

## Analiza autorstva i saradnje u časopisu *Bosniaca* (1996–2023)

### Analysis of Authorship and Collaboration in Journal *Bosniaca* (1996–2023)

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#### Sažetak / Abstract

**Cilj:** Cilj ovoga istraživanja je utvrditi obrasce povezane s autorstvom i saradnjom autora čiji su radovi objavljeni u časopisu *Bosniaca: Časopisu Nacionalne i univerzitetske biblioteke Bosne i Hercegovine* u periodu od 1996. do 2023. godine.

**Metodologija/pristup:** Kod selekcije i pripremanja istraživačkog korpusa analizirali su se identifikacijski bibliografski podaci objavljenih radova, a u istraživanju se za izračunavanje stepena saradnje koristila formula Subramanyam. Ukupno je analizirano 328 radova i 392 autora po pojavnosti (227 jedinstvenih autora).

**Rezultati:** Opremljenost objavljenih radova identifikacijskim elementima u vremenskom periodu od 1996. do 2023. godine postepeno se stabilizira, a standardizaciju bibliografske opremljenosti objavljenih radova prati i jačanje međunarodne mreže autora te indeksiranje časopisa u bibliografskim i citatnim bazama podataka. Broj jednoautorskih radova objavljenih u časopisu iznosi 85,98%, dok prema izračunu, stepen saradnje u *Bosniaci* u razmatranom vremenskom periodu iznosi 0,14, pri čemu se od 2019. godine povećava broj koautorskih radova. Od analiziranih, najveći broj jedinstvenih autora dolazi iz Bosne i Hercegovine (132), zatim zemalja regije (69), a kada je zastupljenost po spolnoj strukturi jedinstvenih autora u pitanju, daleko su zastupljenije žene (159 autorica, 70,04%), od kojih većina, 88 autorica, dolazi također iz Bosne i Hercegovine.

**Ograničenja:** U okviru ovoga istraživanja nisu se mogli utvrditi čvrsti kriteriji za odabir radova za analizu, također, nestandardizirano navođenje identifikacijskih bibliografskih podataka radova u prvim brojevima časopisa i ručni unos prikupljenih podataka mogu utjecati na rezultate istraživanja i eventualne greške.

**Originalnost/vrijednost:** U Bosni i Hercegovini do sada nisu rađene bibliometrijske analize bosanskohercegovačkih časopisa iz oblasti bibliotečko-informacijskih nauka. Kao prilog takvim istraživanjima, ovaj rad donosi prvu bibliometrijsku analizu časopisa *Bosniaca: Časopisa Nacionalne i univerzitetske biblioteke Bosne i Hercegovine*.

**Goal:** The goal of this research is to explore the patterns related to authorship and collaboration of authors of the papers published in the journal *Bosniaca: Journal of National and University Library of Bosnia and Herzegovina* in the period from 1996 to 2023.

**Approach/Methodology:** During the selection and preparation of the corpus for analysis, bibliographic identifiers of published papers were analysed, and Subramanyam K. formula was used for calculation of the degree of collaboration. A total of 328 papers and 392 authors by occurrence were analyzed (227 unique authors).

**Results:** Identification data of published papers in the period from 1996 to 2023 are gradually stabilizing, and standardization of bibliographic data is accompanied by the strengthening of the international network of authors, and the indexing of the Journal in bibliographic and citation databases. The number of single-authored papers published in the Journal is 85.98%, while the degree of collaboration in *Bosniaca* from 1996 to 2023 is 0.14, with the number of co-authored papers increasing from 2019. Of those analyzed, the largest number of unique authors comes from Bosnia and Herzegovina (132), followed by the countries of the region (69), and when it comes to the gender structure of unique authors, women are far more represented (159 authors, 70.04%), of which the majority, 88 female authors, also come from Bosnia and Herzegovina.

**Limitations:** This research does not have firm criteria for selecting papers for analysis, also, nonstandardized listing of identification data of paper published in the first issues of the Journal, and manual entry of collected data can affect the research results and possible errors.

**Originality/value:** So far in Bosnia and Herzegovina no bibliometric analysis of Bosnian and Herzegovinian journals in the field of library and information sciences have been conducted. As a contribution to such analysis, this paper presents the first bibliometric analysis of journal *Bosniaca: Journal of the National and University Library of Bosnia and Herzegovina*.

## 1. Uvod

Otkako je A. Pritchard davne 1969. godine u članku “Statistical Bibliography or Bibliometrics?” umjesto pojma statističke bibliografije predložio korištenje pojma bibliometrije koju definira kao “primjenu matematičkih i statističkih metoda na knjige i druge medije komunikacije” (Pritchard, 1969: 348), nije izostajao interes za bibliometrijskim istraživanjima naučne komunikacije.<sup>1</sup>

Savremenu bibliometriju, prema Glänzelu, odnosno njene teme i podoblasti, određuju tri temeljne grupe korisnika bibliometrije: 1. bibliometrija za bibliometričare (metodologija) – područje osnovnog bibliometrijskog istraživanja; 2. bibliometrija za naučne discipline (naučne informacije) – istraživači iz različitih naučnih disciplina čine najveću i najrazličitiju interesnu grupu korisnika bibliometrije i 3. bibliometrija za politiku nauke i upravljanje (naučna politika) – oblast vrednovanja naučnog istraživanja, trenutno najvažnija tema u oblasti (Glänzel, 2003: 9/10).

Bibliometrija je danas “jedna od rijetkih istinski interdisciplinarnih istraživačkih oblasti koja se proteže na gotovo sve naučne oblasti” (Glänzel, 2003: 5), a provođenjem bibliometrijskih analiza mogu se dakle dobiti različite vrste informacija: informacije o naučnim rezultatima istraživačke ustanove, naučnom utjecaju publikacije, naučnoj saradnji autora, mobilnosti istraživača, interdisciplinarnosti publikacija, spolu autora, ali i informacije o publikacijama u otvorenom pristupu u kojima se objavljuju radovi (Waltman i Noyons, 2018: 9).

Ovu složenu oblast pokušali su sveobuhvatno i metodično prikazati Donthu et al. koji, praveći razliku između bibliometrije, metaanalize i sistematičnog

## 1. Introduction

Since A. Pritchard in 1969 in the article “Statistical Bibliography or Bibliometrics?” proposed the use of the term bibliometrics instead of the term statistical bibliography, which he defines as “the application of mathematical and statistical methods to books and other mediums of communication” (Pritchard, 1969: 348), there was no lack of interest in bibliometric research of scientific communication.<sup>1</sup>

According to Glänzel, contemporary bibliometrics, i.e. its topics and sub-areas, are determined by three basic groups of users of bibliometrics: 1. bibliometrics for bibliometricians (Methodology) – domain of basic bibliometric research; 2. bibliometrics for scientific disciplines (Scientific information) – the researchers in scientific disciplines form the bigger, but also the most diverse interest-group in bibliometrics, and 3. Bibliometrics for science policy and management (science policy) – domain of research evaluation, at present the most important topic in the field (Glänzel, 2003: 9/10).

Today, bibliometrics is “one of the rare truly interdisciplinary research fields to extend to almost all scientific fields” (Glänzel, 2003: 5), and by conducting bibliometric analysis, different types of information can be yield: information about the scientific results of a research unit, scientific impact of publication, scientific collaboration of authors, researchers mobility, publications interdisciplinarity, authors gender, but also information about the open access status of publications in which works are published (Waltman & Noyons, 2018: 9).

Donthu et al. tried to comprehensively and methodically present this complex area, distinguishing between bibliometrics, meta-analysis, and systematic

<sup>1</sup> Bibliometrijska istraživanja pisane naučne komunikacije, kako Borgman još krajem prošlog stoljeća naglašava, mogu ispitivati jednu ili više varijabli, stvaraoce komunikacije, artefakte komunikacije i komunikacijske koncepte (Borgman, 1990: 15). Dok artefakti predstavljaju formalne proizvode naučne komunikacije (naučna djela), a komunikacijski koncepti podrazumijevaju istraživanja korištenja riječi ili drugih oznaka te istraživanja “koja se fokusiraju na svrhu ili citatnu motivaciju” (Borgman, 1990: 16), pod stvaraočima naučne komunikacije podrazumijevaju se “pojedinačni autori, istraživački timovi, ustanove, naučna područja ili zemlje” (Borgman 1990: 15).

<sup>1</sup> Bibliometric research of written scientific communication, as Borgman emphasized at the end of the last century, can examine one or more variables, communication creators, communication artifacts, and communication concepts (Borgman, 1990: 15). While artifacts represent formal products of scientific communication (scientific works), and communication concepts imply research into the use of words or other labels and research “that focuses on the purpose or citation motivation” (Borgman, 1990: 16), creators of scientific communication are defined as “individual authors, research teams, institutions, scientific fields or countries” (Borgman 1990: 15).

pregleda literature, govore o osnovnim i naprednim bibliometrijskim tehnikama, gdje osnovne tehnike dalje dijele na analizu publikacijskih aktivnosti i naučno mapiranje (Donthu et al., 2021: 287).

Analiza publikacijske aktivnosti deskriptivnoga je karaktera i analizira doprinose “konstituenta” (autora, časopisa, ustanova, naučnih oblasti, država) (Donthu et al., 2021: 287) naučnoj komunikaciji. U okviru analize publikacijske aktivnosti ispituju se: pokazatelji koji su vezani uz publikaciju (ukupan broj publikacija, ukupan broj autora koji učestvuju, publikacije s jednim autorom, publikacije u koautorstvu, broj aktivnih godina publiciranja, produktivnost po aktivnoj godini publiciranja); pokazatelji vezani uz citate (ukupan broj citata, prosječan broj citata) te pokazatelji vezani uz publikacije i citate (indeks saradnje, koeficijent saradnje, broj citiranih publikacija, udio citiranih publikacija, citati po citiranoj publikaciji, h-indeks (h), g-indeks (g), i-indeksi (i-10, 1-100, 1-200) (Donthu et al., 2021: 288).

Kod mapiranja nauke, s druge strane, Donthu et al. izdvajaju citatnu analizu (odnosi između publikacija, najutjecajnije publikacije), analizu kocitata (odnosi između citiranih publikacija, temeljne teme), bibliografsko spajanje (odnosi između citiranih publikacija, periodične ili sadašnje teme), analizu koriječi (postojeće ili buduće veze među temama), napisani sadržaj (riječi), te analizu koautorstva (društvene interakcije ili veze između autora, autori i afilijacije autora (ustanove, države)) (Donthu et al., 2021: 288).

Bibliometrijske analize pokazale su se kao “ključno sredstvo za mjerenje naučnih rezultata različitih naučnih jedinica (npr. radova, autora, ključnih riječi, časopisa, ustanova i zemalja) u bilo kojoj oblasti istraživanja” (Öztürk, Kocaman i Kanbach, 2024), a u okviru bibliometrije, istraživanje autorstva kao “grana bibliometrije koja istražuje različite elemente autorstva” (Kirtania, 2021), kako Jokić pojašnjava, “kao tema postaje u bibliometriji interesantna s aspekta vrednovanja doprinosa svakog pojedinog autora u koautorstvu, kao rezultat suradnje među znanstvenicima; služi kao izvor za bolje upoznavanje nastanka i razvoja novih poddisciplina i interdisciplinarnih aktivnosti; te upoznavanje strukture i komunikacija u znanosti” (Jokić, 2005: 19).

Za izračunavanje autorske produktivnosti najčešće se koristi Lotkin zakon, po kojem “broj autora koji su objavili n radova približno je jednak  $1/n^2$  broju autora koji su napisali samo jedan rad” (Lotka, 1926: 323), gdje po Lotkinom izračunu broj autora

literature review. They talk about basic and advanced bibliometric techniques, where the basic techniques are further divided into performance analysis and science mapping (Donthu et al., 2021: 287).

Performance analysis is descriptive in nature and analyzes the contribution of “constituents” (e.g., authors, journals, institutions, scientific fields and countries) (Donthu et al., 2021: 287) in scientific communication. As part of the performance analysis, the following are examined: publication-related metrics (total publications, number of contributing authors, sole-authored publications, co-authored publications, number of active years of publication, productivity per active years of publication); citation-related metrics (total citations, average citations) and citation-and-publication-related metrics (collaboration metrics, collaboration coefficient, number of cited publication, proportion of cited publication, citations per cited publication, h-index (h), g-index (g), i-index (i-10, 1-100, 1-200) (Donthu et al., 2021: 288).

In science mapping, on the other hand, Donthu et al. separate citation analysis (relationships among publications, most influential publications), co-citation analysis (relationships among cited publications, foundational themes), bibliographic coupling (relationships among citing publications, periodical or present themes), co-word analysis (existing or future relationships among topics), written content (words), and co-authorship analysis (social interactions or relationships among authors, authors and author affiliations (institutions, countries)) (Donthu et al., 2021: 288).

Bibliometric analysis proved to be a “crucial tool for measuring the scientific outputs of different scientific items (e.g., papers, authors, keywords, journals, institutions, and countries) in any research field” (Öztürk, Kocaman & Kanbach, 2024), and within bibliometrics, authorship research as “branch of bibliometrics which investigates the different elements of authorship” (Kirtania, 2021), as Jokić explains, “as a topic, it becomes interesting in bibliometrics from the aspect of evaluating the contribution of each individual author in co-authorship, as a result of collaboration between scientists; serves as a source for better familiarization with the emergence and development of new subdisciplines and interdisciplinary activities; and getting to know the structure and communication in science” (Jokić, 2005: 19).

To calculate the author’s productivity, Lotka’s law is most often used, according to which “the number of authors who published n papers is approximately

koji objave po jedan rad iznosi 60%. Mišljenja su podijeljena o primjeni Lotkinog zakona, donesenog davne 1926. godine, prije skoro stotinu godina, u bibliotečko-informacijskim naukama, ali pojedina istraživanja govore u prilog tome da je on primjenjiv i u ovoj oblasti (Kumar, 2017: 240), odnosno da se može koristiti kao “standardiziran način mjerenja produktivnosti autora” (Askew, 2008: 6/7). Uz Lotkin zakon, Bradfordov zakon raspršenosti te Zipfov zakon učestalosti pojave riječi u tekstu čine temeljne bibliometrijske zakone.

Bibliometrijska istraživanja autorstva<sup>2</sup> “diskutiraju karakteristike autorstva”, ali i “nivo saradnje između određenog skupa autora” (Kumar i Behera, 2022: 29). U zavisnosti od učesnika, Subramanyam tako izdvaja sljedećih šest vrsta saradnje u naučnim istraživanjima: 1. saradnja nastavnika i učenika (uobičajen način saradnje u akademskom okruženju); 2. saradnja među kolegama (u okviru koje svako od učesnika vlastitom stručnošću doprinosi određenom projektu); 3. saradnja supervizora i asistenta; 4. saradnja istraživača i konsultanta; 5. saradnja između organizacija i 6. međunarodna saradnja (Subramanyam, 1983: 34). Subramanyam donosi i formulu za izračunavanje stepena saradnje, pri čemu akcentira da postoje razlike po naučnim oblastima u smislu ostvarivanja saradnje među naučnicima. Naime, ova saradnja, koja se povezuje sa “velikom naukom” (Price, 1986) i razvija nakon Drugog svjetskog rata u bogatijim zemljama, “karakteristična je za gotovo sva područja, izuzev područja humanističkih znanosti” (Jokić, 2005: 27).

Kada je oblast bibliotečko-informacijskih nauka u pitanju, do sada su provedene brojne bibliometrijske analize obrazaca povezanih s autorstvom, saradnjom autora u časopisima iz ove oblasti, kako s ciljem analize ovih trendova u pojedinačnim časopisima (npr. Mokhtari et al., 2021; Kirtania, 2021; Khaparde i Pawar, 2013; Khanna et al., 2018; Patel i Verma, 2020), tako i u više njih, a s različitih aspekata (npr. He i Spink, 2002; Barik i Jena, 2018; Park, 2008; Chang, 2019; Chang, 2015; Reece-Evans, 2010; Barik i Jena, 2021), dok je sveobuhvatnu analizu autorstva i autorske saradnje u časopisima iz oblasti bibliotečko-informacijskih nauka u zemljama centralne i istočne Evrope, indeksiranim u Scopus bazi podataka (za period od 1996. do 2017. godine), dala

equal to  $1/n^2$  the number of authors who wrote only one paper” (Lotka, 1926: 323), where, according to Lotka’s calculation, the number of authors who publish single paper each is 60%. Opinions are divided about the application of Lotka’s law adopted back in 1926, almost a hundred years ago, in library and information sciences, but some researches support the fact that it is applicable in this field as well (Kumar, 2017: 240), that is, that it can be used as “a standardized way of measuring author productivity” (Askew, 2008: 6/7). Along with Lotka’s law, Bradford’s law of dispersion and Zipf’s law of the frequency of occurrence of words in the text form the basic laws of bibliometrics.

Bibliometric authorship studies<sup>2</sup> “discuss the characteristics of the authors” but also “the level of collaboration among a particular set of authors” (Kumar & Behera, 2022: 29). Depending on the participants, Subramanyam distinguishes the following six types of cooperation in scientific research: 1. teacher-pupil collaboration (a very common mode of collaboration in an academic setting); 2. collaboration among colleagues (within which each contributing expertise in a different aspect of the project); 3. supervisor-assistant collaboration; 4. researcher-consultant collaboration; 5. collaboration between organizations; 6. international collaboration (Subramanyam, 1983: 34). Subramanyam also provides a formula for calculating the degree of cooperation, emphasizing that there are differences in scientific fields and in terms of achieving cooperation between scientists. This cooperation, which is associated with “big science” (Price, 1986) and developed after the Second World War in richer countries, “is characteristic for almost all fields, except for the field of humanities” (Jokić, 2005: 27).

When it comes to the field of library and information sciences, numerous bibliometric analyzes of patterns related to authorship, collaboration of authors in journals from this field have been carried out so far, both with the aim of analysing these trends in individual journals (e.g. Mokhtari et al., 2021; Kirtania, 2021; Khaparde & Pawar, 2013; Khanna et al., 2018; Patel & Verma, 2020), as well as in several of them, and from different aspects (e.g. He & Spink, 2002; Barik & Jena, 2018; Park, 2008; Chang, 2019; Chang, 2015; Reece-Evans, 2010; Barik & Jena,

<sup>2</sup> U novije vrijeme fokus bibliometrijskih analiza autorstva usredotočen je i na naprimjer analizu ChatGPT-a kao autora ili koautora radova (Nazarovets i Teixeira da Silva, 2024), ili pak na bibliometrijsku analizu uputstava za autore od strane izdavača, odnosno časopisa, a u vezi s korištenjem generativne umjetne inteligencije u pisanju radova (Ganjavi et al., 2024).

<sup>2</sup> In recent times, the focus of bibliometric analyses of authorship is on, for example, the analysis of ChatGPT as an author or co-author of papers (Nazarovets & Teixeira da Silva, 2024), or on the bibliometric analysis of instructions for authors by publishers or journals, and in connection with the use of generative artificial intelligence in writing papers (Ganjavi et al., 2024).

Jokić, analizirajući predmetne časopise iz 11 država EU (Bugarska, Hrvatska, Češka, Estonija, Mađarska, Letonija, Litvanija, Poljska, Rumunija, Slovačka i Slovenija) i četiri zemlje, potencijalne članice EU (Bosna i Hercegovina, Makedonija, Crna Gora i Srbija), ukupno 160 časopisa (Jokić, 2020).

Časopis *Bosniaca*, čiji je izdavač Nacionalna i univerzitetska biblioteka Bosne i Hercegovine, nije obuhvaćen ovim istraživanjem, jer je u Scopus bazu podataka uključen tek 2023. godine, a kao trenutno jedinom naučno-stručnom časopisu na području Bosne i Hercegovine koji pokriva oblast bibliotečko-informacijskih nauka, ranije mu je pažnju posvetila Selhanović (2023), istražujući njegovu bibliografsku opremljenost, dok su zbog značaja časopisa za bh. zajednicu informacijskih stručnjaka Polimac i Smajić Gačević (2021) sačinile *Bibliografiju časopisa Bosniaca (1996–2020)*. Časopis nije bio predmetom bibliometrijskih analiza, s napomenom da zapravo u Bosni i Hercegovini do sada uopće nisu provedena bibliometrijska istraživanja bh. časopisa iz oblasti bibliotečko-informacijskih nauka.

Zbog njihovog značaja i potrebe da se i na ovom području započne s bibliometrijskim analizama, u okviru ovoga istraživanja pažnja se posvećuje obrascima povezanim s produktivnošću i saradnjom autora čiji su radovi objavljeni u časopisu *Bosniaca* u periodu od 1996. do 2023. godine.

## 2. O časopisu *Bosniaca*

Prvi bh. časopis iz oblasti bibliotekarstva, *Bilten Društva bibliotekara Bosne i Hercegovine i Narodne biblioteke NR BiH*, pokrenut je 1955. godine, nakon utemeljenja Narodne biblioteke Federalne Bosne i Hercegovine (1945. godine) i osnivanja Društva bibliotekara Bosne i Hercegovine (1949. godine). Ovaj časopis, koji će 1960. godine biti preimenovan u časopis *Bibliotekarstvo*, a 1980. godine u časopis *Bibliotekarstvo: Godišnjak Društva bibliotekara Bosne i Hercegovine*, nakon rata u Bosni i Hercegovini (1992–1995) izlazi neredovito, te njegov posljednji broj biva štampan 2002. godine. Uporedo s njegovim izlaženjem, od 1996. godine pokreće se i *Bosniaca: Časopis Nacionalne i univerzitetske biblioteke Bosne i Hercegovine*.

Poticaž za nastanak časopisa *Bosniaca* leži u granatiranju zgrade Nacionalne i univerzitetske biblioteke Bosne i Hercegovine 25/26. augusta 1992. godine, kada je uništen značajan dio njenoga fonda, a naziv časopisa veže se uz ideju potrebe izrade retrospektivne bosanskohercegovačke bibliografije. Svjedočanstva o naporima usmjerenim ka izradi Bi-

2021), while a comprehensive analysis of authorship and author collaboration in journals in the field of library and information sciences in the countries of Central and Eastern Europe, indexed in the Scopus database (for the period from 1996 to 2017) gave Jokić, analysing the subject journals from 11 EU countries (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) and four countries, potential EU members (Bosnia and Herzegovina, Macedonia, Montenegro and Serbia), in total 160 journals (Jokić, 2020).

The journal *Bosniaca*, which is published by the National and University Library of Bosnia and Herzegovina, is not covered in this research, because it was included in the Scopus database only in 2023, and it is currently the only scientific and professional journal in the territory of Bosnia and Herzegovina that covers the field of library and information science. Selhanović (2023) previously paid attention to the Journal by investigating its bibliographic data, while due to the importance of the Journal for BH community of information experts, Polimac and Smajić Gačević compiled the *Bibliography of journal Bosniaca (1996–2020)*. The journal was not the subject of bibliometric analyses, with a note that no bibliometric research of BH journals in the field of library and information sciences has been carried out so far in Bosnia and Herzegovina. Due to their importance and the need to start with bibliometric analyses in this area as well, within the framework of this research, attention is paid to patterns related to the productivity and cooperation of authors whose works were published in the journal *Bosniaca* in the period from 1996 to 2023.

## 2. About the journal *Bosniaca*

The first BH journal in the field of librarianship, *Bilten Društva bibliotekara Bosne i Hercegovine i Narodne biblioteke NR BiH* (Bulletin of the Society of Librarians of Bosnia and Herzegovina and the National Library of the People's Republic of Bosnia and Herzegovina), was launched in 1955, after the establishment of the National Library of the Federal Bosnia and Herzegovina (1945) and the establishment of the Society of Librarians of Bosnia and Herzegovina (1949). This journal, which in 1960 was renamed to journal *Bibliotekarstvo* (Librarianship), and in 1980 to the journal *Bibliotekarstvo: Godišnjak Društva bibliotekara Bosne i Hercegovine* (Librarianship: Yearbook of the Society of Librarians of Bosnia and Herzegovina), was published

bliografije *Bosniace* ostala su trajno zabilježena na stranicama spomenutoga Biltena, kao i informacije o svim akterima koji su bili angažirani na izradi ovoga značajnog bibliografskog projekta.

Sličan zadatak, ali daleko komplikovaniji, koji se odnosi na obnovu fondova, dali su sebi tadašnji zaposlenici Nacionalne i univerzitetske biblioteke Bosne i Hercegovine (NUBBiH), nakon spomenutih ratnih stradanja. Među mnogim ciljevima oko rekonstrukcije fondova i oživljavanja bibliotečke djelatnosti bilo je i pokretanje bibliotekskog časopisa. U “Predgovoru” o tome događaju navodi se sljedeće: “Koristan prilog ovome poslu bilo je i stručno savjetovanje posvećeno Bibliografiji Bosne i Hercegovine, održano u Sarajevu početkom novembra 1995. godine i izložba bibliografske literature u Galeriji ‘Paleta’, prikazana tim povodom. Upravo radovi priloženi i pročitani na ovome Savjetovanju, predstavljaju glavninu materijala koji publikujemo u ovom tematskom broju časopisa *Bosniaca*, koji time počinje svoj život” (Redakcija, 1996: 1).

Od pojavljivanja časopisa 1996. do 2023. godine, kroz 28 godišta (volumena) ukupno je izašlo 28 brojeva časopisa, ali 25 svezaka. Glavni i odgovorni urednik prvog broja časopisa bio je E. Kujundžić, a od 2005. (br. 9/10) do 2023. godine glavni i odgovorni urednik je I. Ovčina. Od njegova osnivanja, članovi redakcije, recenzenti i sl. bili su ugledni pojedinci iz oblasti biblioteko-informacijskih nauka, iz Bosne i Hercegovine i drugih zemalja.

Časopis je trenutno indeksiran u DOAJ, Erih Plus, ICI Journal Master List, Mir@bel, dostupan je na Hrčku, CEEOL-u, EBSCO – Central & Eastern European Academic Source, EBSCO – The Belt and Road Initiative Reference Source, Slavic Humanities Index, Index Copernicus, Internet Archive Scholar, EuroPub, Semantic Scholar, HAL Open Science, a naveden je u MIAR (Information Matrix for the Analysis of Journals), Kobson, Ulrich’s Periodicals Directory, Szczeplanski’s List of Open Access Journals, OpenAire, Fatcat, Scilit, ZDB Catalogue i Sherpa Romeo.<sup>3</sup>

Časopis su od njegovog prvog broja uređivali bibliotekari i bibliotekarke, vodeći računa o dugogodišnjoj tradiciji publicističkog djelovanja NUBBiH, koja je rezultirala i time da časopis *Bosniaca* postane jedan od rijetkih časopisa s područja jugoistočne Evrope koji je, pored navedenih, indeksiran i u citatnim bazama podataka Web of Science (Emerging Sources Citation Index, 2017) i Scopus (2023).

irregularly after the war in Bosnia and Herzegovina (1992–1995), and its last issue was printed in 2002. Along with its publication, since 1996, *Bosniaca: Journal of the National and University Library of Bosnia and Herzegovina* has been launched.

The incentive for the foundation of the journal *Bosniaca* lies in the shelling of the National and University Library of Bosnia and Herzegovina building on 25/26<sup>th</sup> August 1992, when a significant part of the fund was destroyed, and the name of the Journal was associated with the idea and the need to create a retrospective bibliography of Bosnia and Herzegovina. Testimonies about the efforts directed towards the creation of the *Bosniaca* Bibliography remained permanently recorded on the pages of the mentioned Bulletin, as well as information about all the participants who were engaged in the work behind this significant bibliographic project.

A similar task, but far more complicated, which refers to the restoration of funds, the National and University Library of Bosnia and Herzegovina (NUBBiH) employees from that period gave themselves, after the mentioned wartime hardships. Among the many goals related to the reconstruction of the funds and the revival of the library functions was the launch of a library journal. The preface regarding this event states: “A useful contribution to this work was the professional conference dedicated to the Bibliography of Bosnia and Herzegovina, held in Sarajevo at the beginning of November 1995, and the exhibition of bibliographic literature in the Gallery ‘Paleta’, shown on that occasion. The papers contributed and read at this Conference, precisely represent most of the material we publish in this thematic issue of the journal *Bosniaca*, which life begins with it” (Redakcija, 1996, 1).

From the appearance of the Journal in 1996 to 2023, through 28 years (volumes), a total of 28 issues of the Journal, but 25 volumes, were published. The editor-in-chief of the Journal’s first issue was E. Kujundžić, and from 2005 (No. 9/10) until 2023, the editor-in-chief was I. Ovčina. Since its establishment, members of the editorial board, reviewers, etc. have been distinguished individuals in the library and information sciences field, from Bosnia and Herzegovina and other countries.

The journal is currently indexed in DOAJ, Erih Plus, ICI Journal Master List, Mir@bel, is available at Hrčak, CEEOL, EBSCO – Central & Eastern European Academic Source, EBSCO – The Belt and Road Initiative Reference Source, Slavic Humanities Index, Index Copernicus, Internet Archive

<sup>3</sup> Vidjeti: *Bosniaca. About the Journal*. <https://bosniaca.nub.ba/index.php/bosniaca/about>.

### 3. Metodologija i istraživački korpus

Cilj ovoga istraživanja je utvrditi obrasce povezanosti s autorstvom i saradnjom autora čiji su radovi objavljeni u časopisu *Bosniaca* u periodu od 1996. do 2023. godine. Sa spomenutim ciljem u vezi, postavljena su sljedeća istraživačka pitanja:

IP1: Koji su obrasci povezani s autorstvom?

IP2: Koje su osnovne karakteristike autorske saradnje?

IP3: Koji su autori najproduktivniji?

IP4: Kakva je struktura autora prema spolu i državama iz kojih dolaze?

Kod selekcije i pripremanja istraživačkog korpusa, analizirali su se identifikacijski bibliografski podaci radova, a u istraživanju se kod izračunavanja stepena saradnje koristila formula Subramanyam.

Ukupno je analizirano 328 radova i 392 autora (227 jedinstvenih autora), pri čemu se pri definiranju korpusa za analizu naišlo na nekoliko istraživačkih problema.

Naime, poredeći web-stranicu časopisa i druge digitalne arhive, otkriveno je niz nedosljednosti oko arhiviranja časopisa, odnosno njegova predstavljanja u web-okruženju. Tako, naprimjer, poređenjem radova s web-stranice časopisa i arhiva CEEOL-a (engl. *Central Eastern European Online Library*), utvrđeno je da na web-stranici među rubrikama *Bosniace* nema rubrike "Događanja", koja se pojavljuje od broja 4/5 (1999–2000). S druge strane, rubrika Događanja vidljiva je u CEEOL-ovom arhivu, ali u njemu se časopis arhivira tek od 2004. godine. *Bosniaca* se usto arhivira i na portalu Hrčak, ali tek od 2016. godine.

Pokušaj da se u identifikaciji radova koristi COBISS.BH (prilozi iz *Bosniace* su obrađeni u katalogu) također se pokazao neadekvatnim rješenjem, jer ispis u vidu Bibliografije *Bosniace* (1996–2023)<sup>4</sup> nema podataka o rubriciranju časopisa.

Dakle, s obzirom na to da spomenute baze nisu nudile sveobuhvatan prikaz sadržaja *Bosniace*, te izbjegavajući pobiranje manjeg broja metapodataka, bilo je potrebno *de visu* ustanoviti stvarni broj radova i njima pripadajućih bibliografskih elemenata. To je urađeno konsultiranjem svih štampanih izdanja časopisa, tragom čega je i sačinjen sveobuhvatan uzorak za bibliometrijsku analizu.

Pripremajući korpus za analizu uočeno je da su se bibliografski podaci uz radove vremenom dopunja-

Scholar, EuroPub, Semantic Scholar, HAL Open Science, and it is listed in MIAR (Information Matrix for the Analysis of Journals), Kobson, Ulrich's Periodicals Directory, Szczepanski's List of Open Access Journals, OpenAire, Fatcat, Scilit, ZDB Catalogue i Sherpa Romeo.<sup>3</sup>

Since its first issue, the journal has been edited by librarians, taking into account the long-standing tradition of publishing activities of the NUBBiH. This resulted in *Bosniaca* becoming one of the rare journals from Southeastern Europe that, in addition to the above, is also indexed in the citation databases Web of Science (Emerging Sources Citation Index, 2017) and Scopus (2023).

### 3. Methodology and research corpus

This research aims to determine the patterns associated with the authorship and collaboration of authors whose works were published in the journal *Bosniaca* in the period from 1996 to 2023. In connection with the mentioned goal, the following research questions were asked:

RQ1: What forms are associated with authorship?

RQ2: What are the basic characteristics of author collaboration?

RQ3: Which authors are the most productive?

RQ4: What is the structure of authors according to gender and the countries they come from?

During the selection and preparation of the research corpus, the identifying bibliographic data of the papers were analyzed, and the Subramanyam formula was used in the research to calculate the degree of cooperation.

A total of 328 papers and 392 authors (227 single authors) were analysed, and several research problems were encountered when defining the corpus for analysis.

Namely, comparing the Journal's website and other digital archives revealed several inconsistencies regarding the archiving of the Journal, i.e. its presentation in the web environment. So, for example, by comparing papers from the website of the Journal and CEEOL archive (Central Eastern European Online Library) it was established that there is no block "Events" on the website among the blocks of *Bosniaca*, which appears from issue 4/5 (1999–2000). On the other hand, the block "Events" is visible in the CEEOL archive, but the Journal has

<sup>4</sup> Bibliografija časopisa *Bosniaca* (1996–2023). Ispis iz: Kooperativni online bibliografski sistem i servisi COBISS.BH, 1. 6. 2024.

<sup>3</sup> See: *Bosniaca. About the Journal*. <https://bosniaca.nub.ba/index.php/bosniaca/about>.

vali i mijenjali, odnosno da se na njegovoj standardizaciji postepeno radilo, te je odabir radova za analizu bio moguć samo ako se uzmu u obzir radovi iz rubrika u kojima većina radova ima obilježja naučnih ili stručnih radova. Pokušaj da se uvede dodatni kriterij za odabir radova za analizu, poput onoga da rad treba imati navedenu literaturu, također nije bio moguć, jer se literatura nije navodila dosljedno uz radove objavljene u prvim brojevima,<sup>5</sup> a oni su značajni zbog kulturno-historijskog konteksta.

U odnosu na prve objavljene brojeve časopisa, s većom bibliografskom opremljenošću radova započinje se od br. 3 (1998), kada se uvode UDK broj i sažetak na b/h/s i engleskom jeziku. Podaci o ustanovi u kojoj je autor zaposlen navode se od broja 4/5 (1999–2000), a u istom broju se objavljuju i “Preporuke autorima”; od ovog broja navode se i naslovi na stranom jeziku te sažetak i ključne riječi na dva jezika.

Od broja 9/10 (2004–2005) navodi se sadržaj *Bosniace* na engleskom jeziku, br. 21 (2016) ima u zaglavlju stranice ime časopisa, broj i podatke o broju stranica rada. Kategorizacija radova (izvorni naučni rad, pregledni rad, stručni rad i izlaganje sa skupa) postoji od broja 22 (2017). Datumi prispjeća i prihvatanja radova u Uredništvo navode se od broja 23 (2018), a DOI identifikator od broja 24 (2019). Časopis se štampa višejezično na engleskom jeziku i jezicima s prostora bivše Jugoslavije od broja 25 (2020), uz korištenje latiničnog i ćiriličnog alfabeta.<sup>6</sup>

S napomenom da pobliže informacije o bibliografskoj opremljenosti radova u časopisu *Bosniaca* donosi Selhanović (2023), ovdje treba izdvojiti još neke dodatne specifičnosti korpusa. U br. 2 (1997) svi radovi su preštampani iz ranije objavljenih izvora, a u broju 6/7 (2001–2002. godina) od 23 rada, devet radova preštampano je iz starih izvora, kao i UNESCO-ova rezolucija 4.8 iz 1993. godine te Pro-

been archived there only since 2004. *Bosniaca* is also archived on the portal Hrčak, but only since 2016.

An attempt to use COBISS.BH in the identification of papers (contributions from *Bosniaca* are processed in the catalog) also proved to be an inadequate solution, because the excerpt in the form of the Bibliography of *Bosniaca* (1996–2023)<sup>4</sup> has no information on journal structure.

Therefore, considering that the mentioned databases did not offer a comprehensive presentation of the content of *Bosniaca*, and avoiding the collection of a smaller number of metadata, it was necessary to establish *with own eyes* the actual number of papers and their associated bibliographic elements. This was done by consulting all printed editions of the Journal, after which a comprehensive bibliometric analysis sample was created.

While preparing the corpus for analysis, it was noticed that the bibliographic data along with the papers were supplemented and changed over time, i.e. there was gradual work on its standardization, and the selection of papers for analysis was only possible if the majority of papers taken into account are from blocks of papers with scientific or professional characteristics. An attempt to introduce an additional criterion for the selection of papers for analysis, such as that the paper should have cited literature, was also not possible, because the literature was not consistently cited in addition to the papers published in the first issues,<sup>5</sup> which are significant due to the cultural-historical context.

Concerning the first published issues of the Journal, papers with larger bibliographic data start from no. 3 (1998), when the UDC number and Abstracts

<sup>5</sup> Nestandardiziranost radova u početnoj fazi izlaženja časopisa dovela je do izostanka navođenja literature uz radove. I pored “Preporuka autorima” koje su date u broju 4/5 (1999–2000), tek od broja 9/10 (2005) smanjuje se broj radova koji nemaju prateću literaturu. Pripremajući korpus za analizu ustanovljen je u godini 1997 (br. 2) zamjetan nagli rast, odnosno preokret oko navođenja literature uz radove. U pitanju je tematski broj, *Iz historije štamparstva u Bosni i Hercegovini*, u kojem je objavljeno ukupno šest radova znalaca te oblasti (Kreševljaković, Pejanović, Dizdar, Petrović i dva rada Rešidbegović), koji predstavljaju već ranije objavljene naučne radove s bogatim popisom korištene literature. Vremenom se povećava broj radova uz koje se navodi literatura, što korespondira sa sve većom standardizacijom bibliografskih identifikatora. Dok se u prvom periodu izlaženja časopisa (1996–2003) objavljuje najveći broj radova bez popisa literature, u narednom periodu izlaženja časopisa (2004–2016) stabilizira se broj rubrika, radi se na indeksiranju časopisa i stabilizaciji bibliografskih identifikatora, pa se u sljedećem periodu izlaženja časopisa (2017–2023) u potpunosti stabilizira bibliografska opremljenost radova.

<sup>6</sup> Prvi tekst na ćiriličnom alfabetu javlja se 2015. godine.

<sup>4</sup> Bibliografija časopisa *Bosniaca* (1996–2023). Ispis iz: Kooperativni online bibliografski sistem i servisi COBISS.BH (Bibliography of journal *Bosniaca* (1996–2023). Excerpt from: Co-operative Online Bibliographic System and Services COBISS.BH), 1. 6. 2024.

<sup>5</sup> The non-standardization of papers in the initial phase of the Journal's publication led to the absence of references with the papers. Despite the “Authors' guidelines” given in no. 4/5 (1999–2000), only from no. 9/10 (2005) the number of papers that do not have accompanying references decrease. While preparing the corpus for analysis, in 1997 (No. 2) a noticeable sudden growth or change in citing literature with papers was established. It is a thematic issue, *From the history of printing in Bosnia and Herzegovina*, with six papers written by experts in the field published (Kreševljaković, Pejanović, Dizdar, Petrović and two papers from Rešidbegović), and which papers represent previously published scientific papers with a rich list of used literature. Over time, the number of papers with references is increasing, which corresponds to the increasing standardization of bibliographic identifiers. While in the first period of Journal publishing (1996–2003), the largest number of papers were published without a bibliography, in the following period of Journal publishing (2004–2016) the number of blocks stabilized, and the work was done on journal indexing and stabilization of bibliographic identifiers, so in the next period of Journal publishing (2017–2023) bibliographic data of the papers is fully stabilised.

glas američkih naučnika iz 1993. godine, od kojih ukupno 11 radova nije obuhvaćeno analizom. Poseban broj je i br. 8 iz 2003. godine u kojem je objavljeno 25 radova, od kojih je 17 posvećeno rekonstrukciji Vijećnice. Među tim radovima su i radovi koji po svojim karakteristikama pripadaju književnom žanru (tri rada: Alikadić, Mehmedbašić, Hrenovica). Zbog historijske perspektive, ovi radovi ubrojali su se u grupu radova za analizu, što neće dramatično utjecati na predstavljene parametre date u rezultatima jer se analizira produktivnost dužeg vremenskog perioda.<sup>7</sup>

Prva klasifikacija radova za analizu urađena je korištenjem definiranih rubrika u *Bosniaci*, gdje analizom nisu obuhvaćeni radovi koji pripadaju rubrikama: “Riječ urednika”, “Dogadjanja”, “Prilozi i prikazi”. Preostale rubrike su se tokom vremena mijenjale i dopunjavale i njihov ukupan popis je: “Članci”, “Bibliotečko-informacioni sistem”, “Kulturno naslijeđe Bosne i Hercegovine”, “Biblioteke u BiH i u svijetu”, “Dokumentarna baština”, “Informacije i servisi u novom tehnološkom okruženju”, “Prilozi i prikazi”, “Aktuelnosti”, “Dogadjanja”, “Riječ urednika”.<sup>8</sup>

Ustanovljeno je da je stvarni broj radova 551, u koji broj su uključeni uvodni radovi glavnih i odgovornih urednika pod nazivom “Riječ urednika” (21), “Prilozi i prikazi” (105), “Dogadjanja” i “Aktuelnosti” (97),<sup>9</sup> jedan intervju (koji je prikazan samo u kumulativnom broju radova). Ovi radovi su isklju-

in Bosnian/Croatian/Serbian and English are introduced. Information regarding authors’ affiliation is given from no. 4/5 (1999–2000), and Author Guidelines are published in the same issue, titles are also given in a foreign language, as well as abstract, and keywords in two languages.

As of issue 9/10 (2004–2005), the content of *Bosniaca* is given in English, no. 21 (2016) has in the running head the name of the Journal, issue, and information on the number of pages of the paper. The categorization of papers (original scientific, review, professional, and conference papers) exists from no. 22 (2017). The dates of receiving and accepting papers by the Editorial Office are given from no. 23 (2018), and the DOI identifier from no. 24 (2019). The journal is printed bilingually in English and languages of the former Yugoslavia from no. 25 (2020), using the Latin and Cyrillic alphabets.<sup>6</sup>

With the note that more detailed information about the bibliographic data of the papers in the journal *Bosniaca* is provided by Selhanović (2023), some additional specifics of the corpus should be singled out here. In no. 2 (1997), all papers are reprinted from previously published sources, and in number 6/7 (2001–2002) out of 23 papers, nine papers were reprinted from old sources, as well as UNESCO resolution 4.8 from 1993 and Proclamation of American scientists from 1993, of which a total of 11 papers were not included in the analysis. A special number is also no. 8 from 2003, in which 25 papers were published, of which 17 were dedicated to the reconstruction of the *Vijećnica*. Among these papers, there are also papers that by their characteristics belong to the literary genre (three papers, Alikadić, Mehmedbašić, Hrenovica). Due to the historical perspective, these papers were included in the group of papers for analysis, which will not dramatically affect the presented parameters given in the results, because the productivity of a longer period is analysed.<sup>7</sup>

The first classification of papers for analysis was done using defined blocks in *Bosniaca*, where the analysis did not include papers belonging to blocks: “Foreword by the Editor-in-Chief”, “Events”, and

<sup>7</sup> Tokom izlaza izdanja izdata su tri dvobroja časopisa, za 1999. i 2000. godinu (br. 4/5), za 2001. i 2002. godinu (br. 6/7) te za 2004. i 2005. godinu (br. 9/10). Pojedini brojevi, u prvoj fazi izlaza izdanja časopisa, imali su i tematske brojeve (ukupno 4): 1996. godine (br. 1) *Bibliografija Bosne i Hercegovine*, 1997. godine (br. 2) *Iz historije štamparstva Bosne i Hercegovine*, 2002. godine (br. 6/7) *Deset godina od razaranja Vijećnice (1992–2002)* te 2003. godine (br. 8) *Obnova i buduća namjena Vijećnice*.

<sup>8</sup> U prvoj godini objavljivanja postojale su dvije rubrike: “Članci”, te “Prilozi” i “Prikazi” (kao dvije odvojene rubrike). Od broja 3 (1998) dodane su rubrike: “Bibliotečko-informacioni sistem”, “Kulturno naslijeđe Bosne i Hercegovine” i “Aktuelnosti”. Rubrika “Aktuelnosti” se pojavljuje samo u ovom broju i nju će zamijeniti rubrika “Dogadjanja” od broja 4/5 do broja 14 (2009). Stabilizacija naziva rubrika počinje s brojem 4/5 (1999-2000) i to su rubrike: “Riječ urednika”, “Bibliotečko-informacioni sistem”, “Bibliotekarstvo u svijetu”, “Kulturno naslijeđe u Bosni i Hercegovini”, “Prilozi” i “Prikazi”, po prvi put i rubrika “Preporuke autorima”, koje u ovom broju nisu navedene kao posebna rubrika. Broj 8 (2003) je specifičan jer je to broj posvećen obnovi Vijećnice te je posebno i rubriciran. Prva rubrika je *Obnova i buduća namjena Vijećnice*, zatim slijedi rubrika *Prilozi na engleskom jeziku*, a nakon toga rubrike: “Bibliotekarstvo u svijetu”, “Kulturno naslijeđe”, “Prikazi dogadjanja” i “Prilozi” i “Preporuke autorima”. U narednim brojevima nema značajnijih promjena, izuzev što od broja 15 (2010) “Prilozi i prikazi” čine jednu rubriku. Od broja 20 (2015) rubrika “Kulturno naslijeđe” mijenja naziv u “Dokumentarno naslijeđe” i javlja se nova rubrika “Informacije i servisi u novom tehnološkom okruženju” od broja 20 (2015).

<sup>9</sup> Analizirajući časopis *de visu* utvrđeno je postojanje i rubrike “Aktuelnosti” u br. 3 (1998). Rubrika je postojala samo jednu godinu. U analizi jedan rad iz ove rubrike pridodat je broju radova u rubrici “Dogadjanja” te je njihov ukupan broj 97.

<sup>6</sup> The first text in the Cyrillic alphabet appeared in 2015.

<sup>7</sup> During its publishing, three double issues of the Journal were published, for 1999 and 2000 (No. 4/5), for 2001 and 2002 (No. 6/7), and for 2004 and 2005 (No. 9/10). Certain issues, in the first phase of the Journal’s publishing, also had thematic issues (4 in total): in 1996 (No. 1) *Bibliografija Bosne i Hercegovine (Bibliography of Bosnia and Herzegovina)*, in 1997 (No. 2) *Iz historije štamparstva Bosne i Hercegovine (From the history of printing in Bosnia and Herzegovina)*, in 2002 (No. 6/7) *Deset godina od razaranja Vijećnice (1992–2002) (Ten years since the destruction of Vijećnica (1992–2002))*, and in 2003 (No. 8) *Obnova i buduća namjena Vijećnice (Restoration and future use of Vijećnica)*.

čeni iz dalje analize, te je korpus umanjen za 223 (40,47%) rada, što je statistički značajno umanjeno korpusa, ali pokazuje prevagu stručnih i naučnih radova (59,53%) u odnosu na ostale radove objavljene u *Bosniaci* u analiziranom vremenskom periodu. Tragom toga, analiza je provedena na odabranom spomenutom uzorku od 328 radova, 392 autora, odnosno 227 jedinstvenih autora, koji su se statistički obrađivali u Microsoft Excelu, a u rezultatima istraživanja tabelarno prikazivali, pri čemu nestandardizirano navođenje bibliografskih identifikatora i ručni unos prikupljenih podataka mogu utjecati na rezultate ovoga istraživanja i eventualne greške.

#### 4. Rezultati istraživanja

Kako je ranije navedeno, od 1996. do 2023. godine, kroz 28 godišta (volumena) ukupno je izašlo 28 brojeva časopisa, ali 25 svezaka, a kada je godišnja produkcija radova u časopisu *Bosniaca* u pitanju, u Tabeli 1 donosi se ukupan broj objavljenih radova, razvrstanih prema pripadajućim rubrikama: “Riječ urednika”, “Prilozi i prikazi”, “Događanja” i “Aktualnosti”. U kategoriju Radovi za analizu uvršteni su svi radovi koji se nalaze u rubrikama: “Bibliotečko-informacioni sistem”, “Kulturno naslijeđe”, “Biblioteke u BiH i u svijetu”, “Dokumentarna baština” i “Informacije i servisi u novom tehnološkom okruženju”.

Oko produkcije radova primjećuje se da je trend objavljivanja radova pozitivan, ali nema pravilnu distribuciju. Vidljivo je da je najmanji broj radova objavljen u br. 2 iz 1997. godine (čine ga preštampani radovi iz drugih izvora). Najveći broj radova objavljen je 2009. godine (br. 14), ukupno 44 rada (10 radova u rubrici “Prilozi i prikazi”, 16 radova u rubrici “Događanja” i jedan rad u rubrici “Riječ urednika”), od kojih je 18 radova uvršteno u analizu (40,9% od ukupnog broja radova objavljenih u ovom broju).

U periodu od 1996. do spomenute 2009. godine objavljeno je 270 radova, od kojih su analizirana 142 rada (52,9% od ukupnog broja radova objavljenih u ovom periodu), nakon čega slijedi pravilnija distribucija radova, s evidentnim porastom naučnih i stručnih radova u periodu od 2010. do 2023. godine, kada je objavljeno ukupno 237 radova, od kojih je analizirano 169 radova (71,3% od ukupnog broja radova objavljenih u ovom periodu).

Ukupan broj autora po pojavnosti, koji su objavili 328 radova, iznosi 392, što predstavlja 0,83 rada po autoru (Tabela 2).

“Review”. The remaining blocks were changed and supplemented over time, and their final list is: “Papers”, “Library-information System”, “Cultural Heritage of Bosnia and Herzegovina”, “Libraries in Bosnia and Herzegovina and the World”, “Documentary Heritage”, “Information, and Services in the New Technological Environment”, “Reviews”, “News”, “Events”, “Foreword by the Editor-in-Chief”.<sup>8</sup>

It was established that the actual number of papers is 551, which include the introductory papers of the editors-in-chief entitled “Foreword by the Editor-in-Chief” (21), “Contributions and Reviews” (105), “Events and News” (97),<sup>9</sup> one interview (which was shown only in a cumulative number of papers). These papers were excluded from further analysis, and the corpus was reduced by 223 (40.47%) papers, which is a statistically significant reduction of the corpus, but shows the outweigh of professional and scientific papers (59.53%) compared to other papers published in *Bosniaca* in the analysed period.

Based on the stated, the analysis was carried out on a selected sample of 328 papers, 392 authors, i.e. 227 single authors, which were statistically processed in Microsoft Excel, and tabulated in the research results, with a non-standardized listing of bibliographic identifiers and manual entry of collected data that may affect the results of this research and possible errors.

#### 4. Research results

As stated earlier, from 1996 to 2023, through 28 years (volumes), a total of 28 issues of the Journal were published, but 25 volumes, and when it comes to the annual production of works in the *Bosniaca* magazine, Table 1 below shows the total the number

<sup>8</sup> In the first year of publishing, there were two blocks: “Articles”, and “Contributions” and “Reviews” (as two separate blocks). From number 3 (1998) blocks were added: “Library-information System”, “Cultural Heritage of Bosnia and Herzegovina”, and “News”. The block “News” appears only in this issue and will be replaced by the block “Events” from issue 4/5 to issue 14 (2009). The stabilization of the designated names of blocks begins with the number 4/5 (1999–2000): “Foreword by the Editor-in-Chief”, “Library-information System”, “Librarianship in the World”, “Cultural Heritage in Bosnia and Herzegovina”, “Contributions” and “Reviews”, and for the first time, block “Authors’ Guidelines”, which is not listed as a separate block in this issue. No. 8 (2003) is specific because it is a number dedicated to the *Vijećnica* restoration and is also rubricated separately. The first block is the “Renovation and Future Purpose of the Vijećnica”, followed by the section “Contributions Written in English”, followed by blocks: “Librarianship in the World”, “Cultural Heritage”, “Presentations of Events and Contributions”, and “Authors’ Guidelines”. There are no significant changes in the following numbers, except for the number 15 (2010) where “Contributions and Reviews” form one block. From issue 20 (2015), the block “Cultural Heritage” changes its name to “Documentary Heritage”, and a new block “Information and Services in a New Technological Environment” appears from issue 20 (2015).

<sup>9</sup> Analyzing the Journal with own eyes, the existence of the block “News” in no. 3 (1998) was established. The block existed for only one year. In the analysis, one paper from this block was added to the number of papers in the block Events, giving their total number 97.

**Tabela 1.** Godišnja produkcija radova u časopisu *Bosniaca* (1996–2023)<sup>10</sup>

Godina i broj Year and Number	Riječ urednika Foreword by the Editor-in-Chief	Prilozi i prikazi Reviews	Događanja i Aktuelnosti Events and News	Radovi za analizu Papers for analysis	Ukupno radova Total number of papers
1996. (1)	1	1	0	16	18
1997. (2)	-	-	0	6	6*
1998. (3)	-	-	1	19	20
2000. (4/5)	-	3	7	14	24
2002. (6/7)	-	3	9	12*	24
2003. (8)	1	7	9	20	37
2005. (9/10)	1	7	10	16	34
2006. (11)	1	4	12	11	28
2007. (12)	1	9	16	12	38
2008. (13)	1	7	17	16*	41
2009. (14)	1	10	16*	17	44
2010. (15)	1	5	0	14	20
2011. (16)	1	4	0	12	17
2012. (17)	1	4	0	13	18
2013. (18)	1	3	0	11	15
2014. (19)	1	5	0	9	15
2015. (20)	1	2	0	8	11
2016. (21)	1	3	0	9	13
2017. (22)	1	4	0	14	19
2018. (23)	1	5	0	13	19
2019. (24)	1	4	0	17	22
2020. (25)	1	3	0	14	18
2021. (26)	1	2	0	11	14
2022. (27)	1	4	0	11	16
2023. (28)	1	6	0	13	20
<b>Ukupno / Total</b>	<b>21</b>	<b>105</b>	<b>97</b>	<b>328</b>	<b>551</b>

**Table 1.** Annual production of papers in the journal *Bosniaca* (1996–2023)<sup>10</sup>

Analiza obrazaca autorstva, odnosno autorske saradnje, koji se pojavljuju u radovima (Tabela 3) pokazuje da su većina radova od 1996. do 2009. godine jednoautorski radovi (85,98%), s tim da se u brojevima 9/10 (2005) i 11 (2006) javljaju i autori koji objavljuju više radova u tim brojevima. Nakon toga, od br. 15 (2010) pojavljuje se veći broj koautorskih radova, da bi od 2019. godine njihov broj bio u stalnom porastu.

Najveći broj koautorstava je s dva autora (29), slijede koautorstva s tri autora (14), zatim s četiri autora (2), dok jedan rad potpisuje pet autora.

of published works, classified according to the relevant sections: “Foreword by the Editor-in-Chief”, “Reviews”, “Events”, and “News”. In the category “Papers” for analysis are included all the papers that are in the blocks: “Library-information System”, “Cultural Heritage”, “Libraries in Bosnia and Herzegovina and the World”, “Documentary Heritage”, “Information”, and “Services in the New Technological Environment”.

Regarding the production of papers, it is noted that the trend of publishing papers is positive, but

<sup>10</sup> U br. 2 (1997) svi radovi su preštampani iz starih izvora. U broju 6–7 (2001/2002) devet radova je preštampano iz starih izvora. Intervju iz br. 13 (2008) nije uračunat u radove za analizu, ali je pridodat kumulativnom broju radova. U ukupan broj tekstova uračunati su i tekstovi koje su u formi uvodnih riječi davali glavni i odgovorni urednici, Kujundžić i Ovcina, i njih je ukupno 21. U vezi s rubrikom “Događanja” treba napomenuti da u izdanju Nacionalne i univerzitetske biblioteke Bosne i Hercegovine od 2000. godine izlazi *Glasnik Nacionalne i univerzitetske biblioteke Bosne i Hercegovine* u kojem se štampaju tekstovi s tematikom sličnom onoj koja je bila zastupljena u rubrici “Događanja” u *Bosniaci*, stoga se nakon 2009. godine spomenuta rubrika ukida, a takve vijesti se štampaju u *Glasniku*.

<sup>10</sup> In no. 2 (1997) all papers are reprinted from old sources. In number 6/7 (2001/2002), nine papers were reprinted from old sources. Interview from no. 13 (2008) was not included in the papers for analysis, but was added to the cumulative number of papers. The total number of texts also includes the texts that were given in the form of introductions by the editors-in-chief, Kujundžić and Ovcina, with a total of 21. Regarding block “Events”, it should be noted that since 2000, the National and University Library of Bosnia and Herzegovina has been publishing the *Herald of the National and University Library of Bosnia and Herzegovina* in which texts with topics similar to those presented in the block Events in *Bosniaca* have been published, therefore, after 2009, the mentioned section was suspended, and such news are published in the *Herald*.

**Tabela 2.** Pregled radova autora po godinama i prosjek po radu (1996–2023)  
**Table 2.** Overview of author's papers by year and average per paper (1996–2023)

Godina i broj Year and number	Broj radova za analizu Number of papers for analysis	Radovi u % Papers in %	Broj autora (pojavnost) Number of authors (occurrence)	Prosjek po radu Average per paper
1996. (1)	16	4,88	16	1
1997. (2)	6	1,83	6	1
1998. (3)	19	5,79	19	1
2000. (4/5)	14	4,27	15	0,93
2002. (6/7)	12	3,66	12	1
2003. (8)	20	6,10	22	0,90
2005. (9/10)	16	4,88	16	1
2006. (11)	11	3,35	11	1
2007. (12)	12	3,66	14	0,85
2008. (13)	16	4,88	16	1
2009. (14)	17	5,18	17	1
2010. (15)	14	4,27	16	0,87
2011. (16)	12	3,66	12	1
2012. (17)	13	3,96	14	0,92
2013. (18)	11	3,36	14	0,78
2014. (19)	9	2,74	12	0,75
2015. (20)	8	2,44	8	1
2016. (21)	9	2,74	15	0,6
2017. (22)	14	4,27	19	0,73
2018. (23)	13	3,96	18	0,72
2019. (24)	17	5,18	20	0,85
2020. (25)	14	4,27	25	0,56
2021. (26)	11	3,35	17	0,64
2022. (27)	11	3,35	17	0,64
2023. (28)	13	3,96	21	0,61
<b>Ukupno / Total</b>	<b>328</b>	<b>100,00</b>	<b>392</b>	<b>0,83</b>

Rezultati istraživanja, prema formuli Subramanyam,<sup>11</sup> pokazuju veoma nizak stepen saradnje u časopisu *Bosniaca*, svega 0,14 za ukupni razmatrani vremenski period od 1996. do 2023. godine:

$$C = \frac{46}{46+282} = 0,14$$

Ukoliko pratimo stepen saradnje autora, u odnosu na evidentirane promjene u bibliografskoj opremljenosti radova, a u vezi s kojima su izdvojena tri perioda oko razvoja ovih identifikatora (1996–2003, 2004–2016, 2017–2023), vidljivo je kako se najveći stepen saradnje pojavljuje u posljednjem periodu, od 2017. do 2023. godine, koji karakterizira potpuna standardizacija oko bibliografske opremljenosti radova.

there is no proper distribution. It can be seen that the smallest number of papers was published in no. 2 from 1997 (it consists of reprinted papers from other sources). The largest number of papers was published in 2009 (No. 14), a total of 44 papers (10 papers in the block “Contributions and Reviews”, 16 papers in the block “Events” and one paper in the block “Foreword by the Editor-in-Chief”), of which 18 papers were included in the analysis (40,9% from the total number of papers published in this issue).

In the period from 1996 to the mentioned year 2009, 270 papers were published, of which 142 papers were analysed (52.9% of the total number of papers published in this period), followed by a more regular distribution of papers, with an evident increase in scientific and professional papers in the period from 2010 to 2023, when a total of 237 papers were published, of which 169 papers were analysed (71.3% of the total number of papers published in this period).

The total number of authors by appearance, who published 328 papers, is 392, which represents 0.83 papers per author (Table 2).

<sup>11</sup> Formula za izračunavanje stepena saradnje je:

$$C = \frac{N_m}{N_m + N_s}$$

gdje je:  $C$  = stepen saradnje,  $N_m$  = broj višeautorskih radova,  $N_s$  = broj jednoautorskih radova (Subramanyam, 1983: 37).

**Tabela 3.** Obrasci autorstva i autorske saradnje u časopisu Bosniaca (1996–2023)**Table 3.** Patterns of authorship and authorial collaboration in the journal Bosniaca (1996–2023)

Godina, broj Year, Number	Jedan autor One author	Dva autora Two authors	Tri autora Three authors	Četiri autora Four authors	Pet autora Five authors
1996. (1)	15	1	-	-	-
1997. (2)	6	-	-	-	-
1998. (3)	19	-	-	-	-
2000. (4/5)	13	-	1	-	-
2002. (6/7)	12	-	-	-	-
2003. (8)	19	-	1	-	-
2005. (9/10)	16	-	-	-	-
2006. (11)	11	-	-	-	-
2007. (12)	10	2	-	-	-
2008. (13)	16	-	-	-	-
2009. (14)	17	-	-	-	-
2010. (15)	12	2	-	-	-
2011. (16)	12	-	-	-	-
2012. (17)	12	1	-	-	-
2013. (18)	8	3	-	-	-
2014. (19)	7	1	1	-	-
2015. (20)	8	-	-	-	-
2016. (21)	5	3	-	1	-
2017. (22)	12	2	-	-	-
2018. (23)	11	1	-	-	1
2019. (24)	12	4	1	-	-
2020. (25)	8	2	3	1	-
2021. (26)	7	2	2	-	-
2022. (27)	7	2	2	-	-
2023. (28)	7	3	3	-	-
<b>Ukupno / Total</b>	<b>282</b>	<b>29</b>	<b>14</b>	<b>2</b>	<b>1</b>

**Tabela 4.** Stepen saradnje autora (1996–2003, 2004–2016. i 2017–2023)**Table 4.** The degree of author's collaboration (1996–2003, 2004–2016 and 2017–2023)

Periodi Periods	Jednoautorski radovi Single author papers	Višeautorski radovi Co-authored papers	Stepen saradnje Degree of collaboration
1996–2003.	84	3	0.03
2004–2016.	134	14	0.09
2017–2023.	64	29	0.31
<b>Ukupno / Total</b>	<b>282</b>	<b>46</b>	<b>0.14</b>

U malom broju koautorskih radova, najčešće saraduju autori koji dolaze iz istih ustanova, i to najviše autori iz Nacionalne i univerzitetske biblioteke Bosne i Hercegovine i autori s Univerziteta u Sarajevu. Rjeđa je saradnja autora iz istih država (Hrvatska, Bosna i Hercegovina, Srbija) koja se najčešće pojavljuje u posljednjim godištim. Od 1996. do 2023. godine objavljena su samo dva rada nastala na međdržavnoj saradnji autora.<sup>12</sup>

Istražujući pojedinačnu produktivnost autora, utvrđen je ukupan broj od 227 jedinstvenih autora (Tabela 5).

Broj jedinstvenih autora koji su objavili po jedan rad je 165 (72,69%), broj jedinstvenih autora koji su objavili po dva rada je 31 (31%), po tri rada 13 (5,73%), a jedan autor je objavio 14 radova u časopisu od 1996. do 2023. godine.

Na temelju ovih rezultata dobiveni su i drugi pokazatelji, poput imena najproduktivnijih autora koji su objavljivali u časopisu u analiziranom vremenskom periodu (Tabela 6).

Dok je najveći broj jedinstvenih autora koji objavljuju radove u časopisu *Bosniaca* porijeklom iz Bosne i Hercegovine, ukupno njih 132, pored autora iz Bosne i Hercegovine značajno su zastupljeni i autori iz zemalja regije, iz Hrvatske (30), Srbije (26), Slovenije (8) i Crne Gore (5), dok jedinstvenih autora porijeklom iz drugih zemalja ima ukupno 27.

Također, od ukupnog broja analiziranih jedinstvenih autora, njih 227, 68 je muškaraca (29,96%), a 159 žena (70,04%). Izuzev nekoliko zemalja iz kojih ne dolaze autorice (npr. Grčka, Azerbejdžan, ukupno 7 zemalja), Tabela 7 zapravo pokazuje da su u većini država iz kojih autori dolaze autorice daleko zastupljenije.

Od 1996. do 2023. godine za *Bosniacu* pišu autori porijeklom iz navedenih 18 različitih zemalja, koji dolaze iz različitih ustanova, nacionalnih biblioteka, visokoškolskih biblioteka, visokoškolskih ustanova, javnih biblioteka, srednjih i osnovnih škola, instituta i sl. Podaci o najproduktivnijim ustanovama, iz kojih dolaze autori koji su objavili četiri i više radova, s napomenom da su ti podaci prikupljeni od br. 4/5 (2002), kada se uz objavljene radove u časopisu donose i informacije o ustanovama iz kojih autori dolaze, donose se u Tabeli 8.

<sup>12</sup> U radu iz br. 8 (2003) "Dijagnoza i prijedlog sanacije zidanih konstrukcija oštećenih u ratu: primjer ispitivanja 'Gradske vijećnice' u Sarajevu" saraduju autori D. Almesberger i M. Tončić iz korporacije SER.CO.TEC., Trieste, Italija, s N. Kupusovićem iz firme "Energoinvest" iz Sarajeva, a u radu iz br. 18 (2013) "Novi bibliotečki servisi na univerzitetima Zapadnog Balkana – rezultati Tempus projekta N.L.S.W.B.U." saraduju B. Mazić iz Univerzitetske biblioteke "Svetozar Marković" i I. Ovčina iz Nacionalne i univerzitetske biblioteke Bosne i Hercegovine.

The analysis of the patterns of authorship or author collaboration that appear in the papers (Table 3) shows that the majority of papers from 1996 to 2009 are single-author works (85.98%), with the fact that in numbers 9/10 (2005) and 11 (2006) also appear authors who have published several papers in those issues. After that, from no. 15 (2010) a larger number of co-authored papers appear, and from 2019 their number will be constantly increasing.

The largest number of co-authorships is with two authors (29), followed by co-authorships with three authors (14), then with four authors (2), while one paper is signed by five authors.

The research results show, and according to the Subramanyam formula,<sup>11</sup> very low level of cooperation in the journal *Bosniaca*, only 0.14 for the total considered period from 1996 to 2023:

$$C = \frac{46}{46 + 282} = 0,14$$

If we follow the degree of collaboration of the authors, in relation to the recorded changes in the bibliographic data of the papers, and in connection with which three periods have been singled out, around the development of these identifiers (1996–2003, 2004–2016, 2017–2023), it is evident that the highest degree of collaboration appears in the last period, from 2017 to 2023, which is characterized by complete standardization of the bibliographic data of papers.

In a small number of co-authored papers, the authors who come from the same institutions most often collaborate, mostly authors from the National and University Library of Bosnia and Herzegovina and authors from the University of Sarajevo. The collaboration of authors from the same countries (Croatia, Bosnia and Herzegovina, Serbia) is rarer and appears foremost in recent years. From 1996 to 2023, only two papers are published as a result of the author's international cooperation.<sup>12</sup>

Investigating the individual productivity of authors, a total number of 227 single authors was determined (Table 5).

<sup>11</sup> The formula for calculating the degree of collaboration is:

$$C = \frac{N_m}{N_m + N_s}$$

where:  $C$  = degree of collaboration,  $N_m$  = a number of co-authored papers,  $N_s$  = a number of single-authored papers (Subramanyam, 1983: 37).

<sup>12</sup> In the paper from no. 8 (2003) "Diagnosis and proposal for sanitation of masonry constructions damaged in the war: an example of the examination 'City Hall' in Sarajevo", a collaboration of the authors D. Almesberger and M. Tončić from the corporation SER.CO.TEC., Trieste, Italy with N. Kupusović from the company "Energoinvest" in Sarajevo, and in the work from no. 18 (2013) "New Library Services at Western Balkan Universities – results of the Tempus project N.L.S.W.B.U.", collaborate B. Mazić from the University Library "Svetozar Marković" and I. Ovčina from the National and University Library of Bosnia and Herzegovina.

**Tabela 5. Rang-lista jedinstvenih autora s brojem radova (1996–2023)**  
**Table 5. Ranking list of single authors with number of papers (1996–2023)**

R.Br. No.	Broj radova u <i>Bosniaci</i> <i>Number of papers in Bosniaca</i>	Broj autora Number of authors	Autori u % Authors in %
1.	1	165	72,69
2.	2	31	13,66
3.	3	13	5,73
4.	4	2	0,88
5.	5	4	1,76
6.	6	4	1,76
7.	7	2	0,88
8.	8	3	1,32
9.	9	1	0,44
10.	13	1	0,44
11.	14	1	0,44
<b>Ukupno / Total</b>		<b>227</b>	<b>100,00</b>

**Tabela 6. Najproduktivniji autori u časopisu Bosniaca i ustanove iz kojih dolaze (1996–2023)**  
**Table 6. The most productive authors in the journal Bosniaca and their institutions (1996–2023)**

R.Br. No	Ime autora Name of the author	Ukupan br. radova Total no. of papers	Broj radova za analizu Number of papers for analysis	Afilijacija Affiliation
1.	Amra Rešidbegović	29	14	NUBBiH
2.	Ismet Ovčina	15	13	NUBBiH
3	Zijada Đurđević Alidžanović	25	9	NUBBiH
4.	Sadžida Šahmanović	12	8	NUBBiH
	Dženana Tuzlak	12	8	NUBBiH
	Nevenka Hajdarović	17	8	NUBBiH
5	Muamera Smajić	10	7	NUBBiH
	Lejla Hajdarpašić	8	7	UNSA – Filozofski fakultet / Faculty of Philosophy
6.	Enes Kujundžić	7	6	NUBBiH
	Nadina Grebović Lendo	12		NUBBiH
	Senada Dizdar	15		UNSA – Filozofski fakultet / Faculty of Philosophy
	Biljana Zarić	7		NUBBiH
7.	Lejla Kodrić Zaimović	11	5	UNSA – Filozofski fakultet / Faculty of Philosophy
	Džejla Khattab	5	5	UNSA – Filozofski fakultet / Faculty of Philosophy
	Dragana Bogdanović	6	5	NUBBiH
	Sanja Polimac	6		NUBBiH

**Tabela 7. Zastupljenost autora i autorica (1996–2023)**  
**Table 7. Representation of male and female authors (1996–2023)**

Država Country	Broj autora Number of male authors	Broj autorica Number of female authors	Ukupno autora iz države (%) Total authors from the country (%)
BiH / B&H	44	88	58.15
Hrvatska / Croatia	4	26	13.22
Srbija / Serbia	6	20	11.45
Albanija / Albania	1	-	0.44
Grčka / Greece	1	-	0.44
Italija / Italy	2	-	0.88
SAD / USA	2	2	1.76
Engleska / England	1	-	0.44
Slovenija / Slovenia	1	7	3.52
Rumunija / Romania	1	2	1.32
Francuska / France	1	3	1.76
Njemačka / Germany	2	-	0.88
Estonija / Estonia	-	1	0.44
Holandija / Netherlands	-	2	0.88
Crna Gora / Montenegro	-	5	2.20
Sjeverna Makedonija / North Macedonia	-	2	0.88
Rusija / Russia	1	-	0.44
Azerbejdžan / Azerbaijan	1	-	0.44
Ukrajina / Ukraine	-	1	0.44
<b>Ukupno / Total</b>	<b>68</b>	<b>159</b>	<b>100.00</b>

**Tabela 8. Naproductivnije ustanove iz kojih autori dolaze (1996–2023)**  
**Table 8. The most productive institutions from which authors are coming (1996–2023)**

R.Br. Order No.	Ustanova Institution	Broj radova Number of papers	Broj radova % od ukupnog broja analiziranih radova Number of papers % of the total number of analysed papers
1.	Nacionalna i univerzitetska biblioteka Bosne i Hercegovine National and University Library of Bosnia and Herzegovina	107	32.62%
2.	Univerzitet u Sarajevu University of Sarajevo	45	13.72%
3.	Narodna biblioteka Srbije National Library of Serbia	13	3.96%
4.	Nacionalna i sveučilišna knjižnica Zagreb National and University Library Zagreb	8	2.44%
5.	Sveučilište u Rijeci University of Rijeka	6	1.83%
6.	Sveučilište u Zagrebu University of Zagreb	5	1.52%
7.	Institut informacijskih znanosti Maribor Institute of Information Science Maribor	5	1.52%
8.	Gimnazija Zenica Gymnasium of Zenica	4	1.22%
9.	Univerzitetska biblioteka Tuzla Library of the University of Tuzla	4	1.22%

Po broju objavljenih radova, najproduktivnije ustanove iz kojih autori dolaze su Nacionalna i univerzitetska biblioteka Bosne i Hercegovine, čiji autori objavljuju 107 radova, te Univerzitet u Sarajevu, s kojega autori objavljuju 45 radova. Autori iz Narodne biblioteke Srbije objavili su 13 radova, autori iz Nacionalne i sveučilišne knjižnice u Zagrebu 8 radova, autori sa Sveučilišta u Zagrebu i iz Instituta informacijskih znanosti Maribor po 5 radova, dok su autori iz Prve gimnazije Zenica i Biblioteke Univerziteta u Tuzli objavili po 4 rada.

## 5. Diskusija

Kod pripreme korpusa za analizu, ustanovljeno je da je razvoj identifikacijskih elemenata radova prošao kroz tri faze u kojima se stabiliziraju identifikacijski bibliografski podaci. Prva, koja traje od 1996. do 2003. godine, pokazuje da se nakon prva dva tematska broja od 1998. godine počinje s uvođenjem standardiziranih elemenata za bibliografski opis radova i rubriciranjem. Druga faza je od 2004. do 2016. godine, u kojoj se uvode nove rubrike, časopis se indeksira u bazama podataka, izrađuje se web-stranica časopisa i dodjeljuje ISSN identifikacijski broj za online verziju 2016. godine. U trećoj fazi, od 2017. do 2023. godine, radi se na dodatnoj standardizaciji, uvodi se kategorizacija radova te se ulažu naponi za povećanje vidljivosti časopisa na međunarodnom nivou, što rezultira indeksiranjem časopisa u citatnim bazama podataka Web of Science (2017. godine) i Scopus (2023. godine).

Kada je godišnja produkcija radova u pitanju, nepravilna distribucija objavljenih radova tokom analiziranog vremenskog perioda vjerovatno je rezultat različitih faktora, među kojima su i ti da je ovaj časopis nastao neposredno nakon rata u Bosni i Hercegovini (1992–1995) i trenutno je jedini časopis iz ove oblasti u Bosni i Hercegovini, koji se od časopisa namijenjenog bibliotekarstvu razvijao postepeno u časopis koji pokriva široko područje informacijskih nauka. Tek s uvođenjem kategorizacije radova i indeksiranjem časopisa distribucija radova je postala pravilnija i časopis je počeo dobijati karakteristike naučnog časopisa, odnosno svrstava se u naučno-stručne časopise.

Od analiziranih 328 radova, jednoautorskih radova je 282 (85,98%), a prema formuli Subramanyam, stepen saradnje autora u časopisu *Bosniaca* iznosi svega 0,14 u razmatranom vremenskom periodu od 1996. do 2023. godine, pa u ovom segmentu *Bosniaca* više podsjeća na časopise iz oblasti humanističkih nauka, što se mijenja od 2019. godine, kada se broj

The number of single authors who published one paper is 165 (72,69%), the number of single authors who published two papers is 31 (31%), three papers 13 (5,73%), and one author published 14 papers in the Journal from 1996 to 2023.

Based on these results, other indicators were also obtained, such as the names of the most productive authors who published in the Journal in the analyzed period (Table 6).

While the largest number of single authors who publish papers in the journal *Bosniaca* originate from Bosnia and Herzegovina, a total of 132 authors, in *Bosniaca*, in addition to authors from Bosnia and Herzegovina, significantly represented authors from the countries of the region: from Croatia (30), Serbia (26), Slovenia (8) and Montenegro (5), while single authors originating from other countries are a total of 27.

Also, out of the total number of analysed single authors, 227 of them, 68 are men (29.96%), and 159 are women (70.04%). Except for a few countries from which the female authors do not come (e.g. Greece, Azerbaijan, a total of 7 countries), Table 7 below actually shows that in most of the countries where the authors come from, female authors are far more represented.

From 1996 to 2023, authors originating from the mentioned 18 different countries, who come from various institutions, national libraries, academic libraries, academic institutions, public libraries, high schools and elementary schools, institutes, etc., write for *Bosniaca*. Data on the most productive institutions from which the authors are coming and that have published four or more papers, with a note that these data were collected from no. 4/5 (2002), in a time when published papers in the Journal also have information regarding authors' institutions, is provided in Table 8 below.

Regarding the number of published papers, the most productive institutions from which authors come are the National and University Library of Bosnia and Herzegovina, whose authors published 107 papers, followed by the University of Sarajevo, from which authors published 45 papers. Authors from the National Library of Serbia published 13 papers, authors from the National and University Libraries in Zagreb 8 papers, authors from the University of Zagreb and the Institute of Information Sciences Maribor 5 papers each, while authors from the First Gymnasium of Zenica and the Library of the University of Tuzla published each 4 papers.

koautorstava povećava, a stepen saradnje autora za period od 2017. do 2023. godine je najveći i iznosi 0,31. Subramanyam je identificirao ranije spomenutih šest oblika autorske saradnje, prema kojem je najčešći oblik saradnje koja se pojavljuje saradnja među kolegama (Subramanyam, 1983: 34), koja je uobičajen način rada u institucijama, jer u istraživanjima i projektima učestvuje veći broj kolega, što je slučaj i s koautorskim radovima u *Bosniaci*. Najviše radova urađeno je u koautorstvu među uposlenicima Nacionalne i univerzitetske biblioteke Bosne i Hercegovine i među istraživačima s Univerziteta u Sarajevu – Filozofskog fakulteta, Odsjeka za komparativnu književnost i informacijske nauke.

Analiza obrazaca oko autorstva pokazuje da je u odnosu na ukupan promatrani broj jedinstvenih autora (227), broj jedinstvenih autora koji su objavili po jedan rad 165 (72,69%), što odstupa od Lotkinog zakona (60% jednoautorskih radova) i upućuje na to da je dosta disperzan broj autora koji saraduju u časopisu.

Kada su najproduktivniji autori u pitanju, utvrđeno je da je u analiziranom vremenskom periodu Amra Rešidbegović najproduktivnija autorica koja je objavila 29 radova, od toga 14 radova koji su bili predmetom analize. Drugi autor po broju objavljenih radova je Ismet Ovčina, koji je objavio 15 radova, od kojih je 13 radova analizirano, s napomenom da je veliki broj tih radova urađen u koautorstvu. Zijada Đurđević Alidžanović objavila je 9 radova, a autorice Sadžida Šahmanović, Dženana Tuzlak i Nevenka Hajdarović po osam radova. Te autorice bile su ili su trenutno zaposlene u Nacionalnoj i univerzitetskoj biblioteci Bosne i Hercegovine.

Sljedeća grupa autora koji su objavili po sedam, šest i pet radova afilijacijom pripadaju Univerzitetu u Sarajevu – Filozofskom fakultetu, Odsjeku za komparativnu književnost i informacijske nauke, što se razlikuje od praksi objavljivanja u časopisima iz informacijskih nauka u svijetu, gdje veliki broj radova objavljuju uposlenici visokoškolskih biblioteka. Ali, u poređenju s afilijacijama autora iz naprimjer časopisa *Vjesnik bibliotekara Hrvatske*, vidna je slična praksa. Naime, bibliometrijska analiza ovoga časopisa za period od 1950. do 2020. ukazuje na to da “sve je veći broj radova koje objavljuju autori iz akademskih ustanova s akreditiranim studijskim programima u području informacijskih i komunikacijskih znanosti (Zagreb, Osijek i Zadar)” (Pehar, 2022: 19).

Spomenute ustanove, Nacionalna i univerzitetska biblioteka Bosne i Hercegovine i Univerzitet u Sarajevu, najproduktivnije su ustanove iz kojih dolaze autori, njihovo učešće u ukupnom broju objavljenih radova u periodu od 1996. do 2023. godine iznosi

## 5. Discussion

With the preparation of the corpus for analysis, it was established that the development of identification elements of the papers went through three phases in which the identification of bibliographic data was stabilized. The first one, which lasted from 1996 to 2003, shows that after the first two thematic issues, since 1998, the introduction of standardized elements for the bibliographic description of papers and their structuring has begun. The second phase is from 2004 to 2016, in which new blocks are introduced, the Journal is indexed in databases, the Journal's website is created and an ISSN for the online version is assigned in 2016. In the third phase from 2017 to 2023, work is being done on additional standardization, the categorization of papers is introduced, and efforts are being made to increase the visibility of the journal at the international level, which results in the indexing of the Journal in the citation databases of the Web of Science (in 2017) and Scopus (in 2023).

When it comes to the annual production of papers, the irregular distribution of published papers during the analyzed period is probably the result of various factors, among which is the fact that this Journal was created immediately after the war in Bosnia and Herzegovina (1992–1995) and it is currently the only journal in this field in Bosnia and Herzegovina, which gradually developed from a journal intended for librarianship into a journal covering a wide area of information sciences. Only with the introduction of the categorization of papers and the indexing of the Journal in the previously mentioned databases, the distribution of papers is more regular and the Journal has the characteristics of a scientific journal, i.e. it is classified as a scientific-professional journal.

Out of the 328 papers analysed, there are 282 (85.98%) single-author papers, and according to the Subramanyam formula, the degree of collaboration of authors in the journal *Bosniaca* is only 0.14 in the considered period from 1996 to 2023, so in this segment, *Bosniaca* more reminds of journals in the field of humanities, which changes from 2019, when the number of co-authorships increases – the degree of collaboration of authors for the period from 2017 to 2023 is the highest and amounts to 0.31. Subramanyam identified the previously mentioned six forms of author collaboration, according to which division, the most common form of collaboration that appears is collaboration between colleagues (Subramanyam, 1983: 34), which is the usual way of working in institutions, because a large number of colleagues participate in research and projects, and

46,34% (152 rada). Preostale ustanove iz kojih su autori objavili četiri ili više radova također su biblioteke i visokoškolske ustanove.

Od 227 jedinstvenih autora, najviše je autora porijeklom iz Bosne i Hercegovine (58,15%), dok je preostalih 95 autora porijeklom iz 17 različitih zemalja. Pored Bosne i Hercegovine, najveći broj autora dolazi iz zemalja regije, iz Srbije, Hrvatske, Slovenije i Crne Gore. Ukupan broj autora porijeklom iz Bosne i Hercegovine (132) te zemalja regije (69), koji objavljuju radove u *Bosniaci* od 1996. do 2023. godine, iznosi 201 (88,55%), dok je ukupan broj autora porijeklom iz drugih zemalja 26 (11,45%), što upućuje na regionalni karakter časopisa.

Zastupljenost autora iz Bosne i Hercegovine te zemalja regije može biti uzrokovana jezičkim barijerama (u časopisu se prijevodi radova na engleski jezik donose od 2020. godine). Slične zaključke donose Dizdar i Isanović Hadžiomerović u istraživanju o bibliografskoj opremljenosti časopisa *Obrazovanje odraslih* (2001–2017), pojašnjavajući da je u ovom časopisu “većina radova objavljena na standardnim jezicima sa prostora bivše Jugoslavije, što je praksa za ‘periferne znanosti’ ili discipline koje se tek konstituiraju kao znanost na određenom području i koriste etnički / maternji jezik u znanstvenom objavljivanju” (Dizdar i Isanović Hadžiomerović, 2018: 83).

U pogledu zastupljenosti autora prema spolu, rezultati istraživanja pokazuju da je od ukupnog broja analiziranih jedinstvenih autora 68 muškaraca (29,95%), a 159 žena (70,04%). Ovi rezultati ne odstupaju značajno od rezultata nekih sličnih istraživanja časopisa iz oblasti bibliotečko-informacijskih nauka, i na mnogo većem broju autora, npr. istraživanja u kojem je analizirano deset najviše rangiranih časopisa iz oblasti (*College and Research Libraries (CRL)*, *Information Technology and Libraries (ITL)*, *Journal of Academic Librarianship (JAL)*, *Journal of Documentation (JOD)*, *Library & Information Science Research (LISR)*, *Library Hi Tech (LHT)*, *Library Quarterly (LQ)*, *Library Resources & Technical Services (LRTS)*, *Library Trends (LT)* i portal *Libraries and the Academy (PLA)*) za period od 2003. do 2021. godine, koje pokazuje da je od ukupnog broja analiziranih autora zastupljeno 55% autorica (Monroe-Gulick, Weaver i Morris, 2024). Slične trendove uočava primjerice i istraživanje Vinay i Sampath Kumar (2021) na primjeru druga tri časopisa iz oblasti (*Library Management*, *New Library World* i *Performance Measurement and Metrics*) za period 2008–2019.

I dok rezultati istraživanja oko zastupljenosti autora

this is also the case with co-authored works in *Bosniaca*. Most of the papers were co-authored among employees of the National and University Library of Bosnia and Herzegovina and among researchers from the University of Sarajevo – Faculty of Philosophy, Department of Comparative Literature and Information Sciences.

The analysis of authorship patterns shows that in relation to the total observed number of single authors (227), the number of single authors who published one paper is 165 (72.69%), which deviates from Lotka’s law (60% of single-authored works) and refers to the fact that the number of authors who collaborate in the Journal is quite dispersed.

When it comes to the most productive authors, it was determined that in the analysed period, Amra Rešidbegović was the most productive author who published 29 papers, of which 14 were the subject of analysis. By the number of published papers, the second author is Ismet Ovčina, who published 15 papers, of which 13 were analyzed, with a note that a great number of these papers were co-authored. Zijada Đurđević Alidžanović has published 9 papers, the authors Sadžida Šahmanović, Dženana Tuzlak, and Nevenka Hajdarović eight papers each. The mentioned authors were or are currently employed in the National and University Library of Bosnia and Herzegovina.

The next group of authors who have published seven, six, and five papers by affiliation belongs to the University of Sarajevo – Faculty of Philosophy, Department of Comparative Literature and Information Sciences, which differs from the practice of publishing in information science journals in the world, where a large number of papers are published employees of academic libraries. But, compared to the affiliations of authors from, for example, the journal *Vjesnik bibliotekara Hrvatske*, a similar practice is detectable. Namely, the bibliometric analysis of this Journal for the period from 1950 to 2020 indicates that “there is an increasing number of papers published by authors from academic institutions with accredited study programs in the field of information and communication sciences (Zagreb, Osijek, and Zadar)” (Pehar, 2022:19).

The mentioned institutions, the National and University Library of Bosnia and Herzegovina and the University of Sarajevo, are the most productive institutions from which authors come, their participation in the total number of published papers in the period from 1996 to 2023 is 46.34% (152 papers). The remaining institutions from which the authors

po spolu mogu postati predmetom i drugih istraživanja časopisa *Bosniaca*, pogotovo u kontekstu ustanova iz kojih autori dolaze i tema kojima se bave, evidentno je da su u časopisu *Bosniaca*, od njegova pokretanja, žene znatno i kontinuirano prisutne u području autorstva (ali i uredništva i redakcije samoga časopisa, iako su direktori Biblioteke i glavni i odgovorni urednici ovog časopisa od 1996. godine do 2023. godine isključivo muškarci).

## 6. Zaključak

Analiza obrazaca autorstva i autorske saradnje pokazuje da je u *Bosniaci* od 1996. do 2023. godine doprinos dalo ukupno 227 jedinstvenih autora, koji su objavili 328 radova, od kojih su daleko najzastupljeniji jednoautorski radovi, otuda i stepen saradnje autora od 1996. do 2023. iznosi 0,14. Ipak, od 2019. godine broj koautorskih radova se povećava, ali i dalje, u periodu od 2019. do 2023. godine, broj višeautorskih radova ne prelazi broj jednoautorskih (mada mu se približava), pri čemu je najzastupljeniji oblik autorske saradnje u *Bosniaci* onaj između autora iz iste ustanove, gdje najviše koautorskih radova donose autori iz Nacionalne i univerzitetske biblioteke Bosne i Hercegovine i autori s Univerziteta u Sarajevu. Upravo su autori iz Nacionalne i univerzitetske biblioteke Bosne i Hercegovine i najproduktivniji, nakon kojih slijede autori s Univerziteta u Sarajevu.

Pored autora iz Bosne i Hercegovine, koji kontinuirano i s najvećim brojem radova doprinose *Bosniaci*, u časopisu se pojavljuje veći broj autora iz zemalja regije (Srbija, Hrvatska, Slovenija, Crna Gora), nešto manji broj autora iz drugih zemalja, dok postoji jasna razlika između zastupljenosti žena i muškaraca. Od ukupnog broja jedinstvenih autora, dok je nešto manje od jedne trećine muškaraca (68), žena je 159, od kojih većina jedinstvenih autorica iz Bosne i Hercegovine u *Bosniaci* pišu kontinuirano, pa tako imaju i neke stalne rubrike unutar kojih objavljuju svoje radove.

Uporedo sa stabilizacijom identifikacijskih bibliografskih podataka radova objavljenih u časopisu *Bosniaca*, a u vremenskom periodu od 1996. do 2023. godine, povećava se i broj koautorskih radova, razvija međunarodna mreža autora te se povećava i međunarodna vidljivost časopisa u međunarodnoj naučnoj zajednici. Od 2020. godine radovi se u *Bosniaci* objavljuju dvojezično, na jezicima s prostora bivše Jugoslavije i na engleskom jeziku, što dodatno doprinosi promociji i vidljivosti časopisa, odnosno radova koji se u njemu objavljuju, a može povoljno utjecati i na zainteresovanost stranih autora za objavljivanje radova u *Bosniaci*.

published four or more papers are also libraries and academic institutions.

Out of 227 single authors, most authors are from Bosnia and Herzegovina (58.15%), while the remaining 95 authors are from 17 different countries. In addition to Bosnia and Herzegovina, the largest number of authors come from the countries of the region, Serbia, Croatia, Slovenia, and Montenegro. The total number of authors from Bosnia and Herzegovina (132) and the countries of the region (69), who published papers in *Bosniaca* from 1996 to 2023, is 201 (88.55%), while the total number of authors from other countries 26 (11.45%), which points to the regional character of the Journal.

The representation of authors from Bosnia and Herzegovina and the countries of the region may be caused by language barriers (translations of papers into English language are done for the Journal from 2020). Similar conclusions are made by Dizdar and Isanović Hadžimerović in their research on the bibliographic data of the journal *Adult Education* (2001–2017), explaining that in this Journal “most of the papers are published in standard languages from the region of the former Yugoslavia, which is the practice for ‘peripheral sciences’ or disciplines that are just being constituted as science in a certain area and use the ethnic / native language in scientific publication” (Dizdar & Isanović Hadžimerović, 2018: 83).

Regarding the representation of authors by gender, the research results show that of the total number of single authors analyzed, 68 are men (29.95%), and 159 are women (70.04%). These results do not deviate significantly from the results of some similar research of journals in the field of library and information sciences, and on a much larger number of authors, e.g. research in which ten top-ranked journals in the field were analysed (*College and Research Libraries (CRL)*, *Information Technology and Libraries (ITL)*, *Journal of Academic Librarianship (JAL)*, *Journal of Documentation (JOD)*, *Library & Information Science Research (LISR)*, *Library Hi Tech (LHT)*, *Library Quarterly (LQ)*, *Library Resources & Technical Services (LRTS)*, *Library Trends (LT)* and portal *Libraries and the Academy (PLA)*), for the period from 2003 to 2021, which shows that of the total number of analysed authors, 55% are female authors (Monroe-Gulick, Weaver & Morris, 2024). Similar trends are observed, for example, in the research of Vinay & Sampath Kumar (2021) on the example of other 3 journals in the field (*Library Management*, *New Library World* and *Performance Measurement and Metrics*), and for the period from 2008–2019.

While the results of the research on the representation of authors by gender may become the subject of other studies of the journal *Bosniaca*, especially in the context of the institutions from which the authors come and the topics they deal with, it is evident that in journal *Bosniaca*, since its launch, women have been significantly and continuously present in the field of authorship (but also the editorial and editorial staff of the Journal itself, although the directors of the Library and the editors-in-chief of this Journal from 1996 to 2023 are exclusively men).

## 6. Conclusion

The analysis of patterns of authorship and author collaboration shows that in *Bosniaca* from 1996 to 2023, 227 single authors in total gave their contributions, with published 328 papers, of which the most represented papers are single-author papers, hence the degree of author collaboration from 1996 to 2023 is 0.14. Nevertheless, since 2019, the number of co-authored papers has been increasing, but still, in the period from 2019 to 2023, the number of multi-authored papers does not exceed the number of single-authored papers (but it is approaching), with the most represented form of authorial collaboration in *Bosniaca* being that between authors from the same institution, where the most co-authored papers are brought by authors from the National and University Library of Bosnia and Herzegovina and authors from the University of Sarajevo. Authors from the National and University Library of Bosnia

and Herzegovina are the most productive, followed by authors from the University of Sarajevo.

In addition to authors from Bosnia and Herzegovina, who continuously and with the largest number of papers contribute to *Bosniaca*, a greater number of authors from the countries of the region (Serbia, Croatia, Slovenia, Montenegro) appear in *Bosniaca*, a slightly smaller number of authors from other countries, while there is a clear difference between the representation of women and men. Of the total number of single authors, while slightly less than one-third are men (68), there are 159 women, of whom the majority of single authors from Bosnia and Herzegovina write continuously in *Bosniaca*, so they also have some permanent columns in which they publish their papers.

Along with the stabilization of the identification of bibliographic data of papers published in the journal *Bosniaca*, and in the period from 1996 to 2023, the number of co-authored papers also increased, the international network of authors developed, and the international visibility of the Journal in the international scientific community also increases, in which from 2020, the papers will be published bilingually, in the languages of the former Yugoslavia and English, which additionally contributes to the promotion and visibility of the Journal, i.e. the papers published in it, and can also favorably influence the interest of foreign authors in publishing papers in *Bosniaca*.

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