

Child Development Students' Level of Knowledge of Child Health

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ABSTRACT:

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Objective: It is important for the pre-school trainers who are intertwined with children as their task requires, to have particular knowledge and equipment in the field of health in addition to their education and training activities. Because it isn't possible to predict their requirements in health issues, especially the timing of the urgencies. In this study, we aimed to discuss the knowledge and experiences of child development students about child health and emergency events that require immediate intervention.

Material and Methods: Within the framework of Gaziosmanpaşa University Child Development Program, this study was enrolled with the students of first and last classes, and their demographic data, if they received any previous first-aid training, if they participated in any course or training in the field of health were recorded and asked to fill a survey which was formed of 20 questions about knowledge of child health. Each question is answered correctly by 1 point; resulting in the lowest 0, it may be the highest in 20 points.

Results: Of 33.7% of the first class students, and 51.6% of the last class students found themselves sufficient about child health. The majority of the students have been found to give the correct answers to questions related with approach to fever, the risks of obesity, personal hygiene, and the approach to children with electric shock, head injury, or foreign body lodge. In addition, only the half of the students have been found to answer that tuberculosis is transmitted by the air (first class: 42.1%, last class: 50.5%) and the correct answer to the question "What should be done first in burns as a result of spilling of hot water?", as "Must be kept for at least 5-10 minutes under running tap water." (first class: 43.2%, last class: 52.7%). In addition, only one of four students marked the wrong expression as "the child who drank bleach, detergent-like cleaning materials should be immediately induced" (first class: 27.4% and last class: 25.3%). The average total score (15.27±2.30) and the success rate (76.3%) of last-year students were found to be higher than the first-year students (13.00±2.93, 65%, p<0.001).

Conclusions: Although the average total score of last-year students has been detected to be higher than the scores of the first-year students; it has been detected that the students didn't have sufficient knowledge about the problems they might encounter often in their professions, such as the approach to a patient with corrosive agent ingestion, the post-burn first-aid and the transmission of tuberculosis. From this perspective, it is thought that to create the content of the curriculum for students intended for the frequently encountered problems that they would face in their professional lives would contribute to the increase in level of knowledge. In addition, continuity of knowledge should be provided with inservice training after graduation.

Keywords: Child development, child health, education

ÖZET:

Çocuk gelişim öğrencilerinin çocuk sağlığı konusundaki bilgi düzeyleri

Amaç: Görevleri gereği çocuklarla iç içe olan okul öncesi eğiticilerinin; eğitim ve öğretim faaliyetlerinin yanında sağlık alanında belirli bilgi ve donanımına sahip olmaları önemlidir. Çünkü sağlık alanındaki gereksinimlerinin özellikle de acil konuların ne zaman ortaya çıkacağını kestirmek mümkün değildir. Bu çalışmada da; çocuk gelişim bölümünde okuyan öğrencilerin, çocuk sağlığı ve acil müdahale gerektiren olaylar ile ilgili bilgi ve deneyimlerini irdelemeyi amaçladık.

Gereç ve Yöntemler: Gaziosmanpaşa Üniversitesi Çocuk Gelişim Programı çerçevesinde eğitim gören birinci ve son sınıf öğrencileri üzerinde yürütülen çalışma kapsamında öğrencilerin demografik bilgileri, daha önceden ilk yardım eğitimi alıp almadıkları, sağlık alanında herhangi bir kursa ya da eğitime katılıp katılmadıkları kaydedildi ve 20 sorudan oluşan çocuk sağlığı bilgi düzeyi ile anket formunu doldurmaları istendi. Her doğru cevaplanan soru 1 puan olup; sonuçta da en düşük 0, en yüksek de 20 puan alınabilirdi.

Bulgular: Birinci sınıf öğrencilerinin %33.7'si ile son sınıf öğrencilerinin %51.6'sı kendilerini çocuk sağlığı konusunda yeterli bulmaktaydı. Öğrencilerinin büyük çoğunluğunun ateşe müdahale yöntemini, obesitenin getirdiği riskleri, kişisel hijyen, elektrik çarpan, kafa travması geçiren ve yabancı cisim saplanan çocuğa müdahale konusuyla ilişkili sorulara doğru cevap verdiği saptanmıştır. Ayrıca öğrencilerin ancak yarısının; tüberküloz hastalığının hava yolu ile bulaştığını (Birinci sınıf: %42.1 ve son sınıf: %50.5) ve "Sıcak su dökülmesi sonucu oluşan yanıklarda ilk olarak ne yapılmalıdır?" sorusuna doğru cevap olan "En az 5-10 dakika süreyle akan çeşme suyunun altında tutulmalıdır." cevabını (Birinci sınıf: %43.2 ve son sınıf: %52.7) verdiği saptanmıştır. Ek olarak öğrencilerin ancak dörtte birinin; "Çamaşır suyu, deterjan benzeri temizlik malzemesi içen çocuk derhal kusturulmalıdır." (Birinci sınıf: %27.4 ve son sınıf: %25.3) ifadesini yanlış olarak işaretledikleri saptandı. Son sınıf öğrencilerin toplam puanlarının ortalaması (15,27±2,30) ve başarı yüzdeleri (%76,3) birinci sınıf öğrencilerinkinden (13,00±2,93, %65) yüksek olarak saptandı (p<0,001).

Sonuçlar: Son sınıf öğrencilerin toplam puanlarının ortalaması; birinci sınıf öğrencilerinkinden yüksek olarak saptansa da; koroziv madde içen hastaya müdahale, yanık sonrası ilk müdahale, tüberküloz hastalığının bulaşma yolu gibi meslek hayatlarında sık karşılaşılabilecekleri sorunlar konusunda öğrencilerin yeterli düzeyine sahip olmadıkları saptanmıştır. Bu açıdan da öğrencilere verilen eğitim müfredatının içeriğinin; meslek hayatlarında sık karşılaşılabilecekleri sorunlara yönelik oluşturulması bilgi düzeyinin artmasına katkı sağlayacağı düşünülmektedir. Ayrıca mezuniyet sonrası hizmet içi eğitimlerle bilginin devamlılığı sağlanmalıdır.

Anahtar kelimeler: Çocuk gelişimi, çocuk sağlığı, eğitim

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INTRODUCTION

It is defined by "Department of child development is a section which aims to be able to evaluate the cognitive, language, motor, social and emotional development and selfcare skills of children between the ages 0-18 with normal development, or with a disability, vulnerable, working, refugee, or delinquent children, or hospitalized children; and aims to educate child development specialists who offer services to the child, the family, the educators and to community about support for all development and areas of skills" (1. Selcuk University Faculty of Health Sciences Child Development).

The most important business area for child development graduates is to be able to work as trainers in the pre-school education services and in private educational institutions. Strengthening pre-school education is also included in the UNICEF 2011-2015 country program action plan (2). The number of female employess according to data from Turkish Statistical Institute rose up to 30.8% in 2013, while it was 26% in 2009 (3). This situation caused an increase in the number of children who spend one-third of their days in pre-school educational institutions.

The people who are dealt with children who require special education, as well as the children in pre-school education should be prepared and experienced against any kind of accidents, injuries and poisoning cases. Because external causes of injury and deaths from poisoning take the first row (7.3%) when the causes of death in 0-14 age group is analyzed (4). The most important cause of morbidity and mortality in children with trauma; but also many of which often can be avoided (5-7). Also at greater risk are the increasing number of children with chronic health problem in terms of sudden events (8-10). In this respect, pre-school educators have an important role, as well as parents, in the protection of child health.

Child development specialists are raised within the child development program, ongoing in our University Vocational School of Social Sciences. The child development progtram consists of four-semester undergraduate program given in two years. We aimed to contribute to the training program, with

evaluating the level of knowledge of child development students in the first and last-year of their education seperately, who find jobs as trainers in particularly kindergardens and daytime nursing homes as pre-school trainer, and in private educational institutes as group trainer.

MATERIAL AND METHOD

The cohort of the study consisted the first and last-year students of Gaziosmanpaşa University, Social Sciences Vocational School, Division of Child Care and Youth Services, Department of Child Development, and no samples have been selected. The necessary permissions for the study were taken from rectorship of Gaziosmanpaşa University; and the study was conducted between May-June 2015. It was administered to students, that received verbal permission given information about research, under observation questionnaire consisting of 20 questions. In order to measure the level of knowledge of the students about child health, 20 questions which were prepared consireding the studies in the literature, were asked (8,11.Sönmez and others, 2014, s241,242). Of the questions, 2 were fill in the blanks, 5 wre multpile choice, and 13 were true/false/undecisive type questions. The content of the questionsoften fiery encountered, seizures, something in her throat escaped, nose or bleeding another part of the body, developing fractures after trauma, burns, was about falling or electric multiplier child the right intervention method. Each question is answered correctly by 1 point; resulting in the lowest 0, it may be the highest in 20 points. Descriptive analysis were performed in order to give information about the general characteristics of the study groups. In comparison of the numerical variables as a result of evaluation of normality, Independent Samples t Test was used. Chi-square test was used in comparison of the categorical variables. The numerical values were given as mean±standard deviation;and the categorical variables as n (%). p values less than 0.05 were considered to be statistically significant. The calculations were made with available statistical software (IBM SPSS Statistics 19, SPSS inc., an IBM Co., Somers, NY).

RESULTS

In the study conducted on first and last-year students of department of child development; of 95 students in the first-year, 2 were male and 93 were female, with a mean age of 19.86 ± 3.320 . Of 91 last-year students surveyed, 2 were male and 89 were female, with a mean age of 20.20 ± 2.29 . Four students from the last year and 3 students from the first year were married; one student from the first year and 3 students from the last year had children.

Of the first-year students, 18.9%, and 33% of the last-year students were finding themselves sufficient about first-aid. In addition; 32 (33.7%) students from the first-year and 47 (51.6%) students from the last year were finding themselves sufficient for the level of knowledge about child health.

When we look at the answers given to the questions about child health level of knowledge, the majority of first-year and last-year students were detected to answer correctly to the questions such as taking off the clothes in a febrile child first and implementation of peripheral cooling in a child with fever, knowing that the risk of developing health problems such as diabetes is high due to obesity, personal hygiene, and the interventions for electric shock, head trauma and stuck foreign body. However, the first-year students were detected to answer the question "What is the peripheral cooling applied with?" (55.8%) correctly with lower rates than the last-year students (74.7%) ($p:0.005$).

63.2% of the first-year students and 74.7% of the last-year students were detected to have the

knowledge that children should not consume sugar rich foods when they had diarrhea. Only the half of the students (First year: 43.2%, last year: 52.7%) were found to answer the question "What is first to do in burns caused by hot water?" as "It should be kept under flowing tap water for at least 5-10 minutes.". For the same question, 25.3% of the first-year students and 28.6% of the last-year students answered as "Ice should be applied to the injured area.", while 4 students from the first year and 3 students from the last year answered as "Yoghurt and toothpaste should be applied to the injured area.".

27.4% of the first-year students and 25.3% of the last-year students were detected to marked the statement "A child who drinks bleach or detergent-like materials should immediately be induced." as false. In addition, obnly the half of the students (First year: 42.1%, last year: 50.5%) were detected to know the transmission of tuberculosis infection. When we evaluated the answers given to the question "What would you do first to a child with complete obstruction in his airway (who swallowed foreign body), unable to cough and conscious?", 70.5% of the first-year students and 81.3% of the last-year students gave the correct answer "I would go back of the child and apply pressure to his abdomen.". When we look at the rates of the answers to the same question as "I would lay down the child prone and hit back.", 21.1% of the first-year students and 14.3% of the last-year students were found to give this answer.

61.1% of first-year students and 74.7% of last-year students knew that hepatitis B is a disease that can be protected with vaccination.

Table-1: The distribution of answers to the question "To understand whether there is fracture in a child who is injured by falling, the organ that has pain is forced to move"

	Class		χ^2	p
	First Year (n and %)	Last Year (n and %)		
True	33 34.7%	22 24.2%	11.775	0.003
False	49 51.6%	66 72.5%		
Indecisive	12 12.6%	2 2.2%		
Who didn't answer	1 1.1%	1 1.1%		

Table-2: The distribution of answers to the question "If a child's jaw with seizures is locked, his mouth should be opened by placing metal objects such as fork, spoon in his mouth"

	Class		χ^2	p
	First Year (n and %)	Last Year (n and %)		
True	35 36.8%	17 18.7%	15.096	0.001
False	45 47.4%	68 74.7%		
Indecisive	14 14.7%	5 5.5%		
Who didn't answer	1 1.1%	1 1.1%		

Table-3: The distribution of answers to the question "In the case of an hemorrhagic injury, direct pressure should be applied first to the wound site"

	Class		χ^2	p
	First Year (n and %)	Last Year (n and %)		
True	74 77.9%	67 73.6%	6.406	0.041
False	6 6.3%	15 16.5%		
Indecisive	14 14.7%	7 7.7%		
Who didn't answer	1 1.1%	2 2.2%		

At questions related with approach to falling patients or patients with seizures, the level of knowledge of last-year students were found to be higher than the first-year students (Table-1 and 2). However, at the question related with first-aid in cases of injuries with bleeding, the level of knowledge of first-year students were found higher than the last-year students (Table-3).

In the study which contains a total of 20 questions, where each correct answer corresponds to 1 point, the average total score (15.27 ± 2.30) and the success rate (76.3%) of last-year students were found to be higher than the first-year students (13.00 ± 2.93 , 65%, $p < 0.001$).

CONCLUSION

Children is most affected by the external environment, can not by themselves resolve the negativity, waiting for help around (12). Maintaining the health status of the child is an important mission,

for not only the parents, but also for the people who are interested in their education. According to the Health Statistics data of year 2013, in our country where there are 6 pediatricians and 197 nurses per 100.000 children (13), the child development department students are expected to be graduated with a particular experience about issues such as frequent infections in children, chronic diseases and first-aid for external injuries.

The children are under risk for infections, and in people living in crowded environments such as nurseries, this risk further increases. To know how to approach to fever, which is one of the most common complaints of infections is crucial for the febrile seizure risk which may occur due to fever. In a study conducted with teachers training 3-6 year old groups in private nurseries in Ankara; only the half of the teachers were detected to know the approach to fever accurately (8). In this study, in contrast to the study performed in Ankara, the correct response rate of students to the question "Which of the following

must be applied first when a child has fever?" were as follows: First year: 84.2%, last year: 94.5%. However, the lower rates of first-year students (55.8%) than the last-year students (74.7%) to answer the question "What is the peripheral cooling applied with?" correctly, reveals the importance of education.

Another important issue which is seen frequently in childhood and creates a substantial risk for mortality is the approach to a child with diarrhea. Causes of under-five child deaths diarrhea (15%) and pneumonia (18%) take the top two positions (14,15). The total share of the infectious disease cause of death is 68% (14,15). In diarrhea treatment, it is crucial to pay attention to fluid intake and because they may cause osmotic diarrhea, the foods rich in fat and sugar should be avoided (16,17). The awareness of pre-school teacher candidates who are responsible to take care of children, who spend the majority of their times in pre-school educational institutions would contribute to be treatment of the children. In a study, the 45% of child development department last-year students of the province Ordu, female trade high-school were detected to correctly marked the choice "giving water and aqueous foods", to the question "Things to do in case of diarrhea?" (18.Bölükbaş and others, 2007, s55). Also in this study, 63.2% of first-year students and 74.7% of last-year students knew the statement "The child should consume sugary foods primarily when he has diarrhea." was wrong. It is thought that the level of education is effective in the increase in the level of knowledge.

Tuberculosis is one of the oldest known diseases; Tuberculosis Department in our country, according to the report of the 2009 is 19 964 tuberculosis patients diagnosed in 2007 with the most of them (90.3%) of the new cases (19). TB is an infection spread through the air. Reference book for the Control of Tuberculosis in Turkey through the air from a sick person is said to be the infecting healthy people (20). In a study related with the awareness and level of knowledge of the students of Kafkas University about TB, only the 36.8% of the students knew the way of transmission of TB infection was through air (21). In this study again, 42.1% of the first-year students and 50.5% of the last-year students had the knowledge about the way of transmission of TB. The slight

increase in the level of knowledge is pleasing; however, not sufficient. The teacher candidates whom we would entrust our children and would work in the pre-school educational institutions that take place at the top of the public places, were expected to have more information about a disease such as TB, which is common in the community. Because lack of knowledge about the way of transmission would create obstacles in protection from the disease. In this respect, giving more space to this subject in the training and the explanation of the importance of the subject by mass media is crucial.

The child development students who also have the opportunity to work as group trainers in private educational institutions to have knowledge about epilepsy, which is chronic and doesn't have a cumulative treatment in many patients, is important. In this disease, the patient can live a normal life is possible with medication, to understand the disease of itself and environment and also health consultant with the time needed to communicate (22). Developed and developing countries in various studies with elementary school teachers; emphasized that lack of knowledge about epilepsy and they should be educated about epilepsy (22-26). In this study also, the higher levels of knowledge about epilepsy of the last-year students (74.7%) than the first-year students (47.4%) reveals the importance of education.

Another important issue in the protection of child health is the caution against accidents and injuries. Incidents / injuries in both developed and developing countries; preventable cause of childhood mortality and disability is hold an important place (27,28). Research has shown that children with developmental disabilities and chronic diseases is higher than children without the risk of injury and accident (27,29,30). One factor contributing to increased mortality in accident that can not be done the first necessary intervention accurately and adequately during accident and after (31). In this study also, 51.6% of the first-year students knew that "To understand whether there is fracture in a child who is injured by falling, the organ that has pain is forced to move." statement was wrong. These results were comparable with the study conducted in the center of province Isparta (11). In addition, in this study, in the

last-year students, the rate of knowledge of not to move the organ with suspected fracture was detected to be higher (72.5%). The increase in the knowledge of last-year students about falling, which takes place in the first 3 reasons for injuries is pleasing; yet not enough (32-34). Death may occur after the accident but recent research has found that one-tenth of the first 5 minutes and the first 30 minutes of the half (31,35,36). In conditions with hemorrhagic injuries, direct pressure to the wound would initially enable the control of bleeding. In also this respect, when we take the students in the study, the slightly lower rates of level of knowledge of last-year students (73.6%) compared to the first-year students (77.9%), once again demonstrates the importance of giving priority to first-aid training in the curriculum.

Another important issue to be discussed about injuries is the burns, that are one of the important morbidity and mortality causes in all age groups, especially in the childhood (37). The new Turkish Penal Code to be held within the framework of Forensic Report Guidance for the "Second-degree burns on more than 20% (more than 15% in children under five years of age) will supply the life-threatening" is called (38). The new Turkish Penal Code to be held within the framework of Forensic Report Guidance, 2005, s11). In this respect, as first responders in the event burns; the use of warm cooling material is important because reducing the amount of heat in the burn area (39). But should be alert to the risk of hypothermia in children (39). There may be heat and fluid loss after the cooling implementation of 5-10 minutes is recommended not to quit and used on the ice (39). In a study conducted between 2004-2005 in the center of province of Isparta to measure the level of knowledge of first-aid of the teachers, the rate of knowledge of teachers about the approach to people with burns was detected as 21.4% (40). Also in this study, only the half of the students (first year: 43.2%, last year: 52.7%) were detected to answer the question "What should be done first in burns as a result of spilling of hot water?" with the answer "Must be kept for at least 5-10 minutes under running tap water." In addition, the rates of 25.3% and 28.6% of the first-year students and the last-years students' answers, respectively, to the same question as "Ice should be applied to the injured area.", reveals

that beside giving the information to the students about what to do in acute cases, it is also important to inform them about false applications.

In our country, the work done in Eskişehir; 16.7% of child poisoning was determined to be due to corrosive ingestion (41). As a result of drinking corrosives accidentally by small children and older children with mental retardation, complications in varying degrees from esophagus burns to death may occur (42-44). In this respect, as important as the early intervention is; a wrong practice such as forcing a person who ingested corrosives to induce, may troublesome the situation. Because, the corrosive substance which passes to the stomach through the esophagus may cause an advance in the previous esophagus injury by second contact with the esophagus during vomiting (42,45). Also in this study, 27.4% of the first-year students and 25.3% of the last-year students had the knowledge of not to force the patient to vomit following corrosive substance ingestion. In a study conducted with the pre-school educators in the province Ankara; 16.7% of the participants knew not to force the patient to vomit who ingested corrosive substance; while in a similar study held in the center of province of Isparta, the rate of teachers with the accurate knowledge was 35.5% (36,11). Both in this study and in other studies; about approaching to a child who ingested corrosives, the number of pre-school teachers with accurate and right knowledge was not sufficient; thus, it is important for the child health to eliminate this lack of knowledge, by making arrangements at the present curriculum, and supporting the issue with in-service training.

As a result, even the mean total scores of last-year students were detected to be higher than the first-year students, the students were found to have insufficient level of knowledge about health problems that they may face in their professional lives, such as approach to a patient with corrosive substance ingestion, post-burn first-aid, and the transmission of tuberculosis. In this respect, formation of the content of the curriculum in respect to the frequent problems that the students may face in their professional lives is thought to contribute to increase their level of knowledge. In addition, the continuity of the knowledge should be maintained with post-graduate in-service training.

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