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### **Abstract**

The situation of rural NEETs aged 15-24 remains understudied. However, transitions from adolescence to emerging adulthood are very demanding for those in the countryside. Our paper discusses this gap by characterising the scholarship focusing on rural NEETs. We undertook a bibliometric review based on 325 entries on Web of Science (WoS) using the Bibliometrix analysis package. Our approach included descriptive bibliometric analysis, co-citation networks assessment, and thematic analysis. Our findings show that the investigation efforts depicting younger rural NEET are recent and marginal in the larger context of international NEETs scholarship. The field is dominated by economy- and sociology-led networks. Concerns regarding health and employment issues are central in international publishing trends, showing a dominant youth-at-risk approach to this group. Still, themes associated with adolescent NEETs and relevant programmes' assessment are gaining traction. Our findings show a need for funding research initiatives to reduce the invisibility of young rural NEETs.

**Keywords:** Emerging adulthood/Adult transition; Employment/Unemployment; Rural context.

### **Introduction**

Popular and scientific literature have often portrayed young people who are Not in Employment, nor in Education or Training (NEETs) as if falling between the cracks of the educational and labour systems. They are characterised by standardised biographies and thus are made to all look alike (Furlong, 2006). However, distinct sets of factors justify a closer look at the diversity found amongst NEETs, beginning with socio-developmental factors.

Different age ranges are applied to NEETs across the globe. In Europe, for instance, the NEETs label encompasses young people aged 15-34 (Eurostat, 2020). This wide age range acknowledges the fragmentation of school-to-work paths, leading to multiple transitional trajectories across entire generations of young people worldwide (Arnett et al., 2011). Transitions have indeed become longer and more erratic, especially amongst NEETs, with many combinations between education and professional decisions being feasible, ahead of an independent life (Walther, 2006). However, there is a risk of using the NEET label without considering the distinct developmental challenges of adolescence and emerging adulthood. The later years of adolescence are marked by biological maturation, the development and use of abstract thinking, the renegotiation of the relationship with parents/caregivers or an overall experience of different social roles (Zarrett & Eccles, 2006). These developmental lines are reshaped during emerging adulthood as relationships evolve from dependence to reciprocity, but also start to be characterised by a deeper experience of, and commitment to, social roles. These changes are also labelled as “re-centring” and are expected to be accomplished in a period marked by the attainment of wisdom-related knowledge and judgement, higher sensitivity to emotional stimuli and/or greater risk-taking compared to older adults (Arnett et al., 2011).

NEETs diversity will not be entirely captured if developmental paths are not contextualised according to significant differences across countries in terms of the institutional support provided to young people in order to ease school-to-work transitions (Walther, 2006). Institutional support at this level is variable: from universalistic transition regimes (typical of Scandinavian countries that ensure a strong public investment in secondary and tertiary education), as well as on the-ground, comprehensive employment services; to sub-protective transition regimes that characterise Southern European countries, plagued by unequal access to tertiary education and which are dominated by low quality, informal support for job seekers (Almeida & Simões, 2020; Bello & Cuzzocrea, 2018); or, finally, to very loose formal support structures in the Global South countries, especially in rural areas (Wilkinson et al., 2017).

The most prominent criticism in relation to NEETs homogenisation have addressed developmental and institutional support intricacies of transitional paths (e.g., Furlong, 2006; Mascherini, 2019). Still, these claims have remained insensitive to the urban/rural divide affecting the odds of becoming NEET at earlier ages. This trend is well documented in Europe, with the available figures showing territorial inequalities across the continent. In 2019, 10.10% of youths in EU28 aged 15-24 were NEETs. Their general distribution was balanced across EU rural areas (10.70%) suburbs (10.40%) and cities (9.40%). However, NEETs' rates within this age bracket in rural areas range from 3.20% in The Netherlands to 18.70% in Serbia, 19.00% in Italy and 23.90% in Bulgaria (Eurostat, 2020).

Is the international scholarship reacting to the greater probability of becoming NEET in rural areas? Moreover, how are younger, rural NEETs being portrayed in the literature? These two key questions justify our work, leading to three main goals.

Firstly, we intend to characterise the knowledge about rural NEETs aged 15-24 in the context of the international scientific literature. Secondly, we want to highlight how reports on younger, rural NEETs fit within the main thematic trends found in the literature. Thirdly, we discuss the research problems stemming from the marginal investigation efforts depicting younger rural NEETs.

We believe our goals are important in many ways. Despite the figures, younger rural NEETs remain an invisible segment of a youth group in research agendas. This is particularly worrisome in the aftermath of COVID-19 considering that greater proportions of rural NEETs will occur in European countries (ILO, 2020), especially in those where institutional support to school-to-work transition is more ineffective (Bello & Cruzzocrea, 2018). These concerns are further justified by relentless evidence showing a deep contradiction between public services deliverance and rural NEETs needs. Whilst vulnerable rural youths are confronted with less and lower quality educational alternatives, are more often threatened by higher unemployment and precariousness, report lower incomes and are harder to outreach and engage with, mainstream policies such as Youth Guarantee are failing to adjust to local and regional needs (Simões & Brito do Rio, 2020). Beyond this, given rural NEETs vulnerabilities, they are also more exposed to new risks, including extreme-right movements that actively seek to draw upon and manipulate these youths' despair (Moore, 2018). These challenges clash with the latest political proclamations. For instance, the European Union Youth Strategy (European Commission, 2018a), have put vulnerable rural young generations' futures in the spotlight. The Sustainable Development Goals have also stressed the need to reduce NEETs across continents (United Nations, 2020). Now seems to be the time for scientific efforts to duly inform these measures by providing the kind of knowledge that upholds meaningful policies

which are also able to match local/regional opportunities with rural NEETs skills and needs.

### **Conflicting notions? Rurality, youth and NEETs**

Although NEETs are attracting more attention from politicians and society, it seems that scholars are not inclined to better understand the situation of younger rural NEETs. This gap is explained, in part, by tacit conflicts between the notions of rurality, youth and NEETs.

It would be easy to say that rural areas are those located outside urban clusters. However, in practice, a distinction between urban and rural has been based on different criteria such as the size of the population, the importance of the primary sector in the employment structure, or the official status of the place (Zilite, 2020). This is a cross-continental debate. In Europe, for instance, in 2010 the European Commission agreed on a new typology of *predominantly rural*, *intermediate* and *predominantly urban* regions. The method builds upon a simple approach to create clusters of urban grid cells with a minimum population density of 300 inhabitants per square km and a minimum population of 5000. All the cells outside these urban clusters are considered as rural. However, the distinction between urban and rural-based solely on the size of the population does not always offer a satisfactory basis for classifying a territory. Other factors must be accounted for when describing a rural region, including the diversity of the socio-economical resources (i.e., human, material, non-material), local populations' sense of belonging and self-identification of inhabitants with a rural area (Zilite, 2020).

It is also important to note that youth definitions vary across countries. For statistical purposes, the United Nations defines youth as persons aged 15 to 24. The

Secretary-General first referred to the current definition of youth in 1981 in his report to the General Assembly concerning International Youth Year. However, the Secretary-General also recognised that apart from the statistical definition, the meaning of the term “youth” varies in different societies around the world. When the General Assembly, via its resolution in 1995, adopted the World Programme of Action for Youth to the year 2020 and beyond, it reiterated that the United Nations defined youth as the age cohort of 15-24. The General Assembly in 2001 and 2008 and the Commission for Social Development in 2017 also adopted the same age-group for the category of “youth” (UNDESA, 2013). The definition of youth as those fitting the 15-24 age cohort usefully serves statistical purposes for assessing the needs of young people and thus providing guidelines for youth development. However, this criteria fails to capture the above mentioned developmental differences between late adolescents and emerging adults, as well as the fragmentation of school-to-work paths and the social dynamics behind that diversification (Arnett et al., 2011; Bynner, 2005).

The NEETs indicator is a good example of a new approach to capturing different experiences of young people. The label emerged in the mid-nineties in the UK in order to describe the situation of young people aged 16-18 years old who were not enrolled in education and who were also not eligible for unemployment benefits (Erdogan, Flynn, Petrescu, 2020). At the European Union level, the NEETs age range was first set at 15-24 by the European Commission's Employment Committee as part of the Europe 2020 strategy indicators. This was in order to allow cross-country comparisons amongst Member States. However, the NEETs indicator is now reported for those aged 15-34, meaning that consensus is far from a globally accepted standard on this matter (Eurostat, 2020). Additionally, the focus on NEETs

(including at the policy monitoring and making levels) has mainly been led by a youth at risk approach. This is understandable, when taking into account the fact that the odds of becoming NEET are challenging conditions. These can include: dropping-out from education at an early stage; being an immigrant; having parental low human capital; a difficult financial situation; chronic somatic diseases; addiction; and, depression-related mental problems (Tomczyk et al., 2018).

The notions of rurality, youth and NEETs mingle in an intricate manner. Public discourse is dominated by dramatic representations of rural areas, describing them as shrinking or deprived territories (Bæck, 2016), marked by uselessness and chronic structural injustice (Pedersen, 2018). These images form a notion of “rural horror” that clashes with the idea of viable futures in these areas. Consequently, there are current visions that younger generations in the countryside are decreasing, or that young people are not supposed to flourish in rural areas. These ideas contain imprecisions and, to some extent, are biased, even in ageing Europe. In fact, while youth populations aged 15-24 living in EU28 rural regions have decreased between 2009 and 2019, a quarter of the population in this age bracket (24.50%) lives in the countryside (Eurostat, 2020). Moreover, in some Northern (e.g. Denmark), Central (e.g. Germany) and Southern (e.g. Portugal) European countries, the absolute figures of youth population are actually increasing (Eurostat, 2020; Simões et al. 2020). These facts are insufficient to balance metro-centric representations of young people’s school-to-work transitions and which limit their hopes, dreams and futures to cities and an urban way-of-life (Farrugia, 2016). Thus, in brief, the combination of rurality with youth and NEETs conceptualisations is characterised by a mixture of misperceptions and indifference. On the one hand, rurality and successful youth biographies are rendered as incompatible; consequently public and private



investment in infrastructure and human capital in the countryside suffers (Bæck, 2016). On the other hand, we are left with a hopeless correlation between rurality and high shares of NEETs in countries with less efficient institutional support mechanism, and which sadly remains overlooked.

### **NEETs heterogeneity: The case of young rural NEETs**

A beneficial contribution to improve the combination of rurality, youth and NEETs is to expand on-going research efforts to capture NEETs heterogeneity. Some research has been undertaken on that matter, with Mascherini's (2019) NEETs typology being amongst them. This typology establishes a clear contrast between re-entrants (short-term NEETs, who are about to re-enter education or the labour market), unemployed, inactive and voluntary NEETs. It also sets out further distinctions between short- and long-terms unemployed NEETs, as well as between different reasons for becoming an inactive NEET (including family care duties, mostly affecting women, physical or mental impairments, or general discouragement).

Whilst Mascherini's (2019) contribution illustrates how scholarship has led to a more fine-grained NEETs profiling, "place of origin" has been kept outside the profiling criteria. Consequently, a whole set of specific challenges that come to affect younger rural NEETs is being disregarded. To begin with, rural areas worldwide struggle with a strong flux of youth out-migration flows which overlaps with the transition from adolescence to adulthood and from secondary education into tertiary education. As a result, there is an increase of the share of young people under-24 remaining in rural areas, coming from poorer households, and displaying lower educational and professional capital. Thus, from an early age, a larger proportion of rural emerging adults are more exposed to low-qualified jobs, precarious

employment and longer spells of unemployment. A complete vicious circle is closed around them as they will not have enough resources to move away (Carling & Schewel, 2018). Many of them come to cope with these barriers through cognitive dissonance, by convincing themselves that their native area is better than others (Anton & Lawrence, 2014) or by fatalistically accepting their situation (Almeida & Simões, 2020).

Women are overrepresented in rural youth out-migration fluxes, mostly due to greater female educational aspirations, and specifically in Western countries, leading to a negative masculinisation phenomenon (Leibert 2016). This gender-gap amongst rural young generations is further widened by an employment structure offering male-dominated jobs in agriculture or small industries (Leibert 2016), or narrow traditional roles that limit women's professional fulfilment outside the household (Farrugia, 2016). Therefore, in both developed and developing countries young women staying in rural areas tend to be those who are less educated, more likely to be dedicated to family care duties and, consequently, with a greater risk of remaining for larger periods as NEETs (Maunaye, 2014; Sadler et al., 2015).

Younger rural NEETs' high rates also reflect specific school-to-work transition challenges in the countryside. School systems in rural areas on different continents struggle with greater infrastructural deficits, paired with lower capacities to attract high quality teachers (Reagan et al., 2019). Alongside this, available curricula (particularly in the vocational training field) is often unmatched with local resources and promising economic opportunities. This creates a misalignment with potential opportunities for NEETs in those areas (Simões & Brito do Rio, 2020). Starting in late adolescence, an insufficient educational offer complicates NEETs school-to-work transitions in rural areas. These structural shortcomings are further amplified by

employment services that struggle to reach out to marginalised young people in these regions (European Commission, 2018b). Mismatched policy-package aspirations vis-à-vis regional specific requirements and local services' shortages of resources also impact negatively (Shore & Tosun, 2019). Thus, whilst the overall NEET figures have declined after reaching their peak in 2013, especially in Europe, and policy instruments such as Youth Guarantee and international initiatives such as the Sustainable Development Goals have been put in place, it remains unclear how much these initiatives have been effective in reducing younger rural NEETs rates as compared with unintended trends such as youth out-migration.

The economic structure of rural areas also poses specific challenges to adolescents and emerging adults. The rural economy is usually described as a declining one, overwhelmed by the dismantling of industrial capacity and the consequent loss of trained and/or skilled human capital. This scenario leaves behind entire generations without the opportunity to learn and to be mentored by older professionals (Zipin et al., 2015). Moreover, agriculture remains a pivotal economic sector in the countryside, but not without problems. The sector is mostly an ageing one, struggling to attract and retain those outside the sector, including NEETs (Simões, 2018). There are exceptions to this negative scenario, with some regions showing a vigorous services sector able to offer a considerable number of jobs, including for young women (Corbett, 2007). Others are managing to modernise agricultural activities through eco-agriculture and thereby increase their value (Brito do Rio & Simões, 2020). However, the path to a job in rural areas remains narrower and that must be accounted for when interpreting NEETs rates in the transition to adulthood.

## Present study

With this work we intend to: (a) describe the knowledge about rural NEETs aged 15-24 in the context of the international scientific literature; (b) highlight how reports on younger, rural NEETs fit into the main thematic trends found in the literature; and, (c) discuss the research problems emerging from the minor investigation efforts representing younger rural NEETs. Our central hypothesis is that papers focusing young, rural NEETs are scarce and spread out across different themes, thus displaying an unstructured field of inquiry.

We start by presenting in detail the methodological approach to our research goals. This includes a step-by-step description of the bibliometric analysis which we implemented. Afterwards we present the results, duly supported by data visualisation techniques. Finally, we discuss in detail the results, based on our goals, the insights arising from our analyses, the implications for NEETs scholarship and the limitations of our work.

## Method

To address our research goal, we conducted a bibliometric analysis following the five steps for science mapping proposed by Zupic and Cater (2015). Firstly, we established the *study design*, aiming at: (a) establishing the knowledge base of the NEET research field as well as the main contributors to this research realm; (b) identifying the social network structure of the scientific community dedicated to research on NEETs; and, (c) identifying its most relevant research themes.

Subsequently, we conducted a *data collection* using the Web of Science, Social Science Citation Index as our source based on some inclusion criteria. The selected documents should: (a) focus on rural NEETs; (b) be peer-reviewed articles; (c) have

been published anytime until 2021; and, (d) be written in English. Data collection included two search steps to cope with our search criteria. Firstly, we looked for articles including the terms “NEET” OR “Not in Education, Employment, or Training” OR “Status 0” OR “disconnected youth”. We considered these terms to make sure that we included all labels that could apply to NEETs, including older ones (“Status 0”) and those that overlap with this group (namely “disconnected youth”). Afterwards, we added the term “Rural” to the selected works in the first step in order to identify those that focused on rural NEETs. These search steps were applied to abstracts and keywords. Data was later converted into a database in the Bibtex format.

Next, we conducted a *data analysis*, involving three steps. Firstly, we ran a descriptive bibliometric analysis to establish the most important publication trends. Then we moved to the creation of a co-citation network matrix to better capture the collaborative networks amongst authors. Finally, we conducted and mapped a cluster thematic analysis in order to uncover the most relevant research themes concerning NEETs. In the field of bibliometric analysis, thematic maps are based on the clusters of keywords and these clusters are accepted as themes. Themes are positioned on the map according to their density and their centrality (Cobo et. al., 2011). *Density* is the strength of internal ties amongst all keywords describing the research theme. *Centrality* corresponds to a theme’s relevance in the co-occurrence keywords network.

Following this, we prepared *data visualisation* (charts and maps) to duly present our results before moving to the *interpretation* of the results for reporting. During all data processing stages, we systematically identified the papers focusing on rural NEETs aged 15-24.

We conducted our analysis using the Bibliometrix analysis package (Aria & Cuccurullo, 2017). This is an open-source software developed in *R* language designed to conduct bibliometric analyses and a wide variety of statistical and graphical analysis that are customised by researchers according to their research goals.

Figure 1 depicts our analysis workflow.

(Figure 1)

## Results

### Descriptive bibliometric analysis

Our descriptive analysis allowed us to characterise publication, citations and literature geographic distribution trends.

Figure 2 depicts the publication trends from 2002 to 2021. Our first research step led to 325 documents, 264 of which were published in academic journals, involving 666 scholars. No duplicates were identified. Our second search, focusing on rural NEETs, delivered 14 documents written by 41 authors.

(Figure 2)

Our results show that after a slow start between 2002 and 2006 ( $fi = 5$ ), the number of papers on NEETs showed a slow increase from 2007 until 2012 ( $fi = 11$ ). After 2013, the number of articles concerning NEETs showed a rapid increase, reaching a peak in 2020 ( $fi = 49$ ). Meanwhile, rural NEETs were less interesting for the academic world ( $fi = 14$ ) with all the identified documents being published from 2012 onwards. Importantly, from these 14 articles, 9 were focused on NEETs aged 15-24 or somewhere in between (e.g., 18-24 years old).

We also examined the most influential publications. We found that the most influential outlet for academic articles about NEETs is the *Journal of Youth Studies* ( $fi$

= 37; H-Index = 11). Others included: Research in Post Compulsory Education ( $fi = 7$ ; H-Index = 2); Social Science Japan Journal ( $fi = 7$ ; H-Index = 2); the Journal of Education and Work ( $fi = 6$ ; H-Index = 2); the Social Indicators Research ( $fi = 6$ ; H-Index = 3); Early Intervention in Psychiatry ( $fi = 5$ ; H-Index = 2); Educational Research ( $fi = 5$ ; H-Index = 5); and, the Annals of the American Academy of Political and Social Science ( $fi = 5$ ; H-Index = 1). These are the outlets amongst which there have been published 5 or more articles from 2002 onwards. These figures show that the Journal of Youth Studies is the dominant source regarding the topic. The overall impact (measured in terms of H-Index) of these top journals ranges from 19 (the Social Science Japan Journal) to 412 (the British Medical Journal). Our calculations also show that there is no correlation between the overall impact of the journal and the impact of articles published in that journal ( $r = -.03$ ).

The number of articles covering rural NEETs is low, so a similar analysis cannot be made as with the one undertaken for all the documents. Still, the Journal of Youth Studies published two articles about rural NEETs (Miller et al., 2015; Simões et al., 2017). Both studies included NEETs aged 15-24 years old, but did not target this age group exclusively.

Figure 3 shows the articles in our dataset that were cited 30 times or more. Four articles are cited more than 100 times. The most cited article was written by Bynner and Parsons (2002) ( $fi = 212$  citations), followed by Furlong's (2006) ( $fi = 143$  citations), Roberts (2011) ( $fi = 124$  citations) and Macdonald's (2011) ( $fi = 115$  citations). None of these works specifically focused on younger rural NEETs<sup>1</sup>.

(Figure 3)

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<sup>1</sup> The authors have organised an Appendix to summarise the research reports on rural NEETs. It can be provided by the first author upon request.

Our descriptive bibliometric analysis also allowed us to examine the geographic distribution of NEETs scholarship across the globe. Figure 4 summarises the number of authors by country.

(Figure 4)

According to our findings, 666 authors are distributed across 49 different countries. The most relevant contributing countries, in terms of authorship, are: the United Kingdom ( $fi = 205$ ); the United States ( $fi = 145$ ); Australia ( $fi = 74$ ); Italy ( $fi = 53$ ); Norway ( $fi = 35$ ); and, Denmark ( $fi = 29$ ). Altogether, these countries contribute to 81% of all the authorship in the NEETs field. China ( $fi = 24$ ) and Mexico ( $fi = 22$ ) are the most relevant countries contributing to authorship in the Global South. The rural NEETs domain is notably different. We identified 37 authors, with the top five contributing countries giving the following figures: Australia ( $fi = 10$ ); UK ( $fi = 8$ ); Portugal ( $fi = 6$ ); United States ( $fi = 5$ ); and, Russia ( $fi = 3$ ). However, it is important to note that whilst the Australian and the North American authors correspond to only one paper each, Portuguese authors are involved in four articles.

## **Advanced descriptive analyses**

### **Co-citation matrix**

Figure 5 depicts a co-citation matrix. Co-citation matrices display clusters departing from a nodal point which corresponds to the most relevant author within that cluster. Clusters are established based on the number of co-cited authors.



Our co-citation matrix shows a clear focus on economic and sociological approaches to NEETs. The green cluster, located at the bottom of the map, departs from two nodal points, namely the Eurofound or the OECD. These institutions have produced key econometric analyses about NEETs for the past decades under consideration. This cluster aggregates authors that are associated with these institutions (e.g., Mascherini) as well as other economists (e.g., Pastore). Two other networks are mostly sociologically-driven. The red cluster is aggregated around a nodal point departing from Furlong. This cluster includes papers dedicated to defining and describing NEETs, as well as to criticising the homogenisation of the group. The blue cluster departs from Bynner's work and is mostly dedicated to framework NEETs within the context of the school-to-work transition. This cluster includes contributions from the social and developmental psychology realm, by authors such as Schoon, Bandura or Arnett. Finally, the yellow cluster is driven by psychological research, including topics such as marginalisation or the motivational factors associated with the NEET status. However, in this cluster, no nodal point is as clear as in the case of other clusters. As expected, the network map shows that these clusters are not independent, with multiple connections between them being observed.

(Figure 5)

### **Cluster thematic analysis**

In Figure 6, our thematic map shows four different types of themes which are automatically labelled by Bibliometrix. *Basic Themes* are located at the lower right quadrant. In co-occurrence keywords networks, these themes show loose internal

ties amongst keywords (low density), but have a high degree of centrality (importance) compared to other keywords combinations. Two clusters can be found in this quadrant. The major one is *Employment*. This cluster indicates that the instrumental aspects associated with NEETs are central in scholarship, aggregating keywords such as: “school”, “employment”, “unemployment”; and, “work”. *Mental Health* is also located in this quadrant. This cluster is smaller than the Employment one, showing a slightly greater connection between keywords such as: “health”; “depression”; “disorders”; “adolescents”; “prevalence”; and, “consequences”.

*Motor Themes*, located in the upper-right quadrant, have both higher density and centrality so they are both important and developed in the field. *Adolescents* is the highest ranked theme here, showing a positive evolving trend around keywords networks including terms such as “adulthood”, “achievement” and “attainment”. *Health* - aggregating keywords such as “prevalence”, “adolescence” and “disorders” - is a secondary theme cluster in this quadrant.

*Niche Themes* is located in the upper-left quadrant. These are themes that are not central in research, but which show a high development around strongly connected keywords. The map presents two niche themes. *Outcomes* is a theme organised around terms such as “inequalities”, “care” and “experiences”. Besides this, *Engagement* is a theme associated with keywords such as “interventions”, “life” and “school performance”.

Finally, *Emerging/Declining Themes* are located in the lower-left quadrant having a lower level of centrality and of density. The first cluster that we find in this quadrant is *Risk*, aggregating concurrent keywords such as: “gender”; “mortality”; “patterns”; and, “barriers”. The second is labelled *Consequences*, including co-

occurring keywords networks with terms such as: “self”; “culture”; “attitudes”; and, “depression”.

Bibliometrix does not permit locating of specific papers in clusters, thus we analysed titles and keywords of papers focusing on rural NEETs in order to understand the main thematic trends. We found that Employment issues were targeted by six papers, followed by Risk ( $fi = 4$ ), Education ( $fi = 2$ ) and Health ( $fi = 2$ ).

(Figure 6)

### **Discussion**

Our paper led to three main findings. First, the descriptive bibliometric analysis shows that the literature on rural NEETs is very marginal. The absolute number of publications is low, the main authors do not report specifically on the situation of rural NEETs, and there is a clear gap in research efforts dedicated to younger, rural NEETs. We also found that international research on NEETs is biased towards Anglo-Saxon and Western countries. However, works published on rural NEETs are beginning to emerge in countries that contradict this trend (e.g., Portugal).

Second, our co-citation analysis depicts that economical and sociological approaches to NEETs’ challenges are dominant and more structured. Economy-led research efforts are being pulled mainly by international institutions, with a strong focus upon informing policy-making, especially at the European level. Beyond this, sociological research networks are roughly divided into two groups. The first focuses on *the definition* of NEETs, including a critique to the depiction of this group as a homogeneous one (e.g. Furlong, 2006). The second focuses on several aspects of *the transitional paths* from school-to-work that affect this group (e.g., Bynner & Parsons, 2002). A network of psychological research, aiming at understanding

motivational or discrimination issues is also emerging but as yet remains rather loose.

Third, our thematic analysis indicates that employment and health continue to be central themes in international scientific production concerning NEETs. However, these basic themes are paralleled by motor themes which are shifting research agendas towards understanding NEETs education and health trajectories earlier in their lives. This somewhat prospective examination of NEETs trajectories is coupled with a niche literature dedicated to interventions that address NEET requirements. These niches combine the assessment of outcomes stemming from school- and community-based interventions designed to mitigate the negative effects of becoming/being NEET. Beyond this, both emerging and declining themes seem unstructured and may be covering new trends that will become more relevant in the years to come (e.g., NEETs gender inequalities). More importantly, when analysing titles and keywords of reports focusing on rural NEETs, we found that employment is the main research concern, further contributing to the centrality of this theme in the literature. Moreover, our results do not indicate that rural NEETs, especially younger ones, are in the spotlight of upcoming trends.

We find our results both worrisome and provocative. We believe our findings are worrisome considering that rural NEETs rates are higher in Southern and Eastern European countries. Therein, one out of four or five rural youths aged 15-24 are NEETs (Eurostat, 2020). In the global South, rural NEETs rates are even higher. To different degrees, on-the-ground institutional support is unstructured or inefficient in countries towards the South and the East of the Globe (Walther, 2006; Wilkinson et al., 2017), leaving rural NEETs more exposed to a complex combination of several structural risks. With some exceptions (Corbett, 2007), rural areas are more often

economically deprived, offering mostly low-skilled, precarious jobs to youths showing less educational resources and professional experience (Almeida & Simões, 2020). NEETs shares increase in the countryside because remaining is the only viable option given that these youths cannot afford to leave (Carling & Schewel, 2018). Thus, they are particularly vulnerable to keep coming in and out of the NEET status, especially in the case of women (Sadler et al., 2015).

In spite of such evidence, cutting-edge international scholarship is not systemically emerging in the areas of the globe more affected by this challenge. It is easy to conclude that these publication trends may simply reflect that social scientists have overlooked this gap. But things might be a bit more complicated. International publishing trends may be showing, on one hand, an overall publishing bias towards metro-centric research topics: this is a predictable distortion. In spite of figures showing the opposite in some countries, including in Europe (Eurostat, 2020), rural areas are repeatedly presented as demographically shrinking regions (Bæck, 2016), where finding youths is virtually impossible. Conversely, youths and cities representations match, because cities are places with a future, where hopes and dreams can be fulfilled (Farrugia, 2016). The fact is that, for instance, a quarter of the youth population still lives in European rural areas, with big shares of those in transition to adulthood and in greater need, something that researchers simply cannot continue to ignore. Moreover, an Anglo-Saxon research trend in international publishing regarding NEETs might also reflect the scarcity of research funds in Southern/Eastern Europe and the Global South, thereby preventing sound investigation which meets international publishing standards. This trend might be further expanded if editors disregard scholarship from these countries as well as

their audiences. Taken together, these barriers will only contribute to keeping young rural NEETs visible in figures, whilst their biographies remain hidden.

Our results are provocative in two distinct ways. Firstly, co-citation networks show the clear relevance of economy-driven research, led by major international institutions (e.g. Eurofound). Our thematic analysis further substantiates this conclusion, considering the centrality of employment-related issues, such as school-to-work transitional paths, or job searches and finding dynamics. Institutional reports have a most-needed instrumental value since they can guide policymaking. Until now, it is arguable that political proclamations have made the best use of this information, to say the least. For instance, in Europe and in countries hard-hit by high NEETs rates (such as Italy), broadband policy packages have been directed to the most vulnerable youths, but the results seem inconsistent (Bello & Cuzzocrea, 2018). In part, these flaws stem from an inadequate translation of European policy packages to national and regional decision-making (Shore & Tosun, 2019). Now that new policy instruments such as the EU Youth Strategy (European Commission, 2018a) have put vulnerable rural young generations' futures in the spotlight, it will be interesting to see how much this bulk of literature will be helpful to inform the segmentation of these instruments at the national and the regional levels in order to address younger rural NEETs' needs.

Secondly, our results also illustrate how the NEETs research field is on the verge of important developments. Whilst the sociological focus on basic concepts, typologies and transitional paths will certainly remain pivotal, our co-citation and thematic analyses demonstrate that a focus on adolescent NEETs (or in interventions effectiveness) is increasing. These developments will certainly lead to a greater contribution from specific fields (such as psychology) in order to address

issues like mental health. More importantly, these new trends may create the necessary push for a much-required multidisciplinary approach to NEETs' complex needs, based on meta-theoretical approaches, something which remains absent in the literature. Furthermore, these trends might pave the way for research efforts that are more clearly centred on younger rural NEETs, from both preventive and remedial perspectives. Niche themes such as engagement or emerging themes (as those being associated with risks due to gender disparities) might also be relevant to inform rural NEETs typologies.

In conclusion, and as we expected, our results show that it is vital to increase knowledge about younger rural NEETs both in terms of quantity and quality. This knowledge is instrumental for tackling the tremendous loss of human potential that youths in this situation represent, but also to boost rural communities in many parts of the globe and thus prevent new risks faced by rural NEETs (e.g., extremist nationalism). Several measures should be taken in this regard. For instance: channelling (inter)national funding for research activities on rural NEETs; integrating the topic in international research networks and projects which promote cooperation between less and more deprived countries; or, creating specific outlets for disseminating reports about rural NEETs (e.g., the publication of special issues in journals examining rurality and youth).

Our findings must, however, be interpreted with caution. Our selection criteria did not cover other data sources (e.g., Google Scholar) nor documents in other languages. Additionally, some general terms such as "at-risk youth" may marginally cover NEETs. Taken together, these filters may have added more information to our database. However, we opted for more constricted criteria in order to offer a snapshot of the most impactful international publication trends regarding NEETs and,

therefore, to better contextualise how younger, rural NEETs are being depicted in this type of research.



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Figure 1. Bibliometric analysis workflow (adapted from Aria & Cucurullo, 2017)

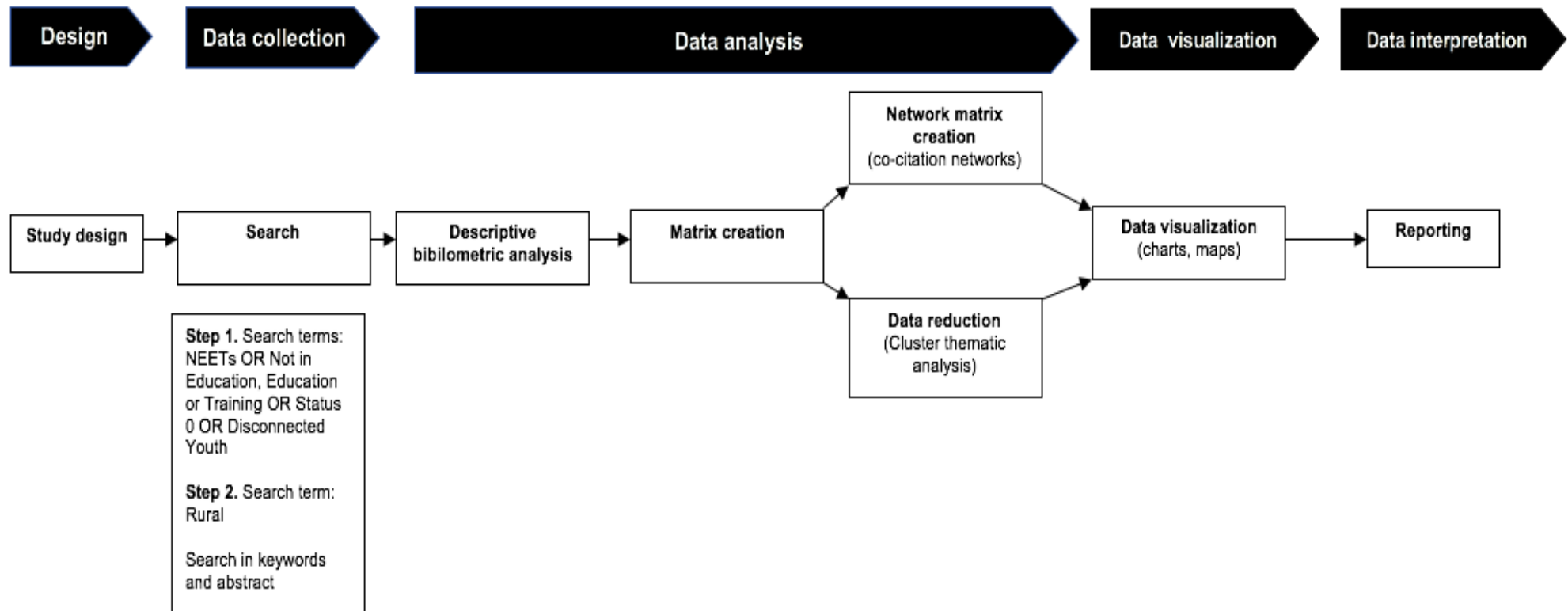


Figure 2. Number of Articles per Year

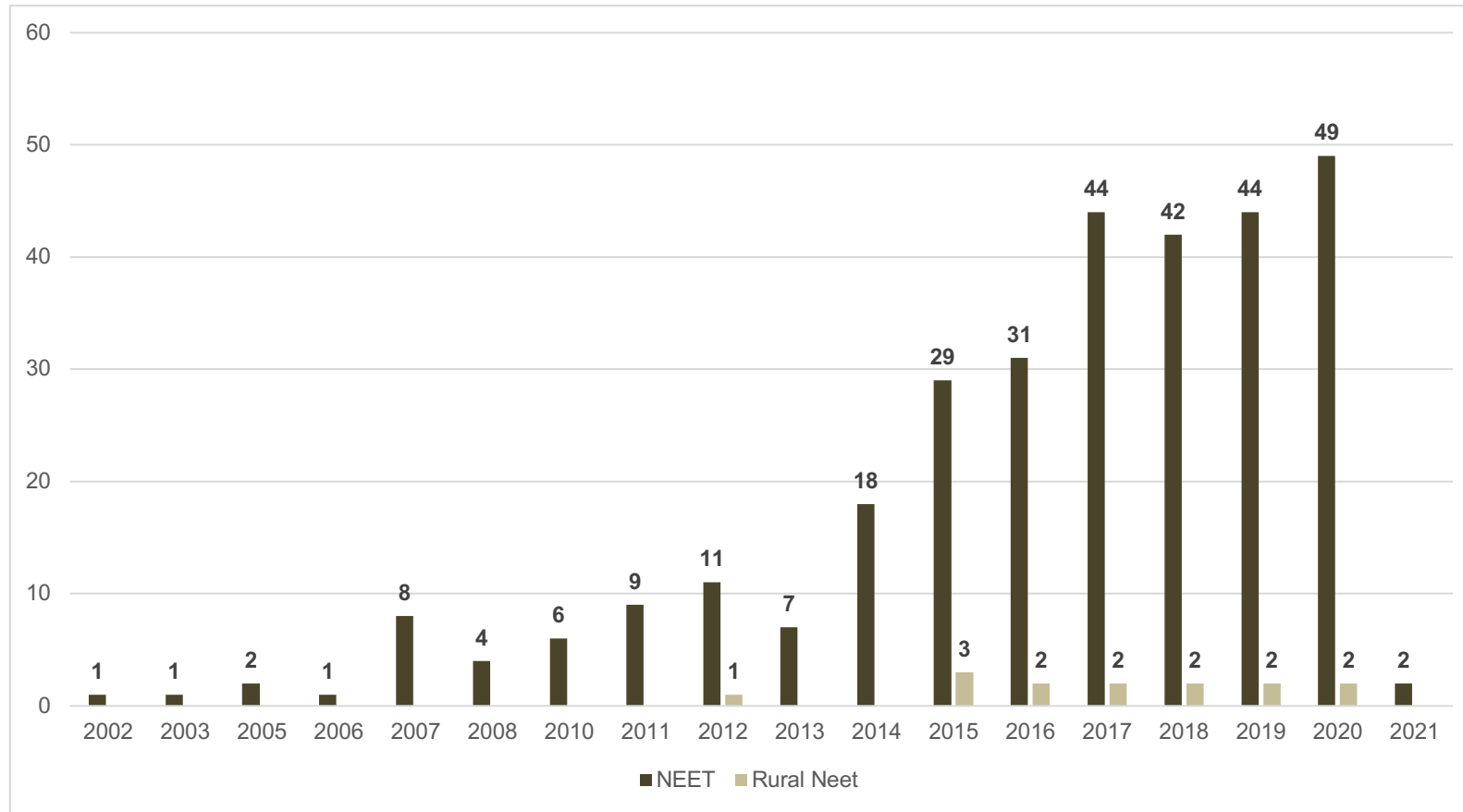




Figure 3. Most Cited Documents (NEETs, Top 30, First Author)

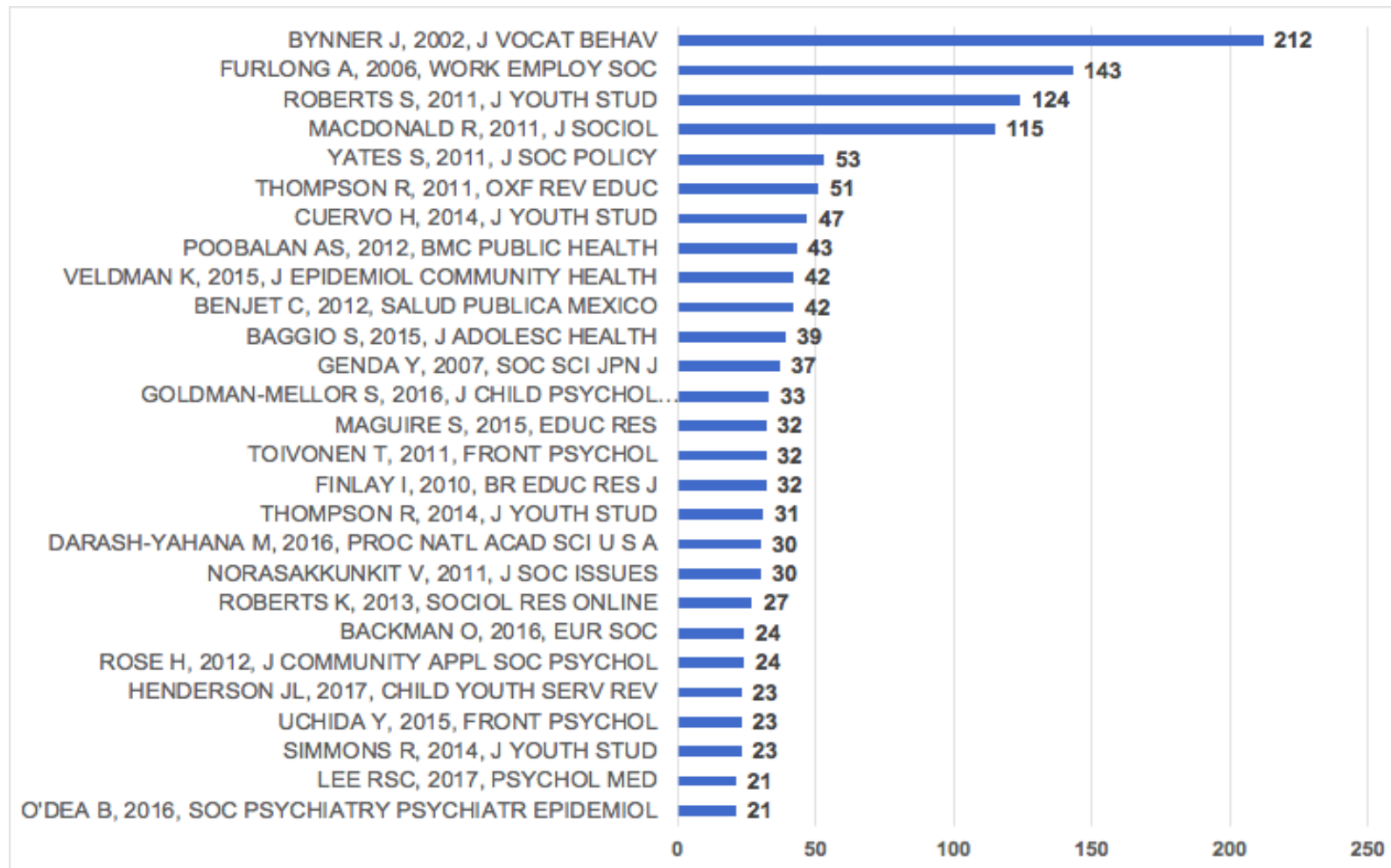


Figure 4. Distribution of authors by country

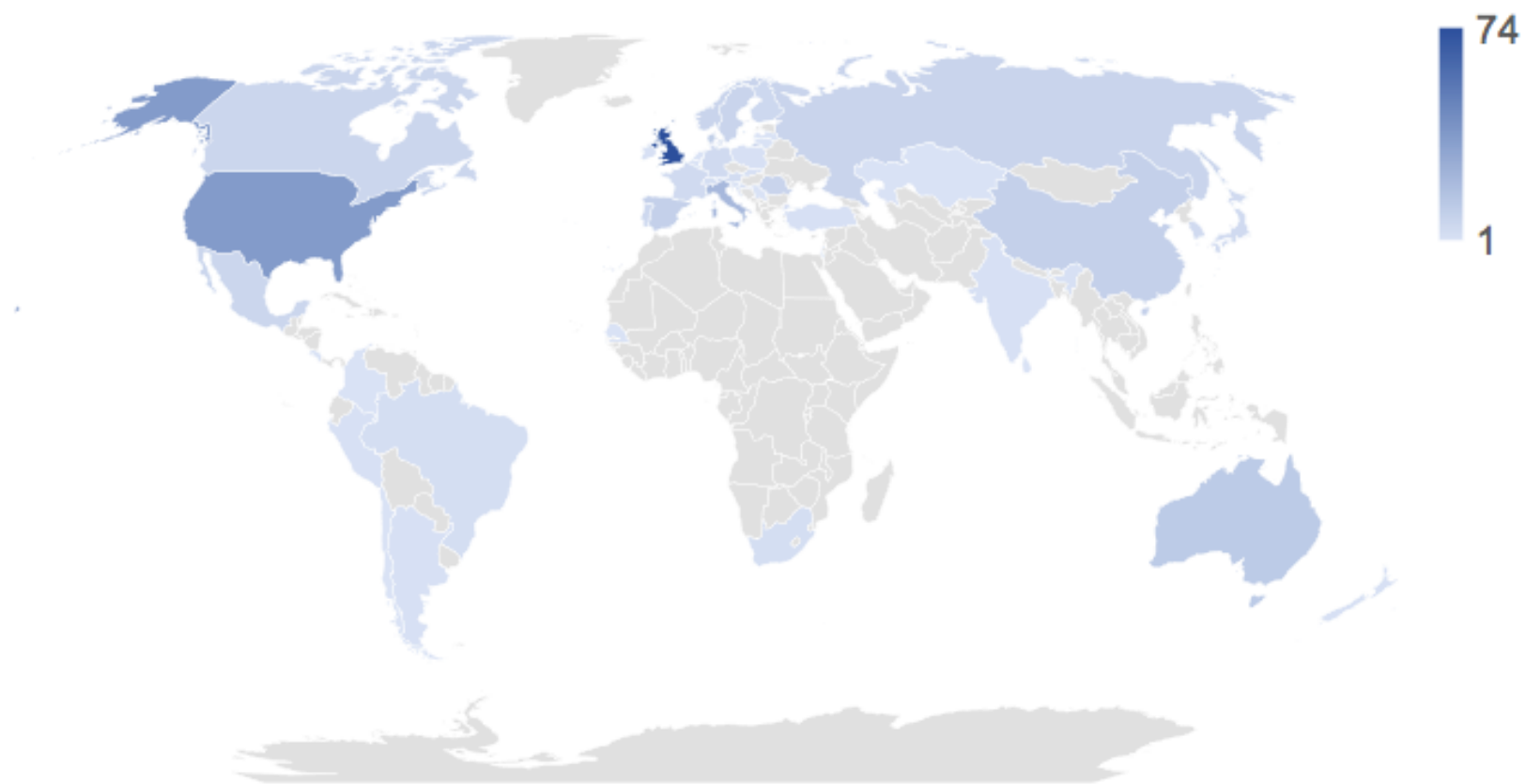


Figure 5. Co-citation Network Map - Authors

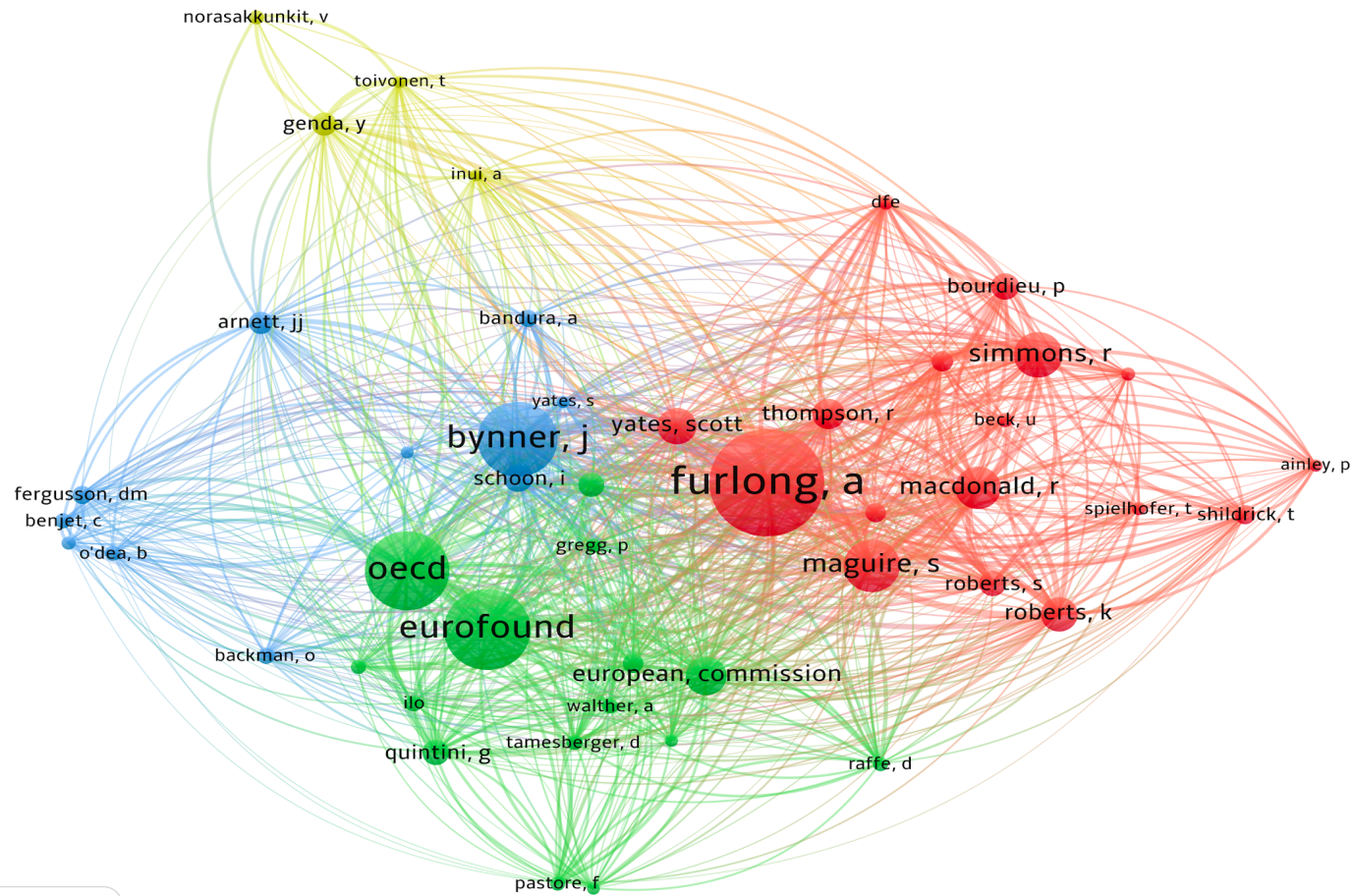


Figure 6. Thematic map of keywords of the articles (NEET)

