

## مقياس ATEEM لقياس البيئة التعليمية لطلاب الدراسات العليا في طب أسنان الأطفال خلال جلسات التخدير العام

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(الإيداع: 3 تموز 2021، القبول: 14 تموز 2021)

### الملخص :

يُعد التخدير العام أداة جيدة لتقديم المعالجة السنوية للأطفال الصغار المصابين بنخور سنوية عديدة والأطفال ذوي الاحتياجات الخاصة غير القادرين على تلقي المعالجة السنوية في العيادة السنوية ولكن هناك حاجة لفهم البيئة التي يعمل بها الأطباء خلال تقديمهم الرعاية السنوية. تم استخدام مقياس ATEEM لقياس البيئة التعليمية لطلاب الدراسات العليا في قسم طب أسنان الأطفال في جامعة دمشق الذين يقدمون المعالجة السنوية تحت التخدير العام بين 2018 و2020. تم تطوير استبيان باللغة العربية على الإنترنت من تصميم Google Forms مكون من 40 عنصرًا. شملت الدراسة 23 طالباً، منهم 61% من الذكور و39% من الإناث. بلغ متوسط مجموع نقاط مقياس ATEEM  $124.14 \pm 31.91$  من 160 مما يشير إلى أن نظرة طلاب الدراسات العليا في اختصاص طب أسنان الأطفال كانت إيجابية بشكل عام تجاه البيئة التعليمية خلال تقديم المعالجة السنوية تحت التخدير العام باستثناء وجهة نظرهم في البند 1 والذي حصل على أقل علامة (1.08) وكذلك البند 13 الذي حصل على علامة متدنية أيضا (1.8). كان متوسط مؤشر الاستقلالية PAU  $28.30 \pm 3.98$  درجة، وكان متوسط المناخ التعليمي PAT  $31.26 \pm 9.44$  درجة. كان متوسط عبء العمل والإشراف والدعم PW/PS هو  $20.86 \pm 5.8$  درجة. وكان متوسط التدريس والمدرسين PTT هو  $15.47 \pm 5.03$ . كان متوسط فرص التعلم PLO هو  $28.21 \pm 9.17$  درجة. زود مقياس ATEEM بمعلومات أساسية حول بيئة التعلم الخاصة بطلاب الدراسات العليا في طب أسنان الأطفال الذين يقدمون الرعاية السنوية تحت التخدير العام وسلط الضوء على الثغرات ونقاط القوة التي يمكن التركيز عليها في المستقبل لتوفير بيئة داعمة ودافئة لطلاب طب أسنان الأطفال وضمان معالجة سنوية متكاملة آمنة تحت التخدير العام.

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## Anaesthetic Theatre Educational Environment Measure (ATEEM) for Assessing the Educational Environment of Paediatric Dental Postgraduates during General Anaesthesia

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(Received: 3 July 2021, Accepted: 14 July 2021)

### Abstract:

**Background:** GA has been a useful modality for offering dental treatment to young children with rampant caries and children with special care needs who do not cope well with clinical dental care. However, there is a need to understand the environment of paediatric dentists performing the treatment under GA to provide safe and optimal care. **Materials and Methods:** The Anaesthetic Theatre Educational Environment Measure ATEEM was utilised to assess the perception of educational atmosphere among postgraduate paediatric dentists performing treatment under GA in the Department of Pediatric Dentistry in Damascus University between 2018–2020. Online Arabic questionnaire designed by Google forms with 40 items, was designed. **Results:** About 23 postgraduate pediatric students included in the study in which 61% were males and 39% were females. The total mean ATEEM score was  $124.14 \pm 31.91$  indicating that the positive perception towards educational environment. However, a lower score was obtained after answering question 1 (1.08) and question 13 (1.80). The mean score of PAU was  $28.30 \pm 3.98$ . The mean score of PAT was  $31.26 \pm 9.44$ . The PW/PS was  $20.86 \pm 5.8$ . The mean score of PTT was  $15.47 \pm 5.03$ . The mean score of PLO was  $28.21 \pm 9.17$ . **Conclusion:** The ATEEM scale provided information about the educational environment for paediatric dental postgraduates who provide dental care under GA, as well as highlighted the gaps and strengths that could be considered in the future to provide a supportive and warm environment for pediatric dental students and ensure safe integrated dental treatment under GA.

**Keywords:** Educational environment, ATEEM Measure, Syria, Pediatric Dentist.

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## 1- Introduction

General anaesthesia has been widely described as a useful modality for offering dental treatment. It is indicated for dental management of young children with rampant caries and for children with special care needs who do not cope well with clinical dental care (Al Sakarna et al 2015). However, it does carry the risk of some morbidity and occasionally mortality (Lim & Borromeo 2017).

Previous studies have reported increased morbidity among healthy children undergoing simple dental procedures under general anaesthesia (Alpert 1957, Malhotra 2008). This was related to error in administration of anaesthesia or conditions with substandard monitoring, assistance and resuscitation equipments (Hu et al 2018).

There is a need to understand the environment of health professionals performing dental treatment under general anaesthesia in order to provide safe and optimal health care to children under GA. The educational environment has a great impact on performance of paediatric dentists and their outcomes. It can influence their behaviour, attitude and values (Pai et al 2014).

The Anaesthetic Trainee Theatre Educational Environment Measure (ATEEM) was developed to measure the educational environment for trainee anaesthetists in the theatre setting (Holt & Roff 2004) as it can also enable trainers to diagnose problem areas in their own theatre educational environment. The ATEEM was considered as a valuable tool that can be used to judge the quality of teaching and learning as well as the realization of the aims and objectives of education (Holt & Roff 2004). Therefore, the present study has utilised the ATEEM in order to provide a baseline reading and a diagnostic analysis about the educational environment of postgraduate students in the Department of Paediatric Dentistry at Damascus University, performing dental treatment under GA.

## 2- Materials and Methods

The ATEEM measure, which was developed by Holt and Roff, in 2004, was used in order to assess the perception of educational atmosphere among postgraduate paediatric dentists performing treatment under GA (Holt & Roff 2004). The ATEEM consists of 40 items that cover five domains including:

- Eight items for assessing perception of autonomy PAA (Q5, Q10, Q15, Q20, Q25, Q29, Q33, and Q36) with a maximum score of 32.
- Ten items for assessing Perception of Atmosphere PAT (Q4,Q9,Q14,Q19,Q24,Q28,Q32,Q35,Q38,and Q40) with a maximum score of 40.

- Seven items for assessing perception of workload/ supervision/ support PW/PS (Q3, Q8, Q13, Q18, Q23, Q27, Q31) with a maximum score of 28.
- Five items for assessing perception of teachers and teaching PTT (Q2, Q7, Q12, Q17, Q22) with a maximum score of 20.
- Ten items for assessing perception of learning opportunities and orientation to learning PLO (Q1,Q6,Q11,Q16,Q21,Q26,Q30,Q34,Q37,Q39) with a maximum score of 40. The ATEEM was translated and uploaded into Google forms. The link was [https://docs.google.com/forms/d/1PzkOztKK4Be9GJg44gmWrfzrP9bWTSvzUTF72\\_Jjwks/edit](https://docs.google.com/forms/d/1PzkOztKK4Be9GJg44gmWrfzrP9bWTSvzUTF72_Jjwks/edit)

All current postgraduate students in their first and second year in the Department of Pediatric Dentistry in Damascus University between 2018–2020 were invited to fill the questionnaire through distributing the link of the questionnaire using WhatsApp. Data collected after two weeks. About 23 postgraduates responded, and filled the questionnaire in which 61% of the students were males and 39% were females. The response rate was 75%. Each item scored on a five-point scale. Likert scale of 0 to 4 namely; 4 for “strongly agree”, 3 for “Agree”, 2 for “Uncertain”, 1 for “Disagree” and 0 for “Strongly disagree”. The ATEEM has a maximum score of 160 (Holt & Roff 2004). Statistical analysis was performed in SPSS Version 25 (SPSS Inc, Chicago, IL, USA). The descriptive statistics was applied. Mean and standard deviation (SD) together with minimum and maximum values, mean difference with 95 % confidence interval, frequencies and percentages of subjects in the light of their gender were calculated. The ATEEM mean score for all items of all participants were also measured. Group comparisons of the ATEEM scores were conducted using t-test to determine the significance difference between males and females in the ATEEM mean scores.  $P < 0.05$  was considered as the significant level. To analyse the internal consistency of the Arabic version of ATEEM, Cronbach’s alpha was used. The findings related to the mean scores of the 40 items of ATEEM obtained from males and females are presented in Table 1.

### 3- Results

About 23 postgraduates paediatric dental students were included in the study in which 61% were males and 39% were females. The findings are presented in Table1. The total mean ATEEM score was  $124.14 \pm 31.91$  indicating that the positive perception towards educational environment. The internal consistency of ATEEM was 0.97. The minimum score was 52 and maximum score was 158. However, a lower score was obtained after answering question 1 “*There are opportunities for learning all desired clinical skills*” (1.08) indicating the negative perception of students towards decreased opportunities for learning all desired clinical

skills. In addition, the low mean score of question 13 “*There is an informative anaesthetic trainee handbook*” (1.80) was also observed to reflect the lack of informative anaesthetic trainee handbook.

Concerning all items investigated, there was no significant difference between males and females except for Q10 “*I am aware of my anaesthetic role in theatre*” and Q 15 “*I feel responsible and accountable for the care given to my patients*” as females significantly expressed more agreement with the two items than males ( $P=0.009$ ).

Concerning the assessment of each subdomain, all subdomains scored close to or above 70%, as shown in Table 2. No significant difference was found between males and females. The mean score of *Perception of autonomy* PAU was  $28.30\pm 3.98$ . The mean score of *Perception of Atmosphere* PAT was  $31.26\pm 9.44$ . *The Perception of Workload, Supervision Support*, PW/PS, was  $20.86\pm 5.8$ . The mean score of *Perception of teacher and teaching* PTT was  $15.47\pm 5.03$ . The mean score of *Perception of learning opportunities and orientation to learning* PLO was  $28.21\pm 9.17$ . All ATEEM domains had Cronbach’s alphas greater than 0.9, suggesting that questions in each domain correlates well and that internal consistency is acceptable (Table 2).

**Table(1): The 40–Item ATEEM in Arabic and mean scores obtained in males and females.**

P value	الانحراف المعياري SD	المتوسط الحسابي لجميع Total mean	الانحراف المعياري للإناث SD for females	المتوسط الحسابي للإناث Mean for females	الانحراف المعياري للذكور SD for males	المتوسط الحسابي للذكور Mean for males	السؤال items	الترقيم N
<b>Perception of autonomy</b>								
0.53	0.78	3.43	0.75	3.5	0.86	3.3	يتم التدريس في وقت مناسب من النهار Teaching is done at appropriate time not affecting vigilance	Q5
0.009	0.2	3.95	0	4	0.3	3.8	أدرك دور المعالجة السنية تحت التخدير العام I am aware of my anesthetic role in theatre	Q10
0.009	0.2	3.95	0	4	0.33	3.8	أشعر بالمسؤولية والمساءلة عن الرعاية المقدمة لمرضاي I feel responsible and accountable for the care given to my patients	Q15
0.20	0.77	3.65	0.85	3.5	0.7	3.7	لدي مستوى مناسب من المسؤولية السريري I have an appropriate level of clinical responsibility	Q20
0.38	0.94	3.47	1.08	3.4	0.72	3.5	أنا أعلم مقاصد التعلم تمام في جلسات التدريب في المشفى I am clear about the learning objectives of the theatre teaching session	Q25
0.72	1.23	3.17	1.2	3.2	1.32	3	أناقش خطة العمل للحالات مع المشرف السريري I discuss the anesthetic plan of cases with the theatre teacher	Q29
0.71	0.75	3.73	0.82	3.7	0.66	3.77	أحذ زيارة المرضى قبل العمل الجراحي I am encouraged to visit patients preoperatively	Q33
0.63	1.31	2.91	1.36	2.7	1.26	3.11	هناك دائما من يشجيني على المشاركة الفعالة في غرفة العمليات I am encouraged to participate in the theatre setting	Q36
<b>Perception of Atmosphere</b>								
0.6	1.03	2.56	1.09	2.5	1	2.6	الجراحون والمخدرون لا يحبون ضجيج التدريس Surgeons do not like the noise of theatre teaching	Q4

0.92	1.11	3.34	1.15	3.4	1.09	3.2	أعيش علاقات ودية مع أساتذتي في غرفة العمليات I experience friendly relations with my teachers in theatre	Q9
0.56	1.15	3.17	1.26	3.07	1	3.3	الأشخاص الذين أعمل معهم وودودون The people I work with are friendly	Q14
0.87	1.01	3.3	1.08	3.3	1.09	3.2	يعمل المشرفون السريريون على تعزيز جو من الاحترام المتبادل My clinical teachers promote an atmosphere of mutual respect	Q19
0.09	1.53	3.08	1.6	2.7	1.3	3.5	وجد تمييز على أساس الجنس خلال التدريب السريري There is sex discrimination in this post	Q24
0.71	1.28	3.1	1.4	3.14	1.16	3.11	أشعر بأنني جزء من فريق يعمل هنا I feel part of a team working here	Q28
0.95	1.27	3	1.32	2.9	1.26	3.1	لدي تعاون جيد مع طاقم المستشفى وغرفة العمليات I have good collaboration with theatre staff	Q32
0.73	1.23	3.17	1.2	3.07	1.32	3.3	لدي علاقة جيدة تربطني بالمشرفين السريريين My clinical teachers have established good rapport with me	Q35
0.19	1.22	3.04	1.32	3.07	1.1	3	أشعر أنني قادر على طرح الأسئلة والاستفسارات التي أريدها I feel able to ask the questions I want	Q38
0.2	1.07	3.43	0.9	3.57	1.3	3.2	أشعر بالراحة في غرفة العمليات من حيث التواصل الاجتماعي مع الطاقم مهنيًا I feel comfortable in theatre socially	Q40
<b>Perception of Workload/ supervision/ support</b>								
0.86	1.09	3.26	1.13	3.2	1.09	3.2	يشرف علي أساتذتي بصورة جيدة I receive effective supervision from the clinical teachers	Q3
0.83	1.12	3.21	1.08	3.3	1.22	3	يمكنني الوصول إلى المشرف السريري دوما للحصول على المشورة My clinical teachers are accessible for advice	Q8

0.26	1.49	1.8	1.33	1.64	1.76	2.11	يوجد أدلة إرشادي للمتدرب حول المعالجة السنوية تحت التخدير العام There is an informative anesthetic trainee handbook	Q13
0.20	0.71	3.6	0.61	3.7	0.88	3.5	في هذا المستشفى ، يمكنني الحصول على مساعدة من زملائي الأكثر خبرة At this hospital I have access to help from more experienced colleagues	Q18
0.48	1.1	2.9	1.16	3.14	1	2.6	عندما أشارك في برامج تعليمية تدريبية رسمية، تخفف أعباء المستشفى الملقاة على عاتقي Whenever I should participate in formal educational programs I get relief from theatre duties	Q23
0.06	1.36	2.6	1.5	2.5	1.1	3	أنتلقى الإشراف السريري اللازم I receive the necessary clinical supervision	Q27
0.1	1.13	3.2	1.23	3.14	1.01	3.4	عبء العمل السريري في المستشفى محتمل My workload in this job is fine	Q31
<b>Perception of teacher and teaching</b>								
0.1	1.12	3.4	1.32	3.2	0.7	3.6	التدريس يساعد على تنمية ثقتي بنفسي The teaching helps to develop my confidence	Q2
0.39	1.39	3.04	1.32	3.07	1.58	3	يساعدني المشرف على تطوير كفاءتي The teacher helps to develop my competence	Q7
0.21	1.1	3.04	1.07	3.07	1.22	3	يتفاعل المدربون السريريون في هذا المستشفى بشكل جيد مع المتدربين The clinical teachers in this hospital interact well with trainees	Q12
0.3	1.34	3	1.5	2.8	1.09	3.22	المعلمون السريريون عادلون في تقييماتهم My clinical teachers are fair in their evaluations	Q17
0.19	1.1	2.9	1.24	3	0.92	2.8	يشرح المعلمون السريريون مراحل العمل بوضوح My clinical teachers are clear in their teaching	Q22
<b>Perception of learning opportunities and orientation to learning</b>								
0.14	0.84	1.08	0.78	1	0.97	1.22	هناك فرص لتعلم جميع المهارات السريرية المطلوبة There are opportunities for learning all desired clinical skills	Q1



0.48	1.3	2.5	1.31	2.2	1.22	3	أنتقى التدريس في غرفة العمليات في مجالات طب اسنان الاطفال تحت التخدير العام التي تستهدف احتياجات التعلم الخاصة بي I receive theatre teaching in anaesthetic specialty areas targeted at my learning needs	Q6
0.15	1	3.22	1.14	3.07	0.72	3.5	لدي فرص لتعلم وممارسة مجموعة متنوعة من الإجراءات السريرية I have opportunities to learn and practice a variety of clinical procedures	Q11
0.15	0.72	3.56	0.63	3.6	0.88	3.4	أنا قادر على اكتساب المهارات التقنية الكافية في غرفة العمليات I am able to acquire adequate technical skills in this post	Q16
0.04	1.31	3	1.52	2.7	0.86	3.3	هناك فرص جيدة للمتدربين الذين يفشلون في إكمال تدريبهم بشكل مرض There are good opportunities for trainees who fail to complete their training satisfactorily	Q21
0.79	1.5	2.5	1.55	2.5	1.5	2.5	يوجد برنامج تدريب سريري يتيح لي الحصول على خبرة متنوعة للعديد من الإجراءات There is a clinical training program here that allows me to get first-hand experience in a range of procedures	Q26
0.78	1.06	3.3	1.05	3.2	1.13	3.44	لدي الفرصة لاكتساب الإجراءات العملية المناسبة لمستوى تدريبي I have the opportunity to acquire the appropriate practical procedures for my level of training (e.g. fiberoptic intubation/ subtenons nerve block)	Q30
0.81	1.26	3.04	1.26	2.9	1.3	3.2	لدي فرص متعددة للتعلم في المستشفى I have the opportunity for on the job learning	Q34
0.36	1.6	2.4	1.73	2.3	1.58	2.5	يوجد برنامج تدريب سريري منهجي There is a systematic clinical training program	Q37
0.86	0.99	3.4	1.01	3.5	1.01	3.4	يبدو أن الكثير مما أتعلمه وثيق الصلة بحياتي المهنية Much of what I learn seems relevant to my career	Q39

**Table( 2): The ATEEM domains and mean score, minimum, maximum, mean difference, confidence interval and Cronbach's Alpha in males and females.**

Domain	All pediatric Dentists	Female=14	Male=9	Minimum	Maximum	P value	Cronbach's Alpha	Mean Difference (95% confidence Interval)
PAU(total points=32)	28.30±3.98	28.28±4.3	28.33±3.5	21	32	0.21	0.945	0.047 (-3.57-3.66)
PAT(total points=40)	31.26±9.44	30.92±9.86	31.77±9.31	11	40	0.80	0.931	0.84(-7.73-9.42)
PW/PS(total points=28)	20.86±5.8	20.78±6.45	21±5.26	7	28	0.4	0.928	0.21(-5.14-5.57)
PTT(total points=20)	15.47±5.03	15.28±5.86	15.77±3.70	2	20	0.35	0.929	0.49(-4.08-5.06)
PLO( total points=40)	28.21±9.17	27.21±9.78	29.77±8.46	9	38	0.42	0.919	2.56(-5.70-10.83)

PAU: Perception of autonomy  
 PAT: Perception of Atmosphere  
 PW/PS: Perception of Workload, Supervision, Support  
 PTT: Perception of teacher and teaching  
 PLO: Perception of learning opportunities and orientation to learning

#### 4- Discussion

General anaesthesia may be indicated to facilitate surgical procedures, such as the extraction of primary and permanent teeth in a single visit, offer preventive and restorative care such as fissure sealants, composite fillings, amalgam restorations and stainless steel crowns.

A review conducted by the Helsinki Public Dental Service in Finland found that the main reasons for treatment under GA were extreme non-cooperation (65%), dental phobia (37%), and an urgent need for treatment (26%) (Lim & Borrromeo 2017).

Behaviour has been a critical factor in determining the approach that should be adopted for dental management.

Other factors such as the general health of the patient, the number of affected teeth and complexity of the procedure, quality and quantity of treatment required and the cost may be relevant to the decision to offer treatment under GA (Lim & Borrromeo 2017). Other work in Jordan has found that GA was used in 45 per cent of young children because of extensive caries in 33 per cent of special needs patients and 13 per cent of children with behaviour management problems (Al Sakarna et al 2015).

Understanding the complexity of the dental management of children under GA can reduce errors and avoid performance problems worsened by stress and fatigue related to anaesthetic

and dental clinical practice. Team work is essential for dental management of children under GA in which the dental surgeon, anaesthetist, and nurse assistant all have their own duties and must work together to facilitate care and manage any complication (Alpert 1957).

Several measures were designed to assess the educational environment in medical schools. The Dundee Ready Education Environment Measure DREEM has been used with 50 items to assess the educational environment for undergraduate students in medical schools (Roff et al 1997). Postgraduate Hospital Education Environment Measure (PHEEM) with 40 items was also designed to assess the environments in hospitals (Vieira 2008) and Surgical Theater Educational Environment Measure (STEEM) (Zeb et al 2017).

Previous work has recommended using The ATEEM to enable trainers to 'diagnose' problem areas in their own theatre educational environment (Holt & Roff 2004). Therefore, this study utilised the ATEEM to measure the learning environment of postgraduate paediatric dentists undertaking dental treatment under GA.

Previously, Universities in the Arab World have translated and validated DREEM into Arabic as it was utilised in Arabic countries for medical schools at King Abdul Aziz University, Umm Al-Qura University in Saudi Arabia and Sana'a University Medical School in the Republic of Yemen (Roff 2005, Al-Mohaimed 2013, Dashash 2020). However, there is no previous attempt to design the Arabic version of ATEEM. Therefore, in this study, the ATEEM was translated into Arabic and validated it. The results showed acceptable internal consistency of the instrument, as the Cronbach's alpha was 0.93. The Arabic ATEEM has been a reliable and simple tool for assessing the clinical educational environment in the operating room for paediatric trainees performing dental management under GA in Damascus University. It provided with useful baseline information for curriculum planners and designers of training programs in Paediatric Dentistry. Postgraduate paediatric dentists displayed more positive than negative perceptions about their educational environment in the department.

The total Mean score of ATEEM was 124.14/160. Similar results were obtained in a study undertaken in Pakistan in 2017, which investigated 30 trainees and found that the total mean score of ATEEM was 117.16/160 (Zeb et al 2017).

The analysis of questions, demonstrated the presence of several positive features related to learning objectives of the course and teaching.

However, lower score was obtained after answering question 1 "***There are opportunities for learning all desired clinical skills***" and question 13 "***There is an informative anaesthetic trainee handbook***" (1.80) indicating decreased opportunities for learning all desired clinical skills and the lack of is an informative anaesthetic trainee handbook.

In fact, to meet the needs of children and provide the best, safe and satisfactory health management, proper training should be emphasised, and supported (Al-Hakim & Gong 2012, Goh et al 2013). There is a need to increase the learning opportunities for paediatric postgraduates to achieve the best outcome. Any disruption in the patient journey in preoperative, anaesthetic, operating and recovery areas can create stress, fatigue and predispose surgical team to errors, which could lead to adverse events (Al-Hakim & Gong 2012, Goh et al 2013). Acknowledging the fact that building a teamwork structure is time-consuming and challenging, the benefits and effectiveness are worth the extra effort (Wang et al 2012). Therefore, the concept of patient care should be well included in training programs, defined in a systematic approach, instructions and guidelines together with handbooks which can develop individuals to work together should be designed (Wang et al 2012, David 2004) together with identification of responsibilities for each member.

The findings of subdomains indicated that the *perception of autonomy PAU* was the highest (mean score was 0.87%, 28/32), whilst the *Perception of learning opportunities and orientation to learning PLO* was the lowest (mean score was 70%, 28/40). This strongly suggest that the faculty should support learning opportunities and self-directed.

Similar findings were obtained in a Pakistani study as the mean score of PAV, PAT, PW/PS, PTT, and PLO were 25.1, 27.5, 20.1, 15.3 and 29.1 respectively (Zeb et al 2017).

Previous research undertaken by Vongspanich et al (2020) found that the perceptions of learning opportunities and orientation to learning were highest, with a mean percentage of 81.0% (mean score 32.4/40), while perception of the atmosphere was the lowest (mean score 27.7/40, 69.2%).

Acknowledging the small sample size of this study, a baseline and a diagnostic analysis of the educational environment has been established.

The present study has provided evidence that educational environment of the postgraduate paediatric dentists undertaking treatment under GA requires some improvement. It addressed the need for further support and engagement of academic staff to provide the best learning opportunities that can positively affect the clinical outcome of patients in need.

## **5-Conclusion**

The ATEEM scale provided information about the educational environment for paediatric dental postgraduates who provide dental care under GA, as well as highlighted the gaps and strengths that could be considered in the future to provide a supportive and warm environment for pediatric dental students and ensure safe integrated dental treatment under GA. Further work is still needed to investigate other clinical environment related to Syrian medical faculties

at undergraduate and postgraduate levels. This would be an essential task for future professional life of students and for optimal health care.

#### **6-Acknowledgment**

The author would like to thank all postgraduate students in the Department of Pediatric Dentistry in Damascus University who accepted to take part in this study.

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