک نہ ہونے دیں۔ جڑوں کے سڑنے سے روکنے کے لیے پانی دینے کے بعد ڈریٹیج ٹرے کو ہمیشہ خالی کریں۔

فائکس

(Ficus. benjamina)



یہ پھولدار پودے کی ایک قسم ہے، جو ایشیا اور آسٹریلیا سے تعلق رکھتی ہے۔ اپنی خوبصورت نشوونما اور خراب حالات میں بھی اُگنے کی صلاحیت رکھنے کی وجہ سے یہ ایک بہت مشہور گھریلو پودا ہے۔ جو کہ معتدل یا درمیانے درجہ حرارت والے علاقوں میں پایا جاتا ہے۔ یہ روشن، دھوپ والے حالات میں بہترین نشوونما پاتا ہے، لیکن یہ کافی حد تک سارے کو بھی برداشت کر سکتا ہے۔ گرمیوں میں اسے درمیانی مقدار میں پانی دینے کی ضرورت ہوتی ہے اور سردیوں میں پانی صرف اسے خشک ہونے سے بچانے کے لیے کافی ہے۔ کم وقت میں اُگنے کے لیے لمبے دن، زیادہ یا معتدل درجہ حرارت سازگار حالات ہیں۔ گھر کے اندر اگانے پر، یہ

اپنے مقام کے لحاظ سے بہت بڑا ہو سکتا ہے اس لیے اس کی کٹائی یا جگہ تبدیل کرنے کی ضرورت پڑ سکتی ہے۔ اس کے علاوہ یہ دیکھا گیا ہے کہ یہ گھر کی اندرونی ہوا سے گیس فارملڈ ہائڈ (زہریلی گیس) کو مؤثر طریقے سے ہٹانے کی صلاحیت رکھتا ہے۔ اس کے کچھ استعمالات مندرجہ ذیل ہیں۔

اس کا لینیکس (شیرہ) معمولی زخموں کو بند کرنے کے لیے استعمال ہوتا ہے۔ چھال کارس جگر کے امراض میں استعمال ہوتا ہے۔ پتوں اور ٹہنیوں کو کیڑے مار دوا کے طور پر استعمال کیا جاتا ہے۔

اس کے لینیکس اور کچھ پھلوں کے عرق کو مقامی کمیونٹیز جلد کے امراض، سوزش، قے، ملیریا، ناک کے امراض اور کینسر کے علاج کے لیے استعمال کرتے ہیں۔ دنیا کے کچھ حصوں میں، اس کے پتوں اور پھلوں کے عرق کو مقامی کمیونٹیز جلد اور سانس کے امراض کے علاج کے لیے استعمال کرتی ہیں۔

اس پودے کو اگانے کے لئے ہدایات:

اس پودے کے لیے صحیح جگہ تلاش کرنا ضروری ہے۔ ایسی جگہ کا انتخاب کریں جہاں یہ روشنی ہو لیکن براہ راست دھوپ میں نہ رکھیں۔ کھڑکی سے چند فٹ کی پوزیشن بہترین ہے۔ اس بات کو یقینی بنائیں کہ پودا خشک جگہ پر نہیں ہے یا سردیوں میں ریڈی ایٹریا ہیٹر کی گرمی کے قریب نہ رکھیں۔ اس کو پھلنے پھولنے کے لیے کم از کم 16°C کے درجہ حرارت کی ضرورت ہوتی ہے، سردیوں میں 13°C سے زیادہ ٹھنڈا موسم ان کے لئے صحیح نہیں ہے۔

اس پودے کو ایک گہرے گملے میں لگائیں جس میں نکاسی کے سوراخ ہوں۔ پانی دینے کے بعد، اس بات کو یقینی بنائیں کہ اضافی پانی نکل جائے۔ پودے کی جگہ بار بار مت بدلیں، اس کی وجہ یہ ہے کہ اس پودے کے پتے بہت زیادہ گرتے ہیں۔ اس کو سنبھالتے وقت دستانے کا استعمال کریں۔

Heart-leaved Moonseed



ہارٹ لیومون سیڈ (Tinospora cordifolia) بھارت کی ایک اہم جڑی بوٹی ہے جو خون میں شوگر کی سطح کو کنٹرول کرنے اور مدافعتی نظام کو مضبوط بنانے میں مدد کرتی ہے۔ یہ جھاڑی خاص طور پر ہندوستان میں پائی جاتی ہے جہاں اسے امرتیا گڈوچی کے ناموں سے بھی جانا جاتا ہے۔ Tinospora cordifolia ذیابیطس، ہائی کولیسٹرول، الرجک ناک کی سوزش، پیٹ کی خرابی، گاؤٹ، میپائائٹس، سپینک السر کی بیماری (PUD)، بخار اور دیگر بیماریوں کے لیے استعمال کیا جاتا ہے۔

اس پودے کو اگانے کے لئے ہدایات:

یہ پودانی دن 4-6 گھنٹے کی مکمل سورج کی روشنی میں اچھی نشوونما پاتا ہے۔ جب پودا چھوٹا ہو تو اسے دوپہر کی سخت دھوپ میں رکھنے سے گریز کریں۔ گملے کو گہرائی سے اور یکساں طور پر

صرف اس وقت پانی دیں جب اوپر کی مٹی چھونے میں خشک محسوس ہو۔ دوبارہ پانی دینے سے پہلے مٹی کی سطح کو خشک ہونے دیں۔ گرمیوں کے دوران کثرت سے پانی دیں، لیکن سردیوں میں اس شرح کو کم کریں۔

غیر نامیاتی، کیمیائی فیڈ کے بجائے صرف نامیاتی کھاد کا استعمال کریں۔

یہ ایک نیل نما پودا ہے۔ باغ وغیرہ میں یہ دوسرے پودے کا سہارا لیتا ہے۔ آپ اس کی نیل کو جالی، لائٹھی یا بانس سے ترتیب دے سکتے ہیں۔ آج تک، اس پودے کو کیڑوں سے پاک جڑی بوٹی کے طور پر رپورٹ کیا گیا ہے۔ زیادہ پانی دینا ممکنہ مسائل کو دعوت دے سکتا ہے لہذا اس سے ہر قیمت پر پرہیز کریں۔

تیسرے دن کی سرگرمی

پچھلے دن کی ایکٹیوٹی کے جائزے کے بعد

آج کے دن ہم گملوں کے اندر مٹی بھرے گے تاکہ بعد میں اس میں پودا لگا سکے۔ آپ کو کھاد اور مٹی فراہم کی جائے گی۔ سب سے پہلے مٹی میں اگر کوئی غیر ضروری ذرات وغیرہ ہیں تو آپ وہ صاف کریں گے مٹی کو بھر بھر بنائیں گے صاف کرنے کے بعد فرش پر ہی مٹی کے اندر آپ نے کھاد مگس کرنی ہے۔ کھاد مگس کرنے کے بعد آپ اس کو اپنے گملوں کے اندر ڈال دیں گے۔ اس کے بعد آپ نے یہ جگہ صاف کر دینی ہے۔ کوشش کریں کہ جب آپ مٹی میں ہاتھ ڈالے تو اسے بھر پور طریقے سے محسوس کرنے کی کوشش کریں کہ آپ کے ہاتھ مٹی میں ڈالنے سے کس طرح کی کیفیات رونما ہو رہی ہے۔

چوتھے دن کی سرگرمی

پچھلی ایکٹیوٹی کے جائزے کے بعد:

آج آپ کو پودے دیے جائیں گے جو کہ آپ نے گملوں میں لگانے ہیں۔ آپ دستانوں کے بغیر بھی یہ کام کر سکتے ہیں لیکن اگر آپ کو کسی قسم کی خارش ہو رہی ہے تو آپ دستانے بھی استعمال کر سکتے ہیں۔ آپ نے سب سے پہلے مٹی کو تر کرنا ہے پھر اس میں پودا لگانا ہے اور مناسب مقدار میں پانی دینا ہے جو فائنکس لگا رہے ہیں انہوں نے اسے دھوپ کے مکمل سامنے نہیں رکھنا بلکہ ہلکی سی سایہ دار جگہ پر رکھیں۔ ریڈ بلڈ لیف پلانٹ کو زیادہ روشنی والی جگہ پر رکھنا ہے اس کا رنگ اس سے سبز ہوتا ہے۔

پانچویں دن کی سرگرمی

پچھلی ایکٹیوٹی کے جائزے کے بعد

فائنکس جس نے لگایا ہے وہ سپرے سے پتوں کو تھوڑا گیلا کر دیں۔ اگر کوئی گرد وغیرہ ہو تو صاف کر دے۔ اس کو بہت زیادہ دھوپ میں مت رکھیں اور نہ ہی اس کو بہت زیادہ پانی سے بھرے ہوئے گملے میں رکھنا ہے۔ ریڈ بلڈ لیف پلانٹ، چونکہ سردیاں ہیں اس لیے جہاں زیادہ روشنی آرہی ہوں وہاں رکھنا ہے۔ کیونکہ سب گملوں میں مٹی گیلی ہے اس لیے آج ہم پانی نہیں دیں گے۔

ہارٹ لیف پیٹ کے لیے بھی ہدایات ہیں اس دن صرف پتوں وغیرہ کو چھوسکتے ہیں یا گرد وغیرہ ہے تو صاف کر دیں۔

چھٹا دن

پچھلی ایکٹیوٹی کے جائزے کے بعد

اپنے ہاتھ کی انگلیوں سے چیک کریں کہ مٹی خشک تو نہیں ہے اگر خشک ہے تو پانی دینے کی ضرورت ہے آج آپ پودے اور گملے میں موجود مٹی کو چھو کے دیکھیں گے کہ یہ کیسا محسوس ہوتا ہے۔

سات سے گیارویں دن کی سرگرمی

مزید اب آگے پانچ دنوں میں آپ کو ایک ورزش کروائی جائے گی جو آپ نے اپنے پودے کی موجودگی میں کرنی ہے کوشش کریں کہ جو ہدایات آپ کو دی جائیں آپ ان پر مکمل عمل کریں۔

مندرجہ ذیل ہدایات کے مطابق ورزش کروائی جائے۔

- کرسی پر بیٹھتے وقت اپنی پیٹھ سیدھی رکھیں۔ اب اپنے جسم کو بالکل آرام دہ حالت میں لائیں لیکن کرسی پر لیٹیں نہ۔ اپنی آنکھیں بند کریں۔
- ایک ہاتھ اپنے پیٹ پر رکھیں، اپنی پسلیوں کے بالکل نیچے۔ دوسرا ہاتھ اپنے سینے پر رکھیں۔
- اب اپنی ناک سے آہستہ آہستہ، گہرا سانس لیں۔ اور اپنی سانس دو یا تین سیکنڈ تک روکیں۔ آہستہ آہستہ اپنے منہ سے سانس باہر نکالیں۔
- توجہ دیں کہ کیسے آپ کے پیٹ پر ہاتھ سانس کے ساتھ باہر جاتا ہے۔
- اس عمل کو کئی بار کریں جب تک کہ آپ کو پرسکون حالت میں نہ آجائے۔
- اب سانس لیتے ہوئے تصور کریں کہ جو ہوا آپ اپنی سانس کے ذریعے اندر لے کے جا رہے ہیں وہ آپ کے پورے جسم میں سکون پھیلا رہی ہے۔
- اب اس پودے کو تصور کریں جس کی آپ دیکھ بھال کر رہے ہیں۔ اس کے بڑھنے اور پھلنے کا تصور کریں۔

• جیسے ہی آپ سانس باہر نکالتے ہیں، تصور کریں کہ آپ کی تمام منفی جذبات، احساسات اور تجربات سانس کے ساتھ باہر نکل رہے ہیں۔

10 منٹ تک گہرا سانس لینے کی کوشش کریں یا جب تک کہ آپ پر سکون اور کم تناؤ محسوس نہ ہو۔

بارہ-سولہواں دن

پچھلی ایکٹیوٹی کے جائزے کے بعد

آج آپ نے بتانا ہے کہ پودے کی دیکھ بھال کرتے ہوئے آپ نے کس قسم کے جذبات محسوس کیے ہیں اس کے بعد ہم اور مزید چار دن ایسی ایکٹیوٹی کریں گے اب آپ نے یہ کرنا ہے کہ جیسے آپ نے آج بتایا ہے اسی طرح اگلے چار دن میں پودے کی دیکھ بھال کے بعد آپ اپنا تجربہ (ایکسپیرینس) شیئر کریں گے۔

سترہ-بیسواں دن

پچھلی ایکٹیوٹی کے جائزے کے بعد

آج سے آپ نے ایک دوسرے کے پودے کی دیکھ بھال کرنی ہے۔ آپ لوگوں کے پودے تبدیل کیے جائیں گے۔ اس کے بعد اگلے تین دن بھی آپ نے ایک دوسرے کے پودوں کی دیکھ بھال کرنی ہے۔ آپ ایک دوسرے سے ان کے پودوں کے بارے میں پوچھ بھی سکتے ہیں یا آپ کو ایک دوسرے سے مدد چاہیے وہ بھی دے سکتے ہیں۔

اکیسواں دن

پچھلی ایکٹیوٹی کے جائزے کے بعد

آج اس پروگرام کا آخری دن ہے۔ آج آپ سب باری باری سب کے سامنے اپنا تجربہ بیان کر سکتے ہیں کہ ان 21 دنوں میں آپ نے کیسا محسوس کیا آپ اپنے جذبات یا خیالات کا اظہار کر سکتے ہیں آپ کی کہی گئی کوئی بھی بات غلط یا صحیح نہیں ہے۔ اس ایکٹیوٹی کا مقصد یہ جاننا ہے کہ 21 دن میں آپ کی کیفیت کیسی تھی۔

Appendix I**Field Notes**

Summary

The children took 1 hour to complete the activities. They were excited about the work they were going to do every day. Some considered it routine work while others performed it by the instructions given to them. Some of them needed to be explained again. The students were also giving instructions to others as well. They were getting competitive with their pot painting. They were trying to do much better painting than their class fellows. They were motivated to participate in these activities. They were empathizing with others and helped one other. They were making fun of each other for not being able to paint well. They were appreciated by their teacher for their efforts on their first-day activity. They were ecstatic about learning something new and doing something different daily. When they were asked about the reviews of these activities every day, they considered it as fantastic work to perform in school. They've mentioned that they tried to learn about hard work, patience, social cohesion, and group work ethics/manners. Their learning was enhanced when they were asked questions related to the activity of the following day. Some of them were reciting the correct plant names. They recall all the related information which was given to them in the previous activity. They've informed each other about the efforts they've made to raise their plants.

