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# Publication Times and Impact Factors (IFs) in Dentistry Journals

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## **Abstract**

Introduction: The speed of manuscript publication in reputable journals plays a crucial role in spreading scientific novelties and may influence the number of received citations. In the present study, the authors investigated the publication speed of dentistry journals. This is crucial for both authors, who desire rapid dissemination of their findings, and patients in need, who seek new therapies.

Materials and methods: This was a cross-sectional bibliometric analysis of published dentistry journals. A list of dentistry journals featured in the 2021 Journal Citation Report was downloaded. A total of five random original articles were extracted from each of these journals. These articles were published between January and December 2020. Median and interquartile range (IQR) times from submission to acceptance, publication in print, online publication, time from acceptance to in print and online publication were calculated. The correlation between publication times and journal impact factor (IF) was examined.

Results: A total of 89 journals were included. Individual time from submission to acceptance (peer review time) ranged from 6 to 279 days, the combined median peer review time was 115 (80-159) days. The overall median time from acceptance to online or print publication was 17 (12-38) and 153 (92-249) days, respectively. Journals with available data concerning publication times tended to have higher IF than others. Only journals that did not have available time from acceptance to online publication had higher IF. There were negative correlations between times from submission (r = -0.442, p = 0.007), acceptance (r = -0.616, p < 0.001) to in-print publication, and IF. There were no correlations between IF and time from submission to acceptance, acceptance to online publication, and submission to online publication.

Conclusions: Publication times availability was revealed to be an indicator of higher impacted journals, which is a potential new exponent of journal quality. Higher IF values were associated with shorter times from submission to acceptance and in-print publication, which is consistent with current editorial policies.

Categories: Quality Improvement, Dentistry

 $\textbf{Keywords:} \ journals, \ clinical \ dentistry, \ publication \ times, \ bibliometric \ analyis, \ peer \ reviews$ 

#### Introduction

The process of publishing research changed tremendously over the past years. Publications in highly regarded journals became an indicator of research quality and productivity. Dissemination of research findings within the scientific community gives a possibility to contribute to the evolution of particular fields and convert scientific experiments into hands-on practice [1]. This holds true across multiple research disciplines and dentistry is no exception.

The publishing process has quickly evolved over the last few years. Submission of paper-written manuscripts was replaced by an electronic manuscript processing system. Instead of mailing manuscript proposals, instant electronic systems give the authors insight into each stage of the publication process [1-4]. Although this innovation reduced the time of the publishing process, the total time to publication remained long [1-4]. Exceptional work done by both authors and journals is essential for each paper from submission to publication. To enhance this process, authors could deliver better manuscripts and respond quickly to revisions.

Delay in the introduction of crucial innovations has a negative outcome for patients who need new therapies [1, 5-6], journals in terms of impact factor (IF) [1, 7], and recognition of authors' scientific work [1-2, 7]. The speed of the publication process, topic fit, and journal quality were found to be the most critical factors that influence an author's choice of journal [1, 8-9]. It seems reasonable that long publication times could influence an author's decision to publish in a particular journal [1-2]. However, faster turn-around times which would be acceptable for authors, should not come with lower peer-review quality [1, 10]. Bibliometric analysis of journals critically analyzes and helps to understand the different phases of the publican process in a particular field [1-2, 8, 11]. To the knowledge of the authors, time from submission to acceptance in dentistry journals has not been investigated. The aim of this study is to get insight into the

time required for manuscripts to be accepted and published in dentistry journals in 2020. In addition, correlations between publication times and IF were analyzed.

#### **Materials And Methods**

From the Thomson Reuters website, a list of dentistry journals, indexed in the Journal Citation Report 2021 was downloaded. All journals under the subject category dentistry, oral surgery, and medicine in Science Citation Index Expanded edition were selected. Journals that published only review articles were excluded. From each of these journals, a total of five random original articles published between January and December 2020 were extracted. Authors selected articles at their own discretion, with no specific randomization method. To reduce bias, articles were selected directly from the journal's articles lists without a prior publication speed check. The selection process relied only on the article's titles and dates of final publication. Review articles, correspondence, and editorials were excluded. The authors collected information about the dates of submission, final acceptance, and online and in-print publication from the final versions of the articles. In accordance with previous studies, the date of submission denotes the date of when a manuscript was submitted for consideration for publication in a journal, the date of acceptance denotes the date of communication of the final decision to the corresponding author of a manuscript, dates of in-print and online publication refer to the date of publication of the manuscript online or in-print [1-2]. The periods from submission to acceptance, from acceptance to online publication and in-print, and from submission to online publication and in-print were calculated for each journal [1-2]. The median and interquartile ranges (IQRs, 25%-75%) of each parameter were calculated. Data were examined for normality with the Shapiro Wilk test. Continuous variables were compared with the Mann-Whitney U test. Spearman correlations between IF and publication times were calculated. JASP 0.16.3 (the University of Amsterdam, The Netherlands) software was used for the statistical analysis. p < 0.05 was considered statistically significant.

## **Results**

A total of 89 journals were included. Time from submission to acceptance was unavailable for 34 (38%) journals, time from acceptance to online publication for 31 (35%) journals, time from acceptance to in-print publication for 50 (56%) journals, time from submission to online publication for 34 (38%) journals, and time from submission to in-print publication for 53 (60%) journals. Journals with available data concerning publication times had higher IF than others. However, journals that did not have available time from acceptance to online publication had higher IF. All differences were statistically significant (all p < 0.05, with Mann-Whitney U test) and presented in Figure 1.

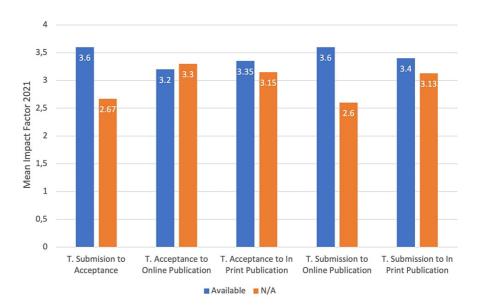


FIGURE 1: Differences between mean IF and availability of publication times.

All differences were statistically significant, p < 0.05; t, time from; N/A, not available

IF, impact factor

Individual time from submission to acceptance (peer review time) ranged from 6 to 279 days, the combined median peer review time was 115 (80-159) days. The overall median time from acceptance to online or print

publication was 17 (12-38) and 153 (92-249) days, respectively. Table  $\it 1$  shows the median publication and peer review time delay for manuscripts in each of the journals.

Journal	AT Time, median (IQR), days	AOP time, median (IQR), days	AIP time, median (IQR), days	SOP time, median (IQR), days	SIPP time, median (IQR), days	IF 2021
Int J Oral Sci	179 (177-223)	52 (30-58)	N/A	209 (200-308)	N/A	24.89
J Dent Res	N/A	N/A	N/A	N/A	N/A	8.924
J Clin Peridontol	47 (46-101)	15 (12-16)	81 (59-83)	63 (58-111)	130 (127-160)	7.478
Oral Onncol	88 (71-122)	13 (9-18)	N/A	106 (78-135)	N/A	5.972
Dent Mater	134 (92-178)	17 (13-18)	61 (61-76)	146 (129-195)	195 (170-239)	5.687
Int Endod J	120 (116-135)	1 (1-2)	77 (63-94)	121 (117-137)	210 (183-212)	5.165
J Evid-Based Dent Pr	146 (122-168)	18 (7-37)	89 (77-103)	164 (149-175)	245 (235-261)	5.100
Clin Oral Implan Res	246 (237-311)	15 (15-63)	113 (92-142)	259 (252-374)	338 (329-453)	5.021
J Dent	101 (96-131)	6 (6-7)	27 (20-39)	107 (103-137)	135 (113-151)	4.991
J Peridontol	N/A	N/A	N/A	N/A	N/A	4.494
J Endodont	N/A	N/A	N/A	N/A	N/A	4.422
J Prosthodont Res	N/A	N/A	N/A	N/A	N/A	4.338
J Adhes Dent	N/A	N/A	N/A	N/A	N/A	4.309
Clin Implant Dent R	102 (94-108)	23 (15-26)	94 (94-98)	121 (121-125)	196 (192-212)	4.259
J Prosthet Dent	N/A	N/A	N/A	210 (210-210)	N/A	4.148
Mol Oral Microbiol	49 (48-62)	8 (8-8)	69 (57-70)	57 (56-70)	119 (105-119)	4.107
Oral Dis	93 (79-118)	11 (7-12)	340 (340-340)	104 (96-130)	433 (419-468)	4.068
J Periodontal Res	73 (23-94)	17 (11-20)	127 (120-140)	93 (40-111)	234 (140-240)	3.946
Caries Res	212 (171-224)	85 (67-117)	137 (130-165)	287 (283-297)	347 (344-349)	3.918
BMC Oral Health	127 (81-175)	10 (9-13)	N/A	170 (93-181)	N/A	3.747
J Dent Sci	156 (156-156)	18 (18-18)	58 (58-58)	24 (17-59)	73 (68-131)	3.719
Int J Oral Impl	N/A	N/A	N/A	N/A	N/A	3.654
Clin Oral Invest	229 (159-310)	10 (9-14)	N/A	243 (168-317)	N/A	3.606
J Oral Rehabil	171 (163-259)	17 (9-18)	63 (63-74)	188 (169-307)	245 (226-349)	3.558
J Oral Pathol Med	62 (50-135)	18 (9-33)	111 (108-189)	95 (78-153)	170 (144-357)	3.539
Dentomaxillofac Rad	23 (13-29)	13 (13-15)	176 (173-184)	36 (28-37)	200 (197-202)	3.525
J Prosthodont	N/A	5 (3-5)	244 (153-260)	N/A	N/A	3.485
J Am Dent Assoc	63 (42-98)	71 (14-100)	150 (137-277)	112 (56-184)	247 (201-352)	3.454
Dent Traumatol	61 (37-188)	26 (25-29)	141 (141-163)	86 (68-204)	202 (190-329)	3.328

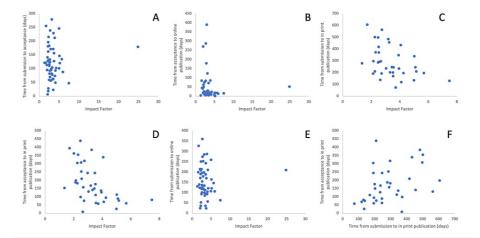
J Cramin Maxill   279 (202-315)   6 (6-7)   168 (188-178)   285 (212-322)   483 (380-509)   3.1     J Appl Cral Sci   82 (74-106)   124 (102-124)   NIA   198 (181-230)   NIA   3.1     Eur J Orthodort   NIA   NIA   NIA   NIA   NIA   NIA   NIA   NIA   3.1     J Eshel Restort   99 (90-122)   15 (13-17)   132 (132-137)   116 (101-139)   236 (234-258)   3.0     Implant Dent   NIA   NI	Int J Paediatr Dent	78 (76-125)	9 (7-16)	284 (315-385)	100 (88-128)	456 (449-463)	3.264
Surg         Z79 (2023/15)         6 (6-7)         168 (168-176)         289 (212-322)         483 (806-509)         3.1           J Appl Oral Sci         82 (74-106)         124 (102-124)         N/A         198 (181-230)         N/A         3.1           Eur J Orthodont         N/A         N/A         N/A         N/A         N/A         N/A         3.1           J Eshlet Restor Dent         99 (90-122)         15 (13-17)         132 (132-137)         116 (101-139)         236 (234-258)         3.0           Int J Oral Max Surg         N/A         N/A         N/A         N/A         N/A         N/A         N/A         3.0           Int J Implant Dent         95 (84-107)         11 (11-25)         N/A         118 (109-129)         N/A         2.9           Oper Dent         N/A         390 (345-381)         N/A         N/A         N/A         N/A         N/A         N/A         N/A         118 (109-129)         N/A         2.9           Int J Oral Max Impl         N/A         N/A         N/A         N/A         N/A         N/A         N/A         N/A         2.8           Ind J Oral Max Impl         N/A         N/A         N/A         N/A         N/A         N/A         2.8	Prog Orthod	104 (80-107)	30 (29-55)	N/A	134 (125-136)	N/A	3.247
Eur J Orthodont N/A N/A N/A N/A N/A N/A N/A N/A N/A 3.1 J Eshtet Restor Dent September 15 (13-17) 132 (132-137) 116 (101-139) 236 (234-258) 3.0 Implient Dent N/A N/A N/A N/A N/A N/A N/A N/A N/A 3.0 Implient Dent N/A N/A N/A N/A N/A N/A N/A N/A N/A 3.0 Implient Dent N/A		279 (202-315)	6 (6-7)	168 (168-178)	285 (212-322)	483 (380-509)	3.192
Eighter Restor   99 (90-122)   15 (13-17)   132 (132-137)   116 (101-139)   236 (234-258)   3.0	J Appl Oral Sci	82 (74-106)	124 (102-124)	N/A	198 (181-230)	N/A	3.144
Dent         99 (90-122)         15 (13-17)         132 (132-137)         116 (101-139)         236 (234-258)         3.0           Implant Dent         N/A         N/A         N/A         N/A         N/A         N/A         N/A         3.0           Int J Graff Max Surg         N/A         17 (13-23)         244 (175-280)         N/A         N/A         N/A         N/A         2.9           Oper Dent         N/A         390 (345-391)         N/A         2.9           Odontology         171 (109-172)         17 (7-20)         N/A         179 (129-222)         N/A         2.8           Med Orall         56 (54-94)         179 (158-189)         N/A         252 (239-252)         N/A         2.8           Brit Dent J         69 (57-87)         2	Eur J Orthodont	N/A	N/A	N/A	N/A	N/A	3.131
Int J Oral Max Surg Int J Oral Max Surg Int J Implant Surg Surg Int J Oral Max N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A		99 (90-122)	15 (13-17)	132 (132-137)	116 (101-139)	236 (234-258)	3.040
Surg         NA         17 (13-23)         244 (175-280)         N/A         NA         2.9           Int J Implant Dent         95 (84-107)         11 (11-25)         N/A         118 (109-129)         N/A         2.9           Oper Dent         N/A         390 (345-391)         N/A         2.9           Int J Oral Max Impl         N/A         N/A         N/A         N/A         N/A         N/A         N/A         2.9           Int J Oral Max Impl         N/A         N/A         N/A         N/A         179 (129-222)         N/A         2.8           Med Oral Max Impl         N/A         N/A         179 (129-222)         N/A         2.8         2.8           Gerodontology         239 (183-251)         23 (18-49)         318 (312-36)         274 (201-288)         563 (501-575)         2.7           Brit Dent J         69 (57-8	Implant Dent	N/A	N/A	N/A	N/A	N/A	3.000
Dent 95 (84-107) 11 (11-25) NIA 118 (109-129) NIA 2.9  Oper Dent NIA 390 (345-391) NIA NIA NIA NIA NIA NIA 2.9  Int J Comput NIA NIA NIA NIA NIA NIA NIA NIA NIA 2.9  Int J Oral Max Int J Oral Max Int J Oral Max NIA NIA NIA NIA NIA NIA 2.9  Odontology 171 (109-172) 17 (7-20) NIA 179 (129-222) NIA 2.8  Med Oral Pathol Oral 56 (54-94) 179 (158-189) NIA 252 (239-252) NIA 2.8  Gerodontology 239 (183-251) 23 (18-49) 318 (312-336) 274 (201-288) 563 (501-575) 2.7  Birt Dent J 69 (57-87) 287 (275-291) NIA 360 (351-374) NIA 2.7  Int J Dent Hyg 124 (123-127) 16 (4-26) 76 (68-244) 130 (130-150) 192 (190-371) 2.7  Am J Orthod Dentofac NIA NIA NIA NIA NIA NIA 195 (175-195) NIA 2.6  Braz Oral Res 133 (131-318) 21 (21-22) 158 (158-170) 154 (184-161) 296 (289-304) 2.6  Arch Oral Biol 123 (119-189) 5 (4-6) 9 (8-9) 137 (123-194) 138 (127-198) 2.6  Int Dent J NIA		N/A	17 (13-23)	244 (175-280)	N/A	N/A	2.986
Int J Comput Dent Dent Dent Dent Dent Dent Dent Den	-	95 (84-107)	11 (11-25)	N/A	118 (109-129)	N/A	2.984
Dent         N/A         N/A         N/A         N/A         N/A         N/A         2.9           Int J Oral Max Impl         N/A         N/A         N/A         N/A         N/A         N/A         2.9           Med Oral Pathol Oral 56 (64-94)         179 (158-189)         N/A         252 (239-282)         N/A         2.8           Gerodontology         239 (183-251)         23 (18-49)         318 (312-336)         274 (201-288)         563 (501-575)         2.7           Brit Dent J         69 (57-87)         287 (275-291)         N/A         360 (351-374)         N/A         2.7           Int J Dent Hyg         124 (123-127)         16 (4-26)         76 (68-244)         130 (130-150)         192 (190-371)         2.7           Am J Orthod Dentofac         N/A         N/A         N/A         N/A         N/A         N/A         192 (190-371)         2.7           Am J Orthod Dentofac         N/A         N/A         N/A         N/A         N/A         N/A         N/A         N/A         192 (190-371)         2.7           Am J Orthod Dentofac         133 (133-138)         21 (21-22)         158 (158-170)         154 (154-161)         296 (289-304)         2.6           Braz Oral Res         133 (133-138)	Oper Dent	N/A	390 (345-391)	N/A	N/A	N/A	2.93
Impl         N/A         N/A         N/A         N/A         N/A         N/A         2.9           Odontology         171 (109-172)         17 (7-20)         N/A         179 (129-222)         N/A         2.8           Med Oral Pathol Oral         56 (54-94)         179 (158-189)         N/A         252 (239-252)         N/A         2.8           Gerodontology         239 (183-251)         23 (18-49)         318 (312-336)         274 (201-288)         563 (501-575)         2.7           Brit Dent J         69 (57-87)         287 (275-291)         N/A         360 (351-374)         N/A         2.7           Int J Dent Hyg         124 (123-127)         16 (4-26)         76 (68-244)         130 (130-150)         192 (190-371)         2.7           Am J Orthod Dentofac         N/A         N/A         N/A         N/A         N/A         N/A         195 (175-195)         N/A         2.7           Am J Orthod Dentofac         92 (92-123)         83 (72-99)         N/A         195 (175-195)         N/A         2.6           Braz Oral Res         133 (133-138)         21 (21-22)         158 (158-170)         154 (154-161)         296 (289-304)         2.6           Int Dent J         N/A         N/A         N/A         N/A	-	N/A	N/A	N/A	N/A	N/A	2.923
Med Oral Pathol Oral         56 (54-94)         179 (158-189)         N/A         252 (239-252)         N/A         2.8           Gerodontology         239 (183-251)         23 (18-49)         318 (312-336)         274 (201-288)         563 (501-575)         2.7           Brit Dent J         69 (57-87)         287 (275-291)         N/A         360 (351-374)         N/A         2.7           Int J Dent Hyg         124 (123-127)         16 (4-26)         76 (68-244)         130 (130-150)         192 (190-371)         2.7           Am J Orthod Dentofac         N/A         N/A         N/A         N/A         N/A         N/A         2.7           Angle Orthod         92 (92-123)         83 (72-99)         N/A         195 (175-195)         N/A         2.6           Braz Oral Res         133 (133-138)         21 (21-22)         158 (158-170)         154 (154-161)         296 (289-304)         2.6           Arch Oral Biol         123 (119-189)         5 (4-6)         9 (8-9)         137 (123-194)         138 (127-198)         2.6           Int Dent J         N/A         N/A         N/A         N/A         N/A         N/A         2.5           Or Surg Or Med Or Pa         115 (113-194)         6 (5-6)         253 (244-257)         121 (11		N/A	N/A	N/A	N/A	N/A	2.91
Pathol Oral 56 (54-94) 179 (158-189) N/A 252 (239-252) N/A 2.8  Gerodontology 239 (183-251) 23 (18-49) 318 (312-336) 274 (201-288) 563 (501-575) 2.7  Brit Dent J 69 (57-87) 287 (275-291) N/A 360 (351-374) N/A 2.7  Int J Dent Hyg 124 (123-127) 16 (4-26) 76 (68-244) 130 (130-150) 192 (190-371) 2.7  Am J Orthod Dentofac N/A N/A N/A N/A N/A N/A N/A 2.7  Am J Orthod 92 (92-123) 83 (72-99) N/A 195 (175-195) N/A 2.6  Braz Oral Res 133 (133-138) 21 (21-22) 158 (158-170) 154 (154-161) 296 (289-304) 2.6  Arch Oral Biol 123 (119-189) 5 (4-6) 9 (8-9) 137 (123-194) 138 (127-198) 2.6  Int Dent J N/A N/A N/A N/A N/A N/A N/A 2.6  Orthod Craniofac Res 82 (61-92) 19 (14-54) 209 (188-230) 101 (101-106) 291 (291-329) 2.5  Or Surg Or Med Or Pa 115 (113-194) 6 (5-6) 253 (244-257) 121 (119-199) 370 (353-447) 2.5  Eur J Dent Bont 183 (140-184) 17 (16-30) 99 (99-208) 214 (152-227) 286 (249-336) 2.4  J Stomatol Oral So (56-91) 13 (9-16) 439 (427-440) 93 (65-104) 498 (496-515) 2.4  Dent Mater J N/A N/A N/A N/A N/A N/A N/A N/A N/A 2.4  Pediatr Dent 132 (104-146) N/A	Odontology	171 (109-172)	17 (7-20)	N/A	179 (129-222)	N/A	2.88
Brit Dent J 69 (57-87) 287 (275-291) N/A 360 (351-374) N/A 2.7 Int J Dent Hyg 124 (123-127) 16 (4-26) 76 (68-244) 130 (130-150) 192 (190-371) 2.7 Am J Orthod Dentofac N/A N/A N/A N/A N/A N/A N/A N/A 2.7 Angle Orthod 92 (92-123) 83 (72-99) N/A 195 (175-195) N/A 2.6 Braz Oral Res 133 (133-138) 21 (21-22) 158 (158-170) 154 (154-161) 296 (289-304) 2.6 Arch Oral Biol 123 (119-189) 5 (4-6) 9 (8-9) 137 (123-194) 138 (127-198) 2.6 Int Dent J N/A N/A N/A N/A N/A N/A N/A N/A 2.6 Orthod Craniofac Res 82 (61-92) 19 (14-54) 209 (188-230) 101 (101-106) 291 (291-329) 2.5 Or Surg Or Med Or Pa 115 (113-194) 6 (5-6) 253 (244-257) 121 (119-199) 370 (353-447) 2.5 Eur J Dent Educ 110 (95-152) 8 (7-9) 308 (308-311) 118 (101-162) 418 (403-475) 2.5 Eur J Dent Coral Dent Oral 133 (140-184) 17 (16-30) 99 (99-208) 214 (152-227) 286 (249-336) 2.4 J Stomatol Oral Maxi 59 (56-91) 13 (9-16) 439 (427-440) 93 (65-104) 498 (496-515) 2.4 J J Oral Facial N/A		56 (54-94)	179 (158-189)	N/A	252 (239-252)	N/A	2.88
Int J Dent Hyg 124 (123-127) 16 (4-26) 76 (68-244) 130 (130-150) 192 (190-371) 2.7  Am J Orthod Dentoface N/A N/A N/A N/A N/A N/A N/A N/A 2.7  Angle Orthod 92 (92-123) 83 (72-99) N/A 195 (175-195) N/A 2.6  Braz Oral Res 133 (133-138) 21 (21-22) 158 (158-170) 154 (154-161) 296 (289-304) 2.6  Arch Oral Biol 123 (119-189) 5 (4-6) 9 (8-9) 137 (123-194) 138 (127-198) 2.6  Int Dent J N/A N/A N/A N/A N/A N/A N/A 2.6  Orthod Crainofac Res 82 (61-92) 19 (14-54) 209 (188-230) 101 (101-106) 291 (291-329) 2.5  Or Surg Or Med Or Pa 115 (113-194) 6 (5-6) 253 (244-257) 121 (119-199) 370 (353-447) 2.5  Eur J Dent Educ 110 (95-152) 8 (7-9) 308 (308-311) 118 (101-162) 418 (403-475) 2.5  Commun Dent Oral 183 (140-184) 17 (16-30) 99 (99-208) 214 (152-227) 286 (249-336) 2.4  J Stomatol Oral 59 (56-91) 13 (9-16) 439 (427-440) 93 (65-104) 498 (496-515) 2.4  Maxi N/A	Gerodontology	239 (183-251)	23 (18-49)	318 (312-336)	274 (201-288)	563 (501-575)	2.75
Am J Orthod Dentoface N/A N/A N/A N/A N/A N/A N/A 2.7  Angle Orthod 92 (92-123) 83 (72-99) N/A 195 (175-195) N/A 2.6  Braz Oral Res 133 (133-138) 21 (21-22) 158 (158-170) 154 (154-161) 296 (289-304) 2.6  Arch Oral Biol 123 (119-189) 5 (4-6) 9 (8-9) 137 (123-194) 138 (127-198) 2.6  Int Dent J N/A	Brit Dent J	69 (57-87)	287 (275-291)	N/A	360 (351-374)	N/A	2.72
Denitofac         N/A         N/A         N/A         N/A         N/A         N/A         N/A         2.7           Angle Orthod         92 (92-123)         83 (72-99)         N/A         195 (175-195)         N/A         2.6           Braz Oral Res         133 (133-138)         21 (21-22)         158 (158-170)         154 (154-161)         296 (289-304)         2.6           Arch Oral Biol         123 (119-189)         5 (4-6)         9 (8-9)         137 (123-194)         138 (127-198)         2.6           Int Dent J         N/A         N/A         N/A         N/A         N/A         N/A         2.6           Orthod Craniofac Res         82 (61-92)         19 (14-54)         209 (188-230)         101 (101-106)         291 (291-329)         2.5           Or Surg Or Med Or Pa         115 (113-194)         6 (5-6)         253 (244-257)         121 (119-199)         370 (353-447)         2.5           Eur J Dent Educ         110 (95-152)         8 (7-9)         308 (308-311)         118 (101-162)         418 (403-475)         2.5           Commun Dent Oral Maxi         183 (140-184)         17 (16-30)         99 (99-208)         214 (152-227)         286 (249-336)         2.4           J Stomatol Oral Maxi         N/A         N/A	Int J Dent Hyg	124 (123-127)	16 (4-26)	76 (68-244)	130 (130-150)	192 (190-371)	2.72
Braz Oral Res         133 (133-138)         21 (21-22)         158 (158-170)         154 (154-161)         296 (289-304)         2.6           Arch Oral Biol         123 (119-189)         5 (4-6)         9 (8-9)         137 (123-194)         138 (127-198)         2.6           Int Dent J         N/A         N/A         N/A         N/A         N/A         N/A         2.6           Orthod Craniofac Res         82 (61-92)         19 (14-54)         209 (188-230)         101 (101-106)         291 (291-329)         2.5           Or Surg Or Med Or Pa         115 (113-194)         6 (5-6)         253 (244-257)         121 (119-199)         370 (353-447)         2.5           Eur J Dent Educ         110 (95-152)         8 (7-9)         308 (308-311)         118 (101-162)         418 (403-475)         2.5           Commun Dent Oral Maxi         183 (140-184)         17 (16-30)         99 (99-208)         214 (152-227)         286 (249-336)         2.4           J Stomatol Oral Maxi         59 (56-91)         13 (9-16)         439 (427-440)         93 (65-104)         498 (496-515)         2.4           J Oral Facial Pain H         N/A         N/A         N/A         N/A         N/A         N/A         N/A         N/A         2.4           Pediatr Dent		N/A	N/A	N/A	N/A	N/A	2.71
Arch Oral Biol 123 (119-189) 5 (4-6) 9 (8-9) 137 (123-194) 138 (127-198) 2.6 Int Dent J N/A N/A N/A N/A N/A N/A N/A 2.6 Orthod Craniofac Res 82 (61-92) 19 (14-54) 209 (188-230) 101 (101-106) 291 (291-329) 2.5 Or Surg Or Med Or Pa 115 (113-194) 6 (5-6) 253 (244-257) 121 (119-199) 370 (353-447) 2.5 Eur J Dent Educ 110 (95-152) 8 (7-9) 308 (308-311) 118 (101-162) 418 (403-475) 2.5 Commun Dent Oral 183 (140-184) 17 (16-30) 99 (99-208) 214 (152-227) 286 (249-336) 2.4 J Stomatol Oral Maxi 59 (56-91) 13 (9-16) 439 (427-440) 93 (65-104) 498 (496-515) 2.4 J Oral Facial N/A N/A N/A N/A N/A N/A N/A 2.4 Pediatr Dent 132 (104-146) N/A N/A N/A N/A N/A N/A 2.3	Angle Orthod	92 (92-123)	83 (72-99)	N/A	195 (175-195)	N/A	2.684
Int Dent J         N/A         N/A         N/A         N/A         N/A         N/A         2.6           Orthod Craniofac Res         82 (61-92)         19 (14-54)         209 (188-230)         101 (101-106)         291 (291-329)         2.5           Or Surg Or Med Or Pa         115 (113-194)         6 (5-6)         253 (244-257)         121 (119-199)         370 (353-447)         2.5           Eur J Dent Educ         110 (95-152)         8 (7-9)         308 (308-311)         118 (101-162)         418 (403-475)         2.5           Commun Dent Oral         183 (140-184)         17 (16-30)         99 (99-208)         214 (152-227)         286 (249-336)         2.4           J Stomatol Oral Maxi         59 (56-91)         13 (9-16)         439 (427-440)         93 (65-104)         498 (496-515)         2.4           J Oral Facial Pain H         N/A         N/A         N/A         N/A         N/A         N/A         2.4           Dent Mater J         N/A         N/A         N/A         N/A         N/A         N/A         2.3           Pediatr Dent         132 (104-146)         N/A         N/A         N/A         N/A         N/A         2.3	Braz Oral Res	133 (133-138)	21 (21-22)	158 (158-170)	154 (154-161)	296 (289-304)	2.67
Orthod Craniofac Res       82 (61-92)       19 (14-54)       209 (188-230)       101 (101-106)       291 (291-329)       2.5         Or Surg Or Med Or Pa       115 (113-194)       6 (5-6)       253 (244-257)       121 (119-199)       370 (353-447)       2.5         Eur J Dent Educ       110 (95-152)       8 (7-9)       308 (308-311)       118 (101-162)       418 (403-475)       2.5         Commun Dent Oral Oral Maxi       183 (140-184)       17 (16-30)       99 (99-208)       214 (152-227)       286 (249-336)       2.4         J Stomatol Oral Maxi       59 (56-91)       13 (9-16)       439 (427-440)       93 (65-104)       498 (496-515)       2.4         J Oral Facial Pain H       N/A       N/A       N/A       N/A       N/A       2.4         Pediatr Dent       132 (104-146)       N/A       N/A       N/A       N/A       N/A       N/A       N/A       2.3	Arch Oral Biol	123 (119-189)	5 (4-6)	9 (8-9)	137 (123-194)	138 (127-198)	2.64
Craniofac Res       82 (61-92)       19 (14-54)       209 (188-230)       101 (101-106)       291 (291-329)       2.5         Or Surg Or Med Or Pa       115 (113-194)       6 (5-6)       253 (244-257)       121 (119-199)       370 (353-447)       2.5         Eur J Dent Educ       110 (95-152)       8 (7-9)       308 (308-311)       118 (101-162)       418 (403-475)       2.5         Commun Dent Oral Oral Maxi       183 (140-184)       17 (16-30)       99 (99-208)       214 (152-227)       286 (249-336)       2.4         J Stomatol Oral Maxi       59 (56-91)       13 (9-16)       439 (427-440)       93 (65-104)       498 (496-515)       2.4         J Oral Facial Pain H       N/A       N/A       N/A       N/A       N/A       N/A       2.4         Dent Mater J       N/A       N/A       N/A       N/A       N/A       N/A       2.3         Pediatr Dent       132 (104-146)       N/A       2.3	Int Dent J	N/A	N/A	N/A	N/A	N/A	2.60
Med Or Pa       115 (113-194)       6 (5-6)       253 (244-257)       121 (119-199)       370 (353-447)       2.5         Eur J Dent Educ       110 (95-152)       8 (7-9)       308 (308-311)       118 (101-162)       418 (403-475)       2.5         Commun Dent Oral Oral Maxi       183 (140-184)       17 (16-30)       99 (99-208)       214 (152-227)       286 (249-336)       2.4         J Stomatol Oral Maxi       59 (56-91)       13 (9-16)       439 (427-440)       93 (65-104)       498 (496-515)       2.4         J Oral Facial Pain H       N/A       N/A       N/A       N/A       N/A       2.4         Dent Mater J       N/A       N/A       N/A       N/A       N/A       2.4         Pediatr Dent       132 (104-146)       N/A       N/A       N/A       N/A       N/A       N/A       2.3		82 (61-92)	19 (14-54)	209 (188-230)	101 (101-106)	291 (291-329)	2.56
Educ 110 (95-152) 8 (7-9) 308 (308-311) 118 (101-162) 418 (403-475) 2.5  Commun Dent Oral 183 (140-184) 17 (16-30) 99 (99-208) 214 (152-227) 286 (249-336) 2.4  J Stomatol Oral Maxi 59 (56-91) 13 (9-16) 439 (427-440) 93 (65-104) 498 (496-515) 2.4  J Oral Facial Pain H N/A N/A N/A N/A N/A N/A 2.4  Dent Mater J N/A N/A N/A N/A N/A N/A 2.4  Pediatr Dent 132 (104-146) N/A N/A N/A N/A N/A 2.3	•	115 (113-194)	6 (5-6)	253 (244-257)	121 (119-199)	370 (353-447)	2.53
Oral       183 (140-184)       17 (16-30)       99 (99-208)       214 (152-227)       286 (249-336)       2.4         J Stomatol Oral Maxi       59 (56-91)       13 (9-16)       439 (427-440)       93 (65-104)       498 (496-515)       2.4         J Oral Facial Pain H       N/A       N/A       N/A       N/A       N/A       N/A       2.4         Dent Mater J       N/A       N/A       N/A       N/A       N/A       2.4         Pediatr Dent       132 (104-146)       N/A       N/A       N/A       N/A       N/A       2.3		110 (95-152)	8 (7-9)	308 (308-311)	118 (101-162)	418 (403-475)	2.52
Maxi       59 (56-91)       13 (9-16)       439 (427-440)       93 (65-104)       498 (496-515)       2.4         J Oral Facial Pain H       N/A       N/A       N/A       N/A       N/A       N/A       2.4         Dent Mater J       N/A       N/A       N/A       N/A       N/A       2.4         Pediatr Dent       132 (104-146)       N/A       N/A       N/A       N/A       N/A       2.3		183 (140-184)	17 (16-30)	99 (99-208)	214 (152-227)	286 (249-336)	2.48
Pain H       N/A       N/A       N/A       N/A       N/A       N/A       2.4         Dent Mater J       N/A       N/A       N/A       N/A       N/A       N/A       2.4         Pediatr Dent       132 (104-146)       N/A       N/A       N/A       N/A       N/A       2.3		59 (56-91)	13 (9-16)	439 (427-440)	93 (65-104)	498 (496-515)	2.480
Pediatr Dent 132 (104-146) N/A N/A N/A N/A 2.3		N/A	N/A	N/A	N/A	N/A	2.45
	Dent Mater J	N/A	N/A	N/A	N/A	N/A	2.418
J Orofac Orthop 215 (177-223) 74 (72-81) N/A 251 (246-295) N/A 2.3	Pediatr Dent	132 (104-146)	N/A	N/A	N/A	N/A	2.378
	J Orofac Orthop	215 (177-223)	74 (72-81)	N/A	251 (246-295)	N/A	2.34

Eur J Paediatr Dent	N/A	N/A	N/A	N/A	N/A	2.32
J Dent Educ	28 (24-40)	19 (13-22)	355 (337-358)	53 (35-53)	372 (371-389)	2.31
Aust Dent J	18 (18-18)	11 (8-12)	182 (180-191)	36 (36-36)	209 (209-209)	2.25
J Public Health Dent	196 (152-199)	15 (12-16)	305 (305-320)	208 (168-230)	501 (472-504)	2.25
Head Face Med	162 (139-390)	17 (15-26)	N/A	190 (165-407)	N/A	2.24
Acta Odontol Scand	181 (157-303)	25 (19-33)	N/A	214 (181-319)	N/A	2.23
Int J Peridont Rest	N/A	N/A	N/A	N/A	N/A	2.22
Qunitessence Int	N/A	N/A	N/A	N/A	N/A	2.17
Eur J Oral Sci	127 (88-134)	50 (43-131)	198 (170-199)	171 (131-272)	297 (293-333)	2.16
J Oral Maxil Surg	6 (2-48)	21 (15-23)	187 (174-189)	25 (23-73)	191 (189-207)	2.13
J Peridontal Implan	141 (134-146)	62 (62-68)	N/A	214 (196-232)	N/A	2.08
Brit J Oral Max Surg	N/A	270 (54-281)	362 (362-387)	N/A	N/A	2.01
J Adv Prosthodont	95 (60-136)	17 (16-28)	N/A	124 (77-152)	N/A	1.98
Cleft Palate- Cran J	N/A	N/A	N/A	N/A	N/A	1.91
Oral Radiol	113 (56-125)	41 (23-47)	N/A	139 (108-160)	N/A	1.88
IInt J Prosthodont	N/A	N/A	N/A	N/A	N/A	1.78
Am J Dent	N/A	N/A	N/A	N/A	N/A	1.74
Aust Endod J	255 (155-320)	45 (30-73)	394 (317-415)	327 (216-362)	606 (472-735)	1.71
Cranio	N/A	N/A	N/A	N/A	N/A	1.67
J Oral Sci	121 (106-151)	84 (79-88)	N/A	199 (168-230)	N/A	1.63
Oral Hith Prev Dent	N/A	N/A	N/A	N/A	N/A	1.59
J Oral Implantol	N/A	N/A	N/A	N/A	N/A	1.54
Kor J Orthod	121 (69-129)	4 (2-6)	153 (150-169)	131 (69-140)	279 (212-289)	1.36
J Can Dent Assoc	/A	N/A	N/A	N/A	N/A	1.34
Semin Orthod	N/A	N/A	N/A	N/A	N/A	1.34
J Clin Pediatr Dent	N/A	N/A	N/A	N/A	N/A	1.33
Commun Dent Hlth	N/A	N/A	N/A	N/A	N/A	1.33
Australas Orthod J	N/A	N/A	N/A	N/A	N/A	0.26
Implantologie	N/A	N/A	N/A	N/A	N/A	0.12

#### TABLE 1: Publication and peer review time delay in dentistry journals in 2021.

AT Time, median time between submission and acceptance (interquartile range), days; AOP time, median time between acceptance and online publication (interquartile range), days; AIP time, median time between acceptance and in-print publication (interquartile range), days; SOP time, median time between submission and online publication (interquartile range), days; SIPP time, median time between submission and in-print publication (interquartile range), Days; IF, impact factor; N/A, not available; IQR, interquartile range

There were no correlations between IF and time from: submission to acceptance, acceptance to online publication, or submission to online publication (r = -0.063, p = 0.649; r = -0.253, p = 0.055; r = -0.156, p = 0.255, respectively). There were statistically significant correlations between time from: acceptance to in print publication, submission to in print publication, and IF (r = -0.616, p < 0.001; r = -0.442, p = 0.007, respectively). Journals with longer times from submission and acceptance to in print publication were associated with lower IF values. Figure 2 shows the relationship between IF and publication times.



# FIGURE 2: Scatterplots showing correlation between IF and publication times.

Correlation between IF and time from A) submission to acceptance (days) r = -0.063, p = 0.649; B) acceptance to online publication (days) r = -0.253, p = 0.055; C) submission to in print publication (days) r = -0.442, p = 0.007; D) acceptance to in print publication (days) r = -0.616, p = 0.255; F) submission to online publication (days) r = -0.156, p = 0.255; F) submission to in print publication and time from acceptance to in print publication (days) r = -0.475, p = 0.003

IF, impact factor

#### **Discussion**

Bibliometric analysis of scientific papers has a big importance for the research community. It is used by both researchers and institutions to estimate the time required for paper publication. This study was designed to evaluate publication times in peer-reviewed dentistry journals. Journals that published bibliometric data pretended to have higher IF values. The IF was negatively correlated with times from submission (r = -0.442, p = 0.007), and acceptance (r = -0.616, p < 0.001) to in-print publication.

The time of publication process is one of the most crucial indicators of a journal's quality [1-2, 12]. The publication process relies on two intervals: time between the submission of a manuscript to acceptance which is spent on revisions and the peer review process, and the time from acceptance to publication in print which is usually consumed on editing, proofreading, typesetting, and printing [1-2]. From the authors' experience, time spent by researchers revising the manuscript is variable, depends on the current schedule and other duties thus may contribute to the overall delay in publication.

The present study is the first that focuses on publication time in dentistry journals. Both review-only journals and review articles were excluded because most of them are invited by editors and do not have to follow the strict timeline [1-2]. To maintain harmony in the selection process, only original articles were included. It was revealed that 34% of analyzed journals did not publish the dates of manuscript submission and approximately 50% of journals had no available publication times, which is much more when compared to other disciplines (e.g. 20% for ophthalmology, 15% for plastic surgery journals) [1-2]. In contrast to previous studies, journals that had available publication times tended to have higher IF values [1-2]. Although some journals do not provide information about the publication times of the manuscripts,

approximate time for editorial decisions is posted on their websites, offering limited information about the publishing timeline.

In the present study, individual median peer-review time for dentistry journals varied widely, with an overall peer-review time of 115 days. In top plastic surgery journals in 2020, the median time from submission to acceptance was 5.4 months (approximately 162 days), and in ophthalmology journals was 119 days, which is comparable to dentistry journals [1, 13]. Significant time delay in the publication process could influence the reporting of significant clinical findings [2]. It was strongly documented that trials with positive findings were more likely to be published than those with negative or inconsistent results, therefore introducing a publication bias [2, 5, 14-16]. However, other authors did not find any significant associations between clinical trial outcomes and publication times [2, 6].

Higher IF values were associated with shorter times from submission (r = -0.442, p = 0.007), and acceptance (r = -0.616, p <.001) to in-print publication. This is in accordance with policies employed by highly cited journals [17-20]. It was revealed that journals speed up turn-around times and employ fast-track publication for potentially high-impact papers [17-20]. Medical scientists appear more reliant on print than electronic journals [21-24]. Some editors even deliberately personally approach lead investigators of the major research projects to get papers with the highest impact potential [17-20]. All of these are aimed to enhance the journal's IF and do editorial duty.

There are some limitations in the present study. Authors did not have access to some journals which decreased the number of analyzed both journals and articles. A lower number of articles was analyzed than in the previous bibliometric analysis. Only five random original articles were extracted from each journal and no validated randomization method was utilized. Bibliometric factors such as the cited half-life of the journals and immediacy index are both less desirable by the authors and recognizable by the society [25-28], thus were excluded from the study.

#### **Conclusions**

To the knowledge of the authors, the present study is the first bibliometric analysis of the dentistry journals in the literature. It has the potential to be a valuable source of information for both authors and editors. Authors could easier select journals with short turn-around times and editors compare their journals with each other. Publication times availability was revealed to be an indicator of higher impacted journals, which is a potential new exponent of journal quality. Higher IF values were associated with shorter times from submission to acceptance and in-print publication, which is consistent with mentioned editorial policies.

#### **Additional Information**

#### **Disclosures**

**Human subjects:** Consent was obtained or waived by all participants in this study. **Animal subjects:** All authors have confirmed that this study did not involve animal subjects or tissue. **Conflicts of interest:** In compliance with the ICMJE uniform disclosure form, all authors declare the following: **Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work. **Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work. **Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

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