

# 경남지역 특수학교 학생의 구강내 세균검사에 따른 영구치우식경험률에 관한 연구

: Streptococcus mutans, Lactobacillus, DMFT, DT, MT, FT

## 1. 서론

(Streptococcus mutans) (Lactobacillus)  
<sup>3)</sup> Streptococcus mutans  
가 가  
pH  
<sup>1)</sup> .  
가 Lactobacilli  
가  
pH  
Lactobacilli count가  
<sup>2)</sup> .  
가  
가

가 .

가 Dentocult-SM LB kit .

가

(70 ) 가

가 가

4).

(Streptococcus mutans)

(Lactobacillus)

5)

(DMFT), (DT),

(FT), (MT)

가

가

2. 연구대상 및 방법

2.1 연구대상

가

86.6%, 가 9%, 4.5%,

가 3%

가

가

140

가 가 6 134

< 1>

표 1. 연구대상자의 일반적인 특성별 분포

장애유형		전체		남자		여자	
		N	%	N	%	N	%
뇌병변	1급	6	4.5	4	5.4	2	3.3
	1급	6	4.5	2	2.7	4	6.7
발달장애	2급	6	4.5	4	5.4	2	3.3
	전체	12	9.0	6	8.1	6	10.0
정신지체	1급	28	20.9	16	21.6	12	20.0
	2급	62	46.3	36	48.6	26	43.3
	3급	22	16.4	12	16.2	10	16.7
	전체	112	83.6	64	86.5	48	80.0
청각장애	2급	4	3.0	0	0.0	4	6.7
Total		134	100.0	74	100.0	60	100.0

2.2 연구방법

2.2.1 구강검사

. Dentocult-LB . Cultute tube dipslide 37 4 Lactobacillus(LB ) count 가 , , , 4) , , , (DMFT rate), (DT rate), (FT rate), (MT rate) 2.3 분석방법 SPSS 15.0 for Windows , , ,

2.2.2 Dentocult-SM과 LB검사

Dentocult-SM Dentocult-SM Dentocult-LB t , , , site strip 1 1 1 test strip 10

test strip 37 48 S.mutans(SM )가 zone 9.3% 9% of inhibition 가 36% 33% (negative:0), , ,

3. 연구성적

3.1 장애유형에 따른 DMFT, DT, MT, FT 의 차이 분석

표 2. 장애유형에 따른 DMFT, DT, MT, FT

변인	정신지체		그외		전체		t(p)
	M	SD	M	SD	M	SD	
DMFT	9.31	12.08	9.09	14.73	9.28	12.50	.075 (.940)
DT	36.92	38.46	33.83	32.35	36.41	37.43	.397 (.694)
FT	40.02	39.91	24.41	32.51	37.46	39.12	1.724 (.087)
MT	10.56	22.14	32.67	36.95	14.19	26.32	-2.713*(.012)

\* p<.05

표 3. 성별에 따른 DMFT, DT, MT, FT

변인	남자		여자		전체		t(p)
	M	SD	M	SD	M	SD	
DMFT	9.07	14.88	9.52	8.84	9.28	12.50	- .217 (.828)
DT	29.12	36.48	45.41	36.92	36.41	37.43	-2.555*(.012)
FT	34.07	40.16	41.63	37.71	37.46	39.12	-1.114 (.267)
MT	17.89	3.93	9.63	18.41	14.19	26.32	1.916 (.058)

\* p<.05

표 4. 허부위의 SM의 분포에 따른 DMFT, DT, FT, MT

	DMFT		DT		FT		MT	
	M	SD	M	SD	M	SD	M	SD
무활성	-	-	34.04	36.99	34.74	40.43	8.99	17.68
경도활성	12.20	13.66	40.47	35.89	38.10	37.34	13.10	25.70
중도활성	6.80	9.33	32.18	37.95	36.66	38.01	21.63	33.31
고도활성	6.25	6.82	45.00	48.70	50.00	53.45	5.00	9.26
F(p)	1.614(.189)		.550(.649)		.337(.799)		1.983(.120)	

\* p<.05

40% 24% 가  
10% < 3>  
32% (P<.012).

3.3 Dentocult SM분석결과에 따른 DMFT, DT, FT, MT의 차이

< 2> 3.3.1 허부위의 Dentocult SM결과와 DMFT, DT, FT, MT의 관계

Dentocult SM 가

9%, 9.5% 가 45% 가  
가 29%, 가 50% 가  
45% (p<.012), 가  
34%, 41% SM 가  
가  
17%, 가 9% < 4>  
가

표 5. 상악우측대구치의 SM의 분포에 따른 DMFT, DT, FT, MT

		DMFT		DT		FT		MT	
		M	SD	M	SD	M	SD	M	SD
상악 우측 대구치	무활성	3.25	5.93	21.65	37.02	58.08	47.10	11.18	17.39
	경도활성	10.71	14.49	37.42	39.14	25.30	34.84	20.61	34.07
	중도활성	8.84	10.62	37.91	39.02	36.30	35.50	11.50	24.46
	고도활성	12.18	14.45	43.06	32.62	38.41	38.15	12.65	23.69
F(p)		2.586(.056)		1.549(.205)		3.390*(.020)		.996(.397)	

\* p&lt;.05

표 6. 상악좌측대구치의 SM의 분포에 따른 DMFT, DT, FT, MT

		DMFT		DT		FT		MT	
		M	SD	M	SD	M	SD	M	SD
상악 좌측 대구치	무활성	4.95	6.31	37.55	39.27	33.76	45.24	21.00	23.45
	경도활성	8.47	12.57	29.01	35.18	34.48	38.92	14.29	30.71
	중도활성	9.29	10.34	39.43	36.97	50.45	34.22	10.12	16.78
	고도활성	15.77	17.14	48.08	39.59	31.92	37.00	11.67	28.23
F(p)		3.462*(.018)		1.575(.199)		1.460(.229)		.892(.447)	

\* p&lt;.05

### 3.3.2 상악우측대구치의 Dentocult SM결과와 DMFT, DT, FT, MT의 관계

Dentocult SM

12%

가

43% 가 ,

58%

(p&lt;.020).

20%

50% 가

21% 가

### 3.3.4 하악좌측대구치의 SM의 분포에 따른 DMFT, DT, FT, MT의 차이

SM

13% 가

&lt; 5&gt;

42%

### 3.3.3 상악좌측대구치의 Dentocult SM결과와 DMFT, DT, FT, MT의 관계

SM

15% 가

(p&lt;.018).

48%

44% 가

22% 가

&lt; 7&gt;

표 7. 하악좌측대구치의 SM의 분포에 따른 DMFT, DT, FT, MT

		DMFT		DT		FT		MT	
		M	SD	M	SD	M	SD	M	SD
하악 좌측 대구치	무활성	7.40	10.05	38.47	37.09	38.86	42.98	15.53	23.08
	경도활성	7.59	10.98	33.60	39.13	32.90	38.37	14.75	27.07
	중도활성	12.50	18.41	35.95	37.63	41.95	39.45	22.10	37.32
	고도활성	13.64	12.16	42.42	34.12	44.85	36.73	3.64	7.90
F(p)		1.979(.120)		.333(.801)		.647(.586)		1.850(.141)	

\* p<.05

표 8. 하악우측대구치의 SM의 분포에 따른 DMFT, DT, FT, MT

		DMFT		DT		FT		MT	
		M	SD	M	SD	M	SD	M	SD
하악 우측 대구치	무활성	6.19	7.44	36.15	39.72	47.82	45.79	9.37	16.46
	경도활성	11.95	15.62	39.98	36.63	22.36	29.67	14.59	27.79
	중도활성	8.57	10.69	34.66	39.25	39.81	38.70	20.53	32.20
	고도활성	7.74	11.88	27.50	30.71	69.17	33.09	3.33	7.78
F(p)		1.525(.211)		.408(.747)		6.732***(.000)		1.830(.145)	

표 9. LB의 분포에 따른 DMFT, DT, FT, MT

		DMFT		DT		FT		MT	
		M	SD	M	SD	M	SD	M	SD
LB	무활성	7.45	13.30	29.89	35.82	43.88	40.57	8.84	23.30
	경도활성	6.93	8.66	37.27	38.94	26.25	34.18	24.72	32.40
	중도활성	10.91	13.52	37.59	35.39	43.98	41.07	7.32	11.02
	고도활성	15.08	13.05	49.15	41.88	29.16	36.69	21.69	35.13
F(p)		2.289(.081)		1.183(.319)		1.992(.118)		4.009**(.009)	

\* p<.05

3.3.5 하악우측대구치의 SM의 분포에 따른 DMFT, DT, FT, MT의 차이

SM

가 11% 가

39% 가

69% 가

(p<.000).

20% 가

SM 가 43%

24% 가 (p<.009).

< 8>

3.4 LB의 분포에 따른 DMFT, DT, FT, MT의 차이

LB

15%

49% 가

가 Dentcult-SM  
< 9> 가  
1,000,000CFU/ml 가

4. 총괄 및 고안

Vignehsa<sup>6)</sup> 가 6 18 가

Evans<sup>7)</sup> 3 19

12 14  
5

가 가<sup>8)</sup> 38%  
, Gizani<sup>10)</sup> 12  
21%

<sup>9)</sup> 가 90%  
가 가

40% 가 SM 가  
가 가  
가

Dentcult-SM  
가

가  
LB

5. 결 론

FT , MT

134

, 2008 3 17 4 9

Dentocult-SM DMFT DT, FT

Dentocult-LB kit streptococcus 가 , MT

mutans lactobacillus 가

7. Dentocult SM

DMFT DT

, FT , MT

(DMFT), (DT), 가

(FT), (MT)

8. Dentocult-LB DMFT DT

SPSS 15.0 for Windows , FT

, Dentocult-SM , MT

Dentocult-LB t

Dentocult SM LB

1. DMFT 가

. DT FT 가

, MT

2. DMFT DT

, FT MT

3. Dentocult SM

DMFT 가 , DT

FT , MT

가

4. Dentocult SM

DMFT DT

, FT , MT

가

5. Dentocult SM

DMFT DT

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**Abstract**

# **A study on analysis of the Relationship Oral bacteria to dental caries experience in disabled student's: in Gyeong-nam**

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**Key words:** Streptococcus mutans, Lactobacillus, DMFT, DT, MT, FT

The purpose of this study was to examine the relationship between the Dentocult SM and LB scores of students and their DMF rate. The subjects in this study were 134 special school students in south Gyeong-sang province. After they were tested to find out their , they received tooth brushing education and preventive treatment. The test, education and treatment were all conducted from March 17 to April 9, 2008. Their oral state was checked and recorded by using a mirror and explorer, and then the data on oral state were analyzed to their DMFT, DT, FT and MT rates. All the collected data were analyzed with SPSS 15.0 for Windows program, and independent-samples t-test, one-way ANOVA and crosstabs analysis were implemented to see what differences their disability type, gender, Dentocult-SM scores and Dentocult-LB scores made. The findings of the study were as follows:

1. As for connections between disability type and DMFT rate, the students with mental retardation were similar to the other students in that regard. The mentally retarded students had higher DT and FT rates than the other students, and the MT rate of the latter was higher than that of the former.
2. Concerning the relationship of gender to DMFT and DT rates, the girls had larger DMFT and DT rates than the boys, and the FT and MT rates of the boys were higher than those of the girls.
3. As to links between Dentocult SM scores on the tongue and DMFT, the students whose bacteria was mildly activated had the highest DMFT rate, and the students who had a severely activated bacteria had the highest DT and FT rates. Those who had a moderately activated bacteria had

the highest MT rate.

4. Regarding the connections of Dentocult SM scores on maxillaryright molar. to DMFT and DT rates, the students whose bacteria was severely activated had the highest DMFT and DT rates. Those who had no activated bacteria had the largest FT rate, and the students who had a mildly activated bacteria had the highest MT rate.
5. Regarding the connections of Dentocult SM scores on maxillaryleft molar to DMFT and DT rates, the students whose bacteria was severely activated had the highest DMFT and DT rates. Those who had no activated bacteria had the largest FT rate, and the students who had a mildly activated bacteria had the largest MT rate.
6. Regarding the connections of Dentocult SM scores on mandibularright molar. to DMFT and DT, FT rates, the students whose bacteria was severely activated had the highest DMFT and DT, FT rates. Those who had a moderately activated bacteria had the highest MT rate.
7. Regarding the connections of Dentocult SM scores on mandibularleft molar. to DMFT and DT rates, the students whose bacteria was mildly activated had the highest DMFT and DT rates. Those who had no activated bacteria had the highest FT rate, and the students who had a moderately activated bacteria had the highest MT rate.
8. Regarding the connections of Dentocult LB scores to DMFT and DT rates, the students whose bacteria was severely activated had the highest DMFT and DT rates. Those who had no activated bacteria had a moderately FT rate, and the students who had a mildly activated bacteria had a mildly MT rate.

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