Positive Youth Development towards Contribution and Pro-Environmental Behavior among University Students

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Abstract

Background: Youth development is a target of any country whether the developed or the developing ones for their own self and country welfare. It is urgent when joined with environmental sustainability that youth must have a vital role in activating it represented into pro-environmental behavior. Aim: The study aimed to assess positive youth development towards contribution and proenvironmental behavior among university students. Subjects & Methods: A survey was conducted among university students, and the correlational descriptive design was followed to achieve aim and objectives of the study which was conducted on 698 students at ten faculties of Suez Canal University. Three valid and reliable international scales were used for data collection: Positive Youth Development Sustainability Scale; Three-Dimensional Contribution Scale; Pro-Environmental Behavior Scale. Results: The positive youth development scores showed confidence ranking highest, followed by connection, caring, competence, character, and contribution. In addition, contribution scores were highest in the community domain, followed by family and self. Moreover, pro-environmental behavior was strongest in transportation, followed by food, conservation, and environmental citizenship. Conclusion: The positive youth development and proenvironmental behavior have high levels compared to contribution which has a moderate level. There is a weak correlation between contribution and other variables whereas there is no correlation between positive youth development and pro-environmental behavior. Sex, residence and faculty haven't cause variation in all studied variables whereas participation in environmental seminars and activities significantly increased pro-environmental behavior. Recommendations: Embedding positive youth development principles directly into university curricula while creating practical environmental engagement opportunities across campus. This dual approach connects theory with practice, systematically building both contribution skills and pro-environmental behavior among all students regardless of their field of study.

Key words: Contribution, Environmental Sustainability; Positive Youth Development, Pro-Environmental Behavior, University Students

1. Introduction:

Youth development is a target of any community and country whether the developed or the developing ones for their own self, community and country welfare. It comes to be an urgent when joined with environmental sustainability which youth must have a vital role in activating it with the simplest and continues action. It is having and practicing pro-environmental behavior. Sense of contribution for youth could support both towards energizing environmental sustainability (Gomez-Baya et al., 2024; Zhang & Cao 2025).

The positive youth development framework presents a strengths-oriented approach to adolescent-to-adult transition. Positive outcomes emerge when young people's individual capabilities interact effectively with supportive developmental resources in their environment (Dimitrova & Wiium, **2021**). This theoretical approach has its roots in developmental systems theory, which proposes that young people's growth and development emerge from the bidirectional relationships between biological factors, personal characteristics, and environmental contexts (Gomez-Baya et al., 2024).

Environmental sustainability has emerged as а pivotal issue for contemporary societies globally. While the Industrial Revolution significantly enhanced economic productivity, it also led to profound environmental degradation, primarily driven by excessive exploitation of natural resources and the expansion of consumer-driven economies. Recent empirical studies indicate that present-day environmental challenges constitute a substantial risk to long-term sustainability, heightening societal vulnerability to ecological disasters and humanitarian crises (Ardoin et al., 2022).

behavior **Pro-environmental** actions represents personal that demonstrate an individual's commitment to environmental sustainability. These behaviors arise in response to the numerous environmental challenges that endanger our planet's ecological balance. То safeguard environmental sustainability, it's essential to guide young people toward environmentally responsible practices, they as will ultimately face the consequences of today's environmental issues in their future (Takshe et al., 2023).

In the past few years, increasing attention has focused on encouraging environmentally friendly actions among young people. **Pro-environmental** behavior refers to individual activities aimed at safeguarding, conserving, or improving the natural world. Such behaviors may involve recycling efforts, decreased energy use, backing sustainable methods. and advocating for environmental policies (Li et al., 2019).

Involvement in initiatives that promote societal contributions and environmentally responsible actions can significantly impact students' growth and overall wellness. When students take part in community service efforts, volunteering initiatives, or environmental sustainability programs, they not only make positive contributions to their communities but also cultivate important abilities including empathy, leadership skills, and environmental understanding (Huang et al., 2019).

Universities are essential in developing environmental consciousness and eco-friendly behaviors among students. These institutions mold future leaders who will create environmental legislation and guide public policy. As centers of higher education dedicated to teaching, learning, and innovative research, universities must provide answers to society's environmental and socioeconomic challenges. Regardless of field, all university graduates need a solid understanding of sustainability principles (Wang et al., 2022).

university's role So. the in environmental awareness is crucial since environmental issues affect everyone. Universities must provide students with comprehensive sustainable development knowledge and skills address to community sustainability challenges. Additionally, universities should help raise public environmental awareness and offer guidance for making informed decisions, adopting environmentally beneficial behaviors, and making responsible consumer choices (Mkumbachi et al., 2024).

Significance of the study:

Youth represent a key stakeholder, particularly university students. They can implement environmentally responsible practices in their daily routines, such as recycling, sharing rides or using hybrid cars, choosing energy-efficient devices, and making environmentally conscious purchasing decisions. Previous research indicates individual-level that proenvironmental behaviors are affected by demographic characteristics. while broader literature demonstrates that PEB is influenced by both social-psychological and socio-demographic factors (Dewi, 2018).

Hence, the current study try to explore to extent the studied variables are signified among vouth the university in community, and if socio-demographic factors personify the studied variables. This could be as a step for taking needed measures for upgrading sense of contributions towards pro-environmental activities and creating positive youth development for environmental sustainability.

Aim of the study:

It was to assess positive youth development towards contribution and pro-environmental behavior among university students.

Research objectives were to:

- Assess positive youth development among university students.
- Identify youth contribution to self, family, and community among university students.
- Assess youth pro-environmental behavior among university students.
- Determine the relationship between positive youth development, contribution and pro-environmental behavior among university students.
- Identify the relationship between the studied variable and sociodemographic characteristics of university students.

Research questions were to:

- To what level the studied variables are presented among university students?
- Is there a relationship between the studied variables among university

students?

• Are the studied variables varied by the variance of socio-demographic characteristics of university students?

2. Subjects and methods:

Research design:

A survey was conducted among university students, and the correlational descriptive design was followed to achieve aim and objectives of the study.

Setting:

The study was conducted on ten faculties of Suez Canal University which responded to the survey questionnaire; medical and non-medical. They were faculties of: Nursing; Medicine; Dentistry; Pharmacy; Science; Agriculture; Commerce, Tourism and Hotels; Literature; Al Alsun.

Sample:

The study was conducted on students at previous mentioned faculties of Suez Canal University, following convenience sampling technique. It included 698 students who are responded to the electronically survey from different academic years, almost equally resident in rural and urban. Characteristics of sample were disclosed in table (1).

Tools of data collection:

Three tools were used for collecting data:

First tool was a questionnaire divided into two parts; the first part is geared to identify socio-demographic characteristics of the students including age, sex, academic year, faculty, taking any training program or seminars (on sustainable development, environmental sustainability, and pro-environmental behavior). The second part is the Positive Youth Development Sustainability Scale (PYDSS) which was developed by Arnold et al. (2012), and was used to assess positive youth development among university students. It is consisted of 55 items along six domains (competence; confidence; character; connection; caring; contribution), measured on a 4-point scale from 1(strongly disagree) to 4 (strongly agree). The scoring system of the tool was based on three cut-off point of mean percentage of it as low (0%-33.3%), (33.4%-66.6%), moderate and high (66.7%-100%).

Second tool is the Three-Dimensional Contribution Scale (3DCON) which is developed by **Truskauskaitė-Kunevičienė and Kaniušonytė (2020)**, and will be used to identify youth contribution to three domains (self, family, and community) among university students. It contains 15 items along 5point likert-format scale from 1 to 5 allowing respondents to indicate how much they agreed with each statement on a continuum from completely disagree to completely agree. The scoring system of the tool was based on three cut-off point of mean percentage of it as low (0%-33.3%), moderate (33.4%-66.6%), and high (66.7%-100%).

Third tool is the Pro-Environmental Behavior Scale (PEBS) which is developed by Markle (2013), and will be used to assess youth pro-environmental behavior among university students. It is consisted of 19 items along four domains (conservation; environmental citizenship; food; transportation), measured on varied point scale scored from (1) to (5). The scoring system of the tool was based on three cut-off point of mean percentage of it as low (0%-33.3%), moderate (33.4%-66.6%), and high (66.7%-100%).

Validity and Reliability of Tools:

All scales are internationally valid and reliable tools, and were translated into Arabic followed by back translation. The reliability of tools in the current study was: 0.973 for PYDSS with scores ranged from 0.862 to 0.911; 0.893 for 3DCON with scores ranged from 0.758 to 0.832; 0.528 for PEBS with scores ranged from 0.379 to 0.694.

Procedure:

After having the approval of the ethical committee, the permission for conducting data from faculties' deans had been obtained. The research purpose of the study and how to fulfill the tool of data collection had been clarified after settling research ethics principles for research participants. Then, the data were collected from university students regarding the studied variables using self-instruction questionnaire survey, along four months extended to six months in 2024, to reach to a maximum participation of university students in the study.

Pilot study:

It was conducted on a group of students to test the situation for data collection: checking the suitability of Arabic copy of tools, duration of fulfilling them, and making the needed modifications upon this study.

Ethical considerations:

The approval of the study proposal by the Research Ethics Committee of Faculty of Nursing and Suez Canal University had been obtained with code (258:3/2023). The confidentiality and anonymity of participants had been protected. Also, the right to withdraw at any time during the study was assured on to the study participants.

Data analysis:

were collected, analyzed and Data tabulated using appropriate statistical tests for quantitative data as frequency & and mean & standard percentages, deviation for describing the sample characteristics and the studied variables in the survey. The spearman correlation coefficient test (r) was used for determining the relationship among the studied variables. F and t tests were used for identifying the difference of the studied variables in relation to the socioof demographic characteristics the university students. Cronbach's a test was used for measuring the reliability of the Arabic copy of the used scales. P value significant was set at <0.05.

3. Results:

Table (1) presents the socio-demographic characteristics of the sample studied (n=698). The sample comprised 37.1% female participants (259) and 62.9% male participants (439). The average age of the participants was 20.16 years (SD = 3.15). During the academic year, 70.1% were first-year students (489), 23.6% were second-year students (165), 1.7% were third-year students (12) and 4.6% were fourth-year students (32). Of the faculty, 44.1% were affiliated with medical faculties (308), while 55.9% were associated with non-medical faculties (391). Of the participants, 47.9% (334) lived in rural areas, whereas 52.1% (364) from urban areas. Regarding were sustainability participation, 24.8% (173) were involved in sustainable development training, whereas 75.2% (525) were not. A minority, 6.9% (48), engaged in environmental sustainability, whereas the majority, 93.1% (650), did not participate. In terms of pro-environmental behaviors, 9.9% (69 individuals) participated, while 90.1% (629 individuals) did not participate. Only 6.6% (46 individuals) participated in environmental supporting activities, while 93.4% (652 individuals) did not engage in such activities.

Table (2) displays the mean scores of students across the positive youth development totally and its domains. The confidence domain achieved the highest mean score of 3.53 (SD = 0.50), followed by connection with a mean of 3.58 (SD = 0.39). The competence domain recorded a mean of 3.46 (SD = 0.31), while caring had a mean score of 3.47 (SD = 0.37). The character domain's mean score was 3.43 (SD = 0.36), and contribution had the lowest mean score of 3.41 (SD = 0.40).

The total mean score for positive youth development was 3.48 (SD = 0.33), with mean percentage (87%) representing a high level of positive youth development among university students.

Table (3) presents the mean scores for students across the contribution totally and its domains. The community domain achieved the highest mean score of 2.10 (SD = 0.95), while the family domain followed with a mean of 1.98 (SD =1.00). The self-domain exhibited the lowest mean score of 1.83 (SD = 0.93). The total mean score for contribution was 1.97 (SD = 0.80), with mean percentage (39.4%) representing a moderate level of contribution among university students.

Table (4) shows the mean scores for students across the pro-environmental behavior totally and its domains. The transportation domain achieved the highest mean score of 4.45 (SD = 0.68), followed by the food domain and conservation domain with a mean of 3.74 (SD = 1.13) and mean of 3.66 (SD =0.67) respectively. The environmental citizenship domain exhibited the lowest mean score of 3.02 (SD = 0.73). The total for pro-environmental mean score behavior was 3.56 (SD = 0.42), with mean percentage (71.2%) representing a high level of pro-environmental behavior

among university students.

Table (5) displays the correlation analysis between the studied variables. A significant positive relationship between contribution and positive vouth development (r = 0.121, p = 0.001) was found. A negative correlation existed between the pro-environmental behavior and contribution (r = -0.077, p = 0.041). Whereas it had no significant correlation between positive youth development (r =-0.055, p = 0.146).

Table (6) shows the relationship between socio-demographic characteristics and the studied variables among university students. It was found that sex, residence faculties had and no significant differences in relation to the studied variables whereas the participation in environmental behavior seminars and activities had significant difference that is higher in relation to pro-environmental behavior and lower in relation to contribution which was higher for the fourth academic year. On the other hand, positive youth development had no significant difference in relation to all socio-demographic characteristics except the academic year.

4. Discussion:

Positive youth development is a

strengths-based approach that emphasizes the potential of young individuals to contribute positively to their communities and the environment. This framework focuses on fostering essential qualities such as responsibility, empathy, and civic engagement, which are particularly relevant in addressing environmental challenges. Among university students, positive youth development can play a pivotal role in shaping pro-environmental behaviors, as this demographic is at a critical stage of forming lifelong habits and values. Universities serve as ideal platforms for promoting pro-environmental behavior through education, community engagement, and leadership opportunities (Zhang& Cao 2025).

The socio-demographic characteristics of the sample provided valuable insights into understanding the dynamics of positive youth development and its relationship with probehavior environmental among university students. The sample of 698 participants comprised one third of the studied sample were females (n=259) while two third of the studied sample were males (n=439), with an average age of 20.16 years (SD=3.15). This agreed with Patel et al., (2017) who examined the influence of sociodemographic factors, such as gender, age, and education, on proenvironmental behavior. It highlighted that males and individuals with higher education levels are more likely to engage in sustainable practices.

In of academic terms background, nearly half of participants were affiliated with medical faculties, while more than half was from nonmedical faculties. From the researcher point of view interestingly, students from non-medical faculties may have more exposure to disciplines like environmental sciences, which could potentially enhance their proenvironmental behaviors.

The observed urban and rural disparities, with more than half of the participants from urban areas and less than half from rural areas, reflect a common trend in studies examining access to resources and developmental opportunities. A similar finding is highlighted in the study by Pillai and Chaturvedi (2024), titled "Bridging the Gap: Addressing Education Disparities between Rural and Urban Areas". The study emphasized that urban students often benefit from better access to educational and developmental programs, while rural students face barriers that hinder their growth and participation in such initiatives.

The findings on the mean scores across the domains of positive youth development provide valuable insights into the strengths and areas for growth among students. The confidence domain achieved the highest mean score of 3.53 (SD = 0.50) suggesting that students feel a strong sense of self-assurance and belief in their abilities, which is a critical of thriving component youth development. This is consistent with the findings of Lerner et al. (2013), who highlighted confidence as a critical component of thriving youth in their longitudinal study on PYD.

Similarly, the connection domain (mean = 3.58, SD = 0.39) highlighted the importance of relationships and social bonds in fostering positive outcomes. This aligns with the work of Sun and Shek (2012), who found that strong connections with peers and mentors are associated with higher levels of life satisfaction and reduced problem behaviors. The competence domain (mean = 3.46, SD = 0.31) reflects students' abilities in various areas, including academic, social, and vocational skills, which are essential for their overall development.

The caring domain (mean = 3.47, SD = 0.37) indicated a moderate level of empathy and compassion among students, which aligns with the broader goals of PYD to nurture socially responsible individuals. The character domain (mean = 3.43, SD = 0.36) underscored the importance of moral and ethical development, while the contribution domain (mean = 3.41, SD = (0.40) suggested that there is room for improvement in encouraging students to actively contribute to their communities. These findings are supported by the work of Wiium et al. (2021), who explored the role of these domains in fostering pro-social behaviors and community engagement. Nevertheless, the contribution domain was the lowest suggesting a need for targeted interventions to encourage active participation in community and societal activities.

The findings on the mean scores for students across domains of the contribution emphasized the varying levels of engagement in community, family, and self-contributions. The community domain achieved the highest mean score (2.10, SD = 0.95) reflecting the importance of external engagement and the opportunities provided by community-based programs. This is consistent with the findings of **Martinez-Yarza et al (2024),** who highlighted that youth often prioritize community involvement due to the structured opportunities and recognition associated with such activities.

The family domain (mean = 1.98, SD = 1.00) underscored the role of familial relationships in shaping contributions, while was slightly lower than the community domain. This score reflects the influence of family as a support system and a source of values that guide pro-social behaviors. This aligns with the work of **Martinez-Yarza et al (2024)** who found that family obligations and support play a significant role in youth development.

The self-domain (mean = 1.83, SD = 0.93) was the lowest suggesting that students may prioritize external contributions over self-focused growth. This is consistent with the study by Urke, et al., (2021), which suggested that while youth are often encouraged to engage in community and family activities, they may require additional support to focus on personal development and self-care. The total mean score for contribution (1.97, SD =0.80) reflected a balanced but varied level of engagement across the domains. These results highlight the need for targeted interventions to enhance contributions in all areas, particularly in the self-domain, to ensure holistic development.

The study's results highlighted significant variations in proenvironmental behavior across its domains, indicating areas of strength and opportunities for improvement. The transportation domain, with the highest mean score of 4.45 (SD = 0.68), suggests that students are strongly adopting sustainable transportation practices. From the researcher point of view, it could be attributed to the ordinary circumstances and life style for some people or the economic status that push people to use public transportation and car-pooled rather than to have their own car. Or for some others, this may be referred to other factors such as increased awareness of environmental issues related to transportation emissions or the availability of accessible ecofriendly commuting options.

While, the food domain (mean = 3.74, SD = 1.13) and conservation domain (mean = 3.66, SD = 0.67) reveal moderate levels of engagement in proenvironmental behavior. The variability in the food domain, as indicated by its higher standard deviation, suggests that student' behaviors regarding sustainable food practices might be influenced by external factors such as cultural dietary habits for most people or eco-conscious food choices others.

The environmental citizenship domain exhibited the lowest mean score of 3.02 (SD = 0.73). This finding implies a potential gap in students' active participation in civic activities aimed at promoting environmental protection, such as advocacy, policy or engagement, community involvement. Addressing this domain may require targeted interventions, such incorporating environmental as citizenship education academic in curricula or fostering platforms for youth-led environmental initiatives (Smith, 2024). The findings, also assures on the need of awareness activities for university students whether in form of seminars, and/or scheduling even course concerning topics or sustainable development and its pillars which environmental sustainability is one of them. as environmental citizenship domain is mainly dependent on the cultural side of people.

The total mean score for proenvironmental behavior (3.56, SD = 0.42) reflects an overall moderate commitment to sustainability among students. This indicates room for improvement, particularly in fostering broader behavioral changes across all domains. Totally, the mean score of positive youth development was 3.48 ± 0.3 representing 87.0%, followed by pro-environmental behavior which was 3.56 ± 0.42 representing 71.2%, whereas the contribution which was 1.97±0.80 scored the least mean percentages (39.4%). The high levels of positive youth development and proenvironmental behavior in spite of the of low percentages students' participation in orientation/seminars on sustainable development or environmental sustainability, may be the nature of Egyptian people (values and attitudes) and their simple life style which spontaneously positive contributes to their engagements toward environment and its preservation. Or, it may be the economic status that directs pro-environmental behavior the regarding transportation and food. Even conservation, the motive factor to follow pro-environmental behavior may be saving cost, or the value of wise use of This situation could things. be considered as a gift for the proenvironmental behavior.

There was a significant positive relationship between contribution and positive youth development (r = 0.121, p = 0.001) underscores the importance of community-oriented behaviors in fostering aspects of youth development. Conversely, there was a significant negative correlation between proenvironmental behavior and contribution (r = -0.077, p = 0.041). The finding of the correlation between positive youth development and contribution was disagreeing with a previous study with Spanish sample by Gomez-Baya et al. (2019), and with other works by Crocetti et al. (2014) in Lithuanian youth.

In addition, the least score of contribution that was very low may interpret the weak positive correlation with positive youth development and very marginal weak negative with proenvironmental behavior. However, orienting university with students contribution and its importance in their development through seminars and training programs could cause increasing sense of contribution and positive youth development and hence more adopting the pro-environmental behavior.

Interestingly, the absence of a

significant correlation between positive youth development and proenvironmental behavior (r = -0.055, p =0.146) suggests that these constructs may operate independently in this While context. positive vouth development and environmental engagement are both valuable, this result highlighted the need for integrated programs that simultaneously foster personal development and ecological awareness to achieve a more holistic impact.

The analysis of sociodemographic characteristics and their relationship with the studied variables among university students revealed that lack of significant differences in relation to sex, residence, and faculties. From the researcher point of view these factors may not play a pivotal role in shaping pro-environmental behavior, contribution, or positive vouth development. Also, this may mean that the type of sex or residence and faculties had not cause any difference in accepting or acquiring the studied variables, which encouraging to provide the university students training programs about environmental sustainability and positive youth development towards active contribution for successful proenvironmental behavior.

Participation in environmental behavior and activities, seminars however, emerged significant factor. as а positively influencing proenvironmental behavior. This may be due to the importance of experiential learning and active engagement in fostering sustainable practices among students. Such activities likely provide students with the knowledge, skills, and motivation needed adopt to environmentally friendly behaviors. Conversely, the lower contribution scores associated with participation in these activities may reflect a trade-off, where students prioritize individual environmental actions over broader community-oriented contributions.

The finding that contribution was higher among students in their fourth academic year suggests that maturity and accumulated academic experiences may enhance students' willingness to contribute to communal or societal causes. This could be attributed to increased exposure to civic education, leadership opportunities, or a greater sense of responsibility as students graduation. approach Interestingly, positive youth development showed no significant differences across most socio-demographic characteristics, except for the academic year. This indicates that while individual growth and development are influenced by educational progression, they remain of relatively independent other demographic factors. This finding highlights the potential for academic institutions to play a central role in fostering youth development through targeted interventions and programs (Nagy, 2024).

5. Conclusion:

The positive youth development and proenvironmental behavior have high levels among university students compared to contribution which has a moderate level. There is a weak correlation between contribution and other variables; positive with positive youth development and negative with pro-environmental behavior whereas there is no correlation between positive youth development and proenvironmental behavior. Sex, residence and faculty haven't cause variation in all variables. studied Participation in environmental seminars and activities significantly increased pro-environmental behavior in spite of less number of students who have been participated. Academic year is only significant factor affecting positively on positive youth development and contribution especially for third and fourth academic years respectively.

6. Recommendation:

Based on the research findings, the following recommendations are proposed to be considered by university and faculties:

1. Integrating positive youth development (PYD) environmental principles, sustainability and the role of students and everyone in its goals achievement topics or course into university curricula across disciplines all to foster students' contribution capabilities and environmental consciousness.

2. Providing the university students seminars, workshop, and/or training programs about environmental sustainability and PYD towards active contribution for successful proenvironmental behavior.

3. Orienting university students with contribution and its importance in their development through seminars and training programs, and developing targeted interventions for early-year university students to build their contribution skills.

4. Establishing campus-wide

environmental initiatives that provide practical opportunities for students to engage in pro-environmental behaviors, and creating peer mentorship programs where students with strong environmental behaviors can guide others, besides to establishing a recognition system that rewards students for environmental leadership and community contributions.

5. Designing community engagement projects that connect university resources with local environmental challenges, and establishing partnership with environmental organizations to provide internship opportunities that strengthen students' contribution and environmental behaviors simultaneously. 6. Creating faculty development programs to equip instructors with tools to incorporate PYD frameworks in their teaching, and conducting longitudinal studies to track how PYD interventions influence long-term environmental behaviors and community engagement after graduation.

Conflict of interest:

Authors declare no conflict of interest.

Acknowledgement:

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Items	No.	%	
Gender			
Female	259	37.1	
Male	439	62.9	
Age (Years)			
Mean ± SD	20.16±3.15	20.16±3.15	
Academic year			
First	489	70.1	
Second	165	23.6	
Third	12	1.7	

 Table (1): Socio-demographic characteristics of the university students (n=698)

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Fourth	32	4.6			
Faculty					
Medical	308	44.1			
Non-medical	391	55.9			
Residence					
Rural	334	47.9			
Urban	364	52.1			
Participate in sustainable developme	ent orientation/seminar				
Yes	173	24.8			
No	525	75.2			
Participate in environmental sustainability orientation/seminar					
Yes	48	6.9			
No	650	93.1			
Participate in environmental behavior orientation/seminar					
Yes	69	9.9			
No	629	90.1			
Participate in environmental supporting activities					
Yes	46	6.6			
No	652	93.4			
		1			

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Table (2): Mean score of positive youth development among university students (n=698).

Positive Youth Development	Mean	SD
Competence	3.46	0.31
Confidence	3.53	0.50
Character	3.43	0.36

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Connection	3.58	0.39
Caring	3.47	0.37
Contribution	3.41	0.40
Total mean (mean %)	3.48(87%)	0.33

Table (3): Mean score of contribution among university students (n=698).

Contribution	Mean	SD	
Self	1.83	0.93	
Family	1.98	1.00	
Community	2.10	0.95	
Total mean (mean %)	1.97(39.4%)	0.80	

Table (4): Mean score of pro-environmental behavior among university students (n=698).

Pro-environmental behavior	Mean	SD	
Conservation	3.66	0.67	
Environmental citizenship	3.02	0.73	
Food	3.74	1.13	
Transportation	4.45	0.68	
Total mean (mean %)	3.56 (71.2%)	0.42	

Table (5): The relationship between the studied variables among university students (n=698).

The studied variablesPositive youth developmentContribution behavior	The studied variables Positive youth development	Contribution	Pro- environmental behavior
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Positive youth development			
Contribution	0.121**		
	(0.001)		
Pro-environmental	-0.055	-0.077*	
behavior	(0.146)	(0.041)	

(r)Spearman correlation coefficient test; P value is significant <0.05

Table (6): The relationship between socio-demographic characteristics and the studied variables among university students (n=698)

Socio-demographic characteristics		Positive Youth Development	Contribution	Pro- Environmental Behavior
		Mean±SD	Mean±SD	Mean±SD
	Male	208.51 ± 18.88	28.78 ± 12.25	66.86 ± 8.21
Sex	Female	208.15 ± 18.47	30.01 ± 11.38	67.91 ± 7.93
	t (P value))	0.247(.805)	1.34(.180)	1.66(.098)
	Yes	207.66 ± 18.61	28.99 ± 11.74	67.71 ± 8.29
Residence	No	208.85 ± 18.61	30.06 ± 11.69	67.35 ± 7.82
	t (P value)	0.842(.400)	1.20(.230)	0.598(.550)
	First year	209.65 ± 18.88	29.07 ± 11.53	67.02 ± 8.12
Academic year	Second year	205.12 ± 17.48	30.23 ± 11.18	68.87 ± 7.55
	Third year	211.42 ± 17.88	25.50 ± 9.24	67.83 ± 9.67
	Fourth year	202.59 ± 18.08	34.88 ± 16.07	68.09 ± 8.30
	F (P value)	3.63 (.013 *)	3.17 (.024 *)	2.27 (.079)
	Medical	206.72 ± 17.99	30.12 ± 11.71	68.10 ± 7.56
Faculties	Non-medical	209.51 ± 19.01	29.10 ± 11.71	67.07 ± 8.39
	t (P value)	1.96(.049)	1.15(.25)	1.69(.088)
Participation in	Yes	207.47 ± 18.68	27.75 ± 11.56	68.53 ± 7.62

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sustainable	No	208.55 ± 18.59	30.15 ± 11.72	67.19 ± 8.16
development				
orientation/seminars	t (P value)	0.662(.508)	2.35(.019*)	1.90(.057)
Participation in	Yes	208.71 ± 17.98	24.06 ± 9.46	69.00 ± 8.58
sustainability	No	208.25 ± 18.67	29.96 ± 11.77	67.41 ± 8.00
orientation/seminars	t (P value)	0.165(.869)	3.39(.001)*	1.31(.188)
Participation in environmental	Yes	212.25 ± 18.13	26.26 ± 9.58	70.29 ± 8.44
behavior	No	207.85 ± 18.62	29.91 ± 11.88	67.22 ± 7.95
orientation/seminars	t (P value)	1.87(.062)	2.47(.014*)	3.03(.003)*
Participation in environmental	Yes	209.41 ± 18.21	25.46 ± 10.45	70.02 ± 7.99
supporting	No	208.20 ± 18.65	29.84 ± 11.75	67.35 ± 8.03
activities	t (P value)	0.427(.670)	2.46(.014)*	2.19(. 029*)

(t) is independent sample t test; (F) test is one way ANOVA, P value is significant <0.05

7. References:

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