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Systematic Review

Daily Life Methods in Adolescence and Emerging Adulthood Studies in Croatia, Serbia, and Slovenia: A Scoping Review

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Abstract: Daily life methods are a novel approach that grasps dynamics when studying various research topics. Although several international systematic reviews and meta-analyses demonstrate their popularity in studies of adolescence, it remains unclear whether daily life methods are also used to study development in different cultures. Therefore, the main aim of this review is to examine the frequency of use of daily life methods in studies of adolescence and emerging adulthood published in Croatian, Serbian, and Slovenian journals. Based on two inclusion criteria, with one being that a study should implement an experience sampling method or an ecological momentary assessment, and the other being that participants should be younger than 30 years, a search of five regional databases yielded only six research papers. The included studies implemented an experience sampling method, following recommendations from the literature. Thus, daily life methods do not yet seem to be recognized in Croatia, Serbia, and Slovenia, and efforts should be made to promote them to both researchers and practitioners. These methods can not only help us understand the differences between people, as well as the changes within a person, but they can also be the basis for tailored interventions, such as changing eating and sleeping habits.

Keywords: scoping review; experience sampling method; ecological momentary assessment; adolescence; emerging adulthood

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1. Introduction

According to Overton and Miller's [1] (p. 21) definition, ontogenesis is the "development of the individual across the life span". In attempting to explain the causes of development, scholars have developed two theoretical perspectives that differ on the issue of nature and nurture. Namely, while the mechanistic paradigm holds that there is only one source, either nature or nurture, for qualitative developmental change, the organismic paradigm typically emphasizes the interaction between nature and nurture as the source of quantitative developmental change [2,3]. The third paradigm, contextualism, became increasingly popular in the 1970s. According to this view, social, cultural, and historical changes are related to individual development [3]. It is clear that, regardless of the theoretical perspective, it is crucial to measure change in the environment in which it occurs in order to understand development.

Human development has long been considered a universal, linear process. However, dynamic models are being increasingly used to explain how different developmental pathways can result in the same developmental outcomes. Researchers are becoming increasingly interested in how changes occur in ordinary environments in everyday life [4]. Furthermore, traditional developmental models focus on the stability of characteristics in a population based on self-reporting and an average result, not describing the occurrence of that characteristic in an individual well [5]. Yet, the intraindividual variability over a brief period is informative not only regarding the developmental processes of an individual, but also about the differences between individuals [6]. Since the main characteristic of adolescence and emerging adulthood is change, one of the crucial methodological questions when

studying them is how to measure change. Change is dynamic and demands a longitudinal study design because cross-sectional design puts variables in static form [7]. Therefore, daily life methods [4], or intensive longitudinal studies, have become increasingly popular over the last two decades, especially in adolescence and emerging adulthood research.

The focus on adolescence or emerging adulthood should not be surprising: both periods define the stability of the adult life-course, when modern circumstances and increasing individualization have contributed to highly heterogeneous and diverse developmental trajectories. Taking responsibility for oneself, becoming financially independent, and making full-scale decisions have been postponed until the early 30s [8,9]. Social determinants, such as educational and employment opportunities, social inclusion, income levels, violence, or any kind of structural conflict, contribute to heterogeneity in outcomes, well-being, and mental health problems. Most young people in their teens or mid-20s try different experiences, develop a sense of identity and habits of self-regulation, build relationships with important others, change social roles, and gradually move toward more stable career and love choices [10]. To promote mental health and achieve overall positive outcomes, researchers need to better understand developmental trajectories and describe patterns of psychological and behavioral change. Understanding what happens in the daily lives of adolescents and emerging adults is critical to building this big picture.

1.1. Daily Life Methods

In the published literature, daily life methods are mentioned using several names [4,11], like experience sampling method and ecological momentary assessment, considered synonyms, or ambulatory studies (more appropriate term when involving physiological measures) and diary studies (data collection once a day). This group of methods has three distinct characteristics: people are assessed in their natural settings, events and experiences are measured in real time or close to when they happen, and each participant is providing an intense sample of data, usually several times daily over multiple consecutive days. An intensive longitudinal design involves at least five repeated measurements, with change being expected to occur during this period [12]. As early as the end of the 18th-century, scholars, especially those interested in developmental psychology, realized that diary records are an excellent method to study everyday life [13]. In the 1990s and the 2000s, researchers began to implement an intensive longitudinal design when studying various research topics, including not only affect, but also personality, physical and mental health, risk behaviors, racism, and sexism, as well as interpersonal processes in dyads [12]. Intensive longitudinal sampling includes two sampling layers: targeting people we want to study and designing intervals to capture what the participants are doing, feeling, and thinking in their natural environment. When thinking about an individual's day, the strategy of sampling [4] may be based on filling out surveys in the case of a specific event (event-sampling, for example, exercise, argument with a parent or a partner, or risk behaviors) or when something is happening (time-based sampling, based on the passage of time). Time-based sampling includes reports of what is happening or what has happened since the last assessment at regular, predetermined intervals. This regularity allows for longitudinal and time-series modeling of the data and makes measurement less intrusive for participants, especially if there are only one or two measurements per day. In addition to event-based and time-based sampling, researchers can choose a signal-contingent design, in which fixed-interval and random-interval sampling can be used. Both the experience sampling method and the ecological momentary assessment use a signal-contingent design [4,12]. Recent meta-analyses showed that most ecological momentary studies, on average, last 7 to 12 days and have four to six assessments per day [14,15].

The implementation of ecological momentary studies is an ideal assessment for topics like drug use or social media usage [16–20]. Jensen and colleagues [16], for example, found that adolescents' technology use, i.e., the number of text messages sent and the number of hours spent online, did not predict later inattention, hyperactivity, conduct problems, anxiety, or depressive symptoms. These symptoms did not occur more frequently on

the days when adolescents reported a higher technology use. However, adolescents who used social media more often, went to sleep later, even if they did not have shorter sleep durations [16]. In another study, collecting intensive longitudinal data during the weekends showed that the risk of concurrent use of alcohol and cannabis was 99% lower when there was no underage drinking and 55% lower when there was more adult supervision. When adolescents used alcohol and cannabis together, there was a higher risk of violence, driving under the influence, and driving together with a drunk driver [17]. In addition, studies conducted with young people in late adolescence and emerging adulthood showed that exposure to drugs and average stress predicted a higher craving for cannabis [18]. While social media use is a more common behavior, it is difficult to accurately assess its frequency without using an ecological momentary assessment [19]. The Dutch study on social media use and friendship best shows that the ecological momentary assessment helps us to better understand the behavior. In particular, the study showed that adolescents who used WhatsApp and Instagram to communicate with their close friends were more likely to have closer friendships. However, at the within-person level, this association was negative and varied widely [20].

Daily life methods and intensive longitudinal designs may include diverse ways of collecting data, such as the following: palmtop computers [21,22], heart rate monitors, wrist accelerometers [23], actigraphy watches [24], and even interviews via phone calls [25,26]. However, technological advances have facilitated the implementation of an ecological momentary assessment [27]. More precisely, smartphone usage has become natural, especially for youth, and presents a fantastic opportunity for investigating development more thoroughly, enabling push messages and notifications leading to a survey with a short set of items. Smartphone-based assessments or experience sampling have mainly been implemented in research on mental health in mid- and late adolescence and emerging adulthood [28–30].

Mobile apps designed to conduct assessments do not only collect self-reports, but are also passive mobile-sensing apps, meaning that they collect data generated through usual phone usage. Specifically, they use indices of a person's behavior such as geolocation, accelerometer, screen-on time, app use, SMS frequency, and call frequency [31]. Today, many platforms enable smartphone-based ecological momentary assessment. Some of these are open-source platforms such as RADAR-base, which is specialized in health studies [32], and AWARE, which allows the development of custom-made applications [33]. The Ethica app (http://ethicadata.com, accessed on 1 September 2023) was developed in Canada and includes a collection of sensor-based data and momentary surveys, but also has a possibility to be extended to outcome measurement and virtual meetings. EARS (Effortless Assessment of Risk States), one of the platforms developed at the University of Oregon, captures some indices that other apps do not, such as charging time, in-call acoustic sample, facial expressions, and music choice. Facial expressions and acoustic vocal quality (including speech rate and vocal prosody) can even signalize depression and suicidality [31]. A new app called m-Path, developed by the University of Leuven [34], is currently becoming more influential in Europe. Targeting both researchers and psychotherapy practitioners and their clients, m-Path is combining assessments with real-time interventions, an online dashboard, and a feedback tool. Finally, movisensXS is an app that is known for its capability to implement an interactive ambulatory assessment, which is a method of asking location-specific questions [35].

1.2. Benefits of Daily Life Methods

There are numerous advantages to using an intensive longitudinal design rather than a cross-sectional design or a longitudinal design with less than five measurements. First, intensive longitudinal studies allow researchers to observe relationships between spontaneous, everyday thoughts, feelings, and behaviors in a natural context. Furthermore, they give researchers the possibility to observe change, as well as study behaviors or events that occur rarely. Multiple assessments over a brief period provide information

regarding intraindividual variability, but also reduce recall bias because the assessment occurs instantly or not long after the event of interest [12]. Not only are routine experiences unlikely to be retained in memory and, therefore, less likely to be recalled, but also recall is influenced by a person's current state of mind, with the overall result being that memory is a subjective reconstruction of reality. Retrospective reports are, however, more useful than ecological momentary data when examining a person's general impressions or predicting future behavior [36]. What differentiates an intensive longitudinal design from the typical longitudinal design is that it facilitates the collection of more objective physiological and behavioral measures [13].

However, participants might find intensive longitudinal studies more intrusive and time-consuming and withdraw because of this [12]. Hence, it is not surprising that the compliance in studies of adults is 81.9% [37] and, in studies of children and adolescents, it is 78.3% [38]. Therefore, researchers should look after their participants' well-being when planning an ecological momentary assessment, both for ethical reasons and for avoiding a biased sample. Gabriel and colleagues [39] suggested motivating participants by using financial incentives or feedback on how many other participants had completed the survey. On another note, the amount of data collected in such a study requires complex techniques for data management and data analysis. And, finally, when interpreting the results of the intensive longitudinal study, researchers must bear in mind the effect of reactivity, which is the possibility that the repeating measurement acted as an intervention [12].

Regardless of the challenges described, there is a growing body of research using an intensive longitudinal design, and several systematic reviews and meta-analyses covering this topic have already been published. Van Roekel, Keijsers, and Chung [15] reviewed 23 unique empirical studies that included self-reported assessments of adolescents aged 10 to 18, while the systematic review published by Heron and her colleagues [14] included 24. In the studies analyzed in the latter systematic review, researchers implemented a mobile-technology-based ecological momentary assessment among children and adolescents. Moreover, Bentley and colleagues [40] reviewed 61 unique studies of self-injurious thoughts and behavior to analyze how researchers monitor and respond to answers that indicate a high suicidal risk. And, finally, Enkema and colleagues [41] reviewed 22 unique studies with intensive longitudinal designs that measured mindfulness and mental health outcomes.

1.3. Development Is Context-Specific

Several theoretical perspectives on child and adolescent development, such as ecological systems theory [42] and positive youth development [43], emphasize the importance of context in examining and understanding development. Cultural background, socioeconomic status, parental education and employment, stability of family income, strength of community, and connections to wider support networks form a broader context that influences young people [42,43]. The daily lives of adolescents from different cultures differ greatly. The ages of adolescence and emerging adulthood are increasingly diverse, with different developmental trajectories in the face of social change, income insecurity, economic inequality, and wide disparities in opportunity. Some of these difficulties, such as the COVID-19 pandemic, are universal across the world, but there are also many difficulties that are specific to certain countries or regions, such as poverty, natural disasters, or political radicalism. Although resilience can mask the impact of these phenomena at the group level, daily life methods may reveal their true impact on youth.

Most of the intensive longitudinal studies, including the reviews mentioned in the previous section, were published in American or Canadian journals. One could also argue that the studies and papers in the wider human, as well as adolescent, development field are related to Western culture and less often include perspectives from low- and middle-income countries. At the same time, we would traditionally expect the findings on a population to apply to the individual as well. Therefore, we have focused specifically on the countries of our region and cultural area, Central and Eastern Europe, which share a common history

but are characterized by the transition from socialist to capitalist society, the post-war period, and the economic crisis. At the same time, this region is struggling with the clash of traditionally strong family and extended kinship influences, changes in traditional gender norms, and the pursuit of a European lifestyle, while technological advances and social networks are transforming the everyday lives of adolescents.

Regional as well as research trends, policy changes, and novel interventions are often adopted from Western European countries and adapted first in the more developed Slovenia, followed by Croatia, Serbia, and other neighboring countries. Against this background, we wanted to investigate the region-specific quality of adolescent research and the degree of adoption of modern methods such as intensive longitudinal studies. As explained earlier, methods such as experience sampling or ecological momentary assessment could reveal both commonalities and particularities of development. Therefore, this scoping review aims to investigate the frequency of implementing an experience sampling method and an ecological momentary assessment in the studies of adolescence and emerging adulthood published in Croatian, Serbian, and Slovenian journals, as well as to analyze the characteristics of these longitudinal intensive measurement studies.

2. Materials and Methods

2.1. Eligibility Criteria

Following the PICO framework [44] and the PRISMA 2020 checklist [45], we have defined that only research studies conducted in Croatia, Serbia, or Slovenia were eligible for inclusion in this review. However, there were no criteria regarding the year of publication or language. To be included, studies had to implement an experience sampling method or an ecological momentary assessment and have adolescent or youth participants, with ages ranging from 10 to 25 years. If these two inclusion criteria were met, a study was included regardless of the research question. Review articles, conference papers, and grey literature were excluded from the review.

2.2. Information Sources and Search Strategy

In total, we searched five scientific databases: Scopus, PsycInfo, Hrčak (the Croatian database), SCIndeks (the Serbian database), and COBISS+ (the Slovenian database). The literature search was based on terms related to intensive longitudinal methods and terms related to adolescence and youth. Namely, in Scopus and PsycInfo, the searched strategy included the following combinations: "experience sampling method" AND "adoles*" OR "youth" OR "young" AND "Croatia" OR "Serbia" OR "Slovenia", and "ecological momentary assessment" AND "adoles*" OR "youth" OR "young" AND "Croatia" OR "Serbia" OR "Slovenia". In Hrčak, SCIndeks, and COBISS+ we searched for the terms "experience sampling method" and "ecological momentary assessment".

2.3. Selection Process

There were two reviewers. Once one of them removed the duplicate records, both reviewers independently screened abstracts to identify records for a full-text review and then examined the full texts. Any disagreement was discussed by the two reviewers. No automation tools nor software for data extraction were used in this selection process.

3. Results

As shown in Figure 1, our search yielded 118 unique research papers. Eight of these were removed before screening because they were duplicate entries. After screening 110 records, 7 were excluded because they were reviews and not research papers. In addition, 15 records were excluded because the participants were not adolescents or emerging adults and were not from Croatia, Serbia, or Slovenia, while 26 records were excluded because neither the experience sampling method nor the ecological momentary assessment were used. Finally, 39 records were excluded because neither the sample nor the method met the inclusion criteria. Thus, we assessed 23 reports for eligibility and excluded 17 of

them, mostly because the sample or method did not meet the inclusion criteria. Finally, six research papers were included in the review, and a narrative synthesis was undertaken. The paper by Križanić et al. [46,47] was divided into two parts with slightly different methods, hence the results are hereby presented for each of these two parts individually. For this reason, seven studies are presented in Table 1 and analyzed in this chapter.

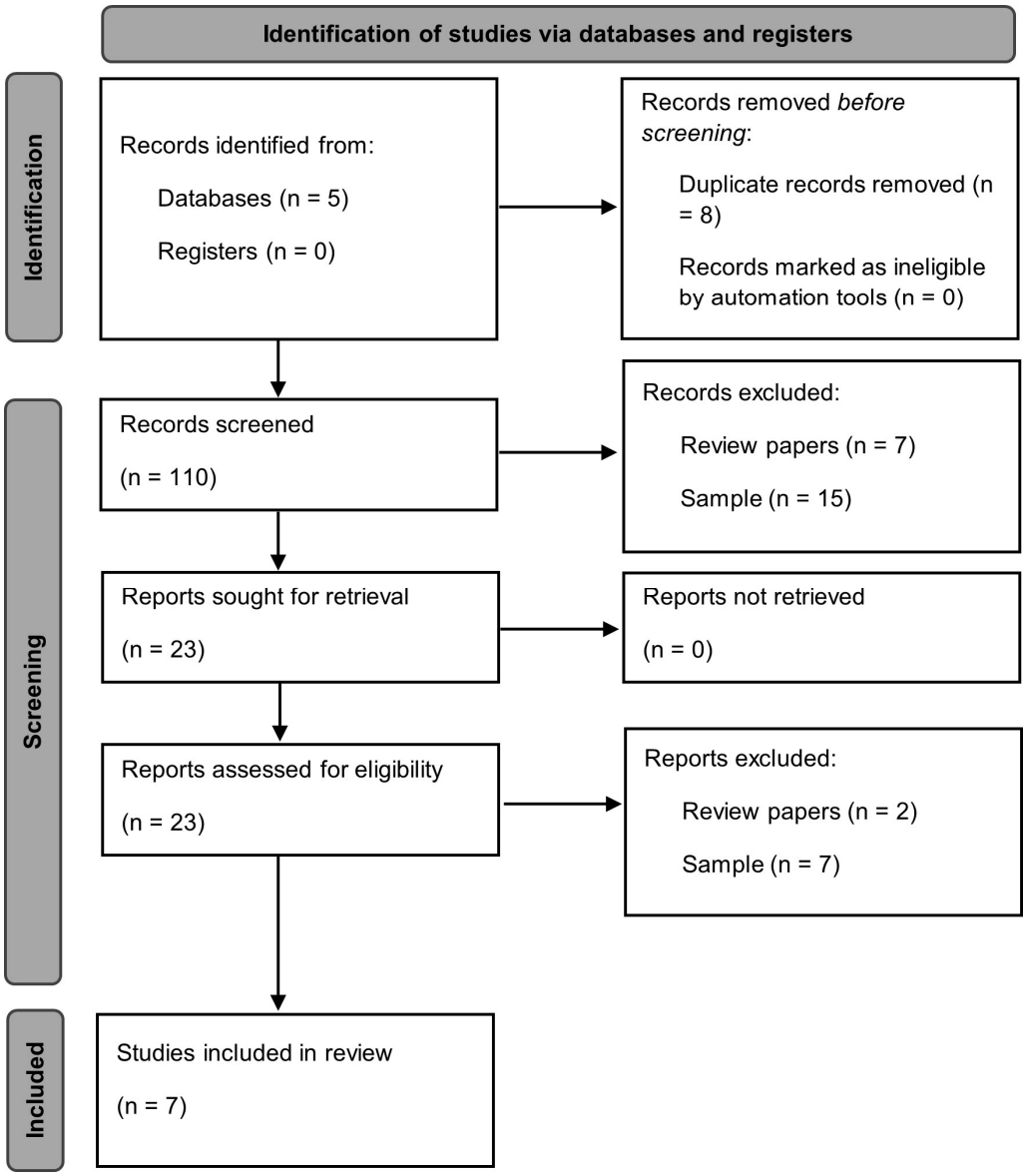

Figure 1. Flowchart for a scoping review. From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021; 372: n71. https://doi.org/10.1136/bmj.n71 (accessed on 1 September 2023).

3.1. Research Method, App, Duration, and Number of Assessments

Most studies were conducted in Croatia (n = four), while two of them were conducted in Serbia and one in Slovenia. Six of these studies implemented an experience sampling method [46–50], while one of them implemented the same method but named it as an 'electronic diary method' [51]. Six studies lasted for seven days [46–51], and only one study lasted for ten days [47]. The number of assessments per day varied greatly between the studies. While one study had two assessments per day [49], there were also studies with three [51], five [48], six [50], and eight [47] assessments per day. Two studies by Križanić and colleagues [46,47] had ten assessments per day. The signals were randomly scheduled

and sent through a wristwatch [46,47] or handheld computer [48]. In two studies, the signals were indicated via a phone call [47] or text message [51]. Only two recent papers reported the use of a mobile app: Peserl [50] used the SEMA3 app, and Knežević et al. [49] used the xSample app.

3.2. Sample Size and Age Group

While five out of seven studies had more than 100 participants [46–50], one study had 57 participants [47] and one had 73 participants [51]. Peserl [50] had the largest sample, with 205 participants. In all the studies the participants were emerging adults whose mean age ranged from 20.4 [47] to 23.5 [51] years.

3.3. Measures

Various measures were used in the analyzed studies. While some authors were more focused on behaviors and asked the participants about their current activities and the context in which they occurred [48,51], some of them were more focused on affect. In four studies [46,47,49], they used the full or shortened version of the PANAS-X, and, in Pavlović and Zezelj's [51] study, they asked the participants about their affect using only one item. Peserl [50], via four items each, asked her participants about their positive and negative affect and about their current regulation of emotions. Open questions about the current situation were also used [46,47].

3.4. Data Analysis

In four out of seven studies, authors used a random coefficient multilevel model for data analysis [46,47,49]. Pavlović and Zezelj [51] averaged tobacco consumption for different moods and used repeated ANOVA measures, while Peserl [50] averaged ratings across measurement points and analyzed the data using Pearson correlation, regression, and *t*-test. Finally, Anić and Tončić [48] obtained frequencies and analyzed data using chi-square.

3.5. Quality Assessment Rating and Reasons for Moderate or Weak Rating

To add to the main aim of this scoping review, we have assessed the methodological quality of all five studies using the quality assessment tool for quantitative studies developed by the Effective Public Health Practice Project [52]. Five out of the seven studies were rated as 'moderate quality' [46,47,50,51] because of their selection bias. The other two studies were rated as 'low quality' [48,49], in both cases due to their selection bias and lack of information regarding withdrawals and dropouts. In addition, the study by Anić and Tončić [48] lacked information on blinding.

Table 1. Summary description of the seven studies included in the full-text screening.

Author and Year	Country	Paper	Research Method	App	Duration and Assessments	Sample Size	Mean Age	Measures	Data Analysis	Quality Assessment Rating with Reasons
Križanić et al. (2014a)	Croatia	Everyday Stress and Core Affect: Examination of the Dynamic Model of Affect (Study 1)	Experience sampling method	Wristwatch	Seven days; ten assessments per day; randomly scheduled signals sent by wristwatch in 90 min intervals	102	21.4	Open question about current situation; sixteen items from PANAS-X (Watson and Clark, 1994); stress measured via three items	Random coefficient multilevel model	Moderate: selection bias
Križanić et al. (2014b)	Croatia	Everyday Stress and Core Affect: Examination of the Dynamic Model of Affect (Study 2)	Experience sampling method	Signal sent by mobile phone	Ten days; eight assessments per day; randomly scheduled signals indicated using a phone call in 90 min intervals	57	20.4	Open question about current situation; sixteen items from PANAS-X (Watson and Clark, 1994); stress measured via three items	Random coefficient multilevel model	Moderate: selection bias
Križanić (2015)	Croatia	Situational and Personal Determinants of Flow Experience in Everyday Life	Experience sampling method	Wristwatch	Seven days; ten assessments per day; randomly scheduled signals in 90 min intervals	102	21.4	Four items from PANAS-X, two items about the current situation	Random coefficient multilevel model	Moderate: selection bias
Anić and Tončić (2014)	Croatia	"What Are You Doing?": Comparison of Three Methodological Approaches to Studying Leisure	Experience sampling method	Experience sampling program installed on handheld computer	Seven days; five assessments per day; randomly scheduled signals on handheld computer	121	21.62	Questions about the location and activity at the time of signaling	Frequency and chi square	Weak: selection bias, blinding, withdrawals, and dropouts
Knežević et al. (2022)	Serbia	The meaning of momentary psychotic-like experiences in a non-clinical sample: a personality perspective	Experience sampling method	xSample	Seven, not necessarily consecutive, days (app was programmed to notify participants until fourteen assessment points were collected); two assessments per day, random intervals	180	20.21	Nine items measuring momentary psychotic-like experiences; ten-item version of the PANAS scale	Multilevel random coefficient modeling	Weak: selection bias, withdrawals, and dropouts
Peserl (2022)	Slovenia	Emotions in everyday life: The role of emotion differentiation in emotion regulation	Experience sampling method	SEMA3	Seven days; six fixed assessments per day	205	22.10	Positive and negative affect measured via four items each; emotion regulation measured via six items	Pearson correlation, regression, and T-test	Moderate: selection bias
Pavlović and Zezelj (2017)	Serbia	Not Only When Feeling Down: The Relationship Between Mood Intensity and Smoking Behavior	Electronic diary method	Text message containing link to web diary application	Seven days; three assessments per day; equal intervals	73	23.5	Number of cigarettes smoked since the previous entry; one item measuring affect (from extremely sad to extremely happy)	Repeated measures ANOVA (averaged tobacco use for different moods)	Moderate: selection bias

4. Discussion

To answer our research question, we searched five scientific databases and found six unique Croatian, Serbian, or Slovenian research papers on adolescence and emerging adulthood in which daily life methods were implemented. Since one of these papers presented results from one bigger and one smaller study, in the end, we analyzed seven studies. In all these studies, the researchers had used signal-contingent designs for studying emotions and free-time activities. As Gabriel and colleagues [39] suggested, the authors of the analyzed studies used either shortened versions of the existing scales or single items in order to measure the variables of interest. Moreover, most of the studies lasted for seven to ten days, which is in line with the existing literature [14,15]. On the contrary, the number of assessments was higher than the average number of assessments described in the literature [14,15]. Namely, the number of assessments in the analyzed studies ranged from two to ten. The signals were randomly scheduled and sent via a wristwatch, a handheld computer, or a mobile app, or indicated using a phone call or text message. All of these methods had been previously used [21,22,24–26].

None of the studies analyzed used passive-sensing data. There is no doubt that mobile passive-sensing data are informative and promise a more thorough and objective insight into human nature and a better understanding of developmental changes. However, most of the studies analyzed were conducted nearly a decade ago, when this method was not widely used. Technological advances have enabled the collection of objective data from naturalistic phone use, including sleep patterns, geolocation, music choice, facial expressions, and language, without any additional burden to participants. Nevertheless, its use also raises new ethical issues that are harder to face in countries with strong traditional research training inclined towards experiments and self-report survey data. First and foremost, participants should be able to control how their personal information is shared with others. Geolocation technologies complicate privacy protection in research, with the use of data by third parties posing the greatest threat to one's privacy [53]. In our region, the inclusion of youth under 18 years of age in the proposed research designs may also require additional ethical procedures and practices.

Most of the studies included in this scoping review had more than 100 participants and at least 2500 data entries. Such a quantity of data allows researchers to obtain intraindividual variability, which is the main advantage of intensive longitudinal designs [12]. However, to obtain intraindividual variability, researchers must use the appropriate method for data analysis. The most common statistical approaches are time-series analysis and dynamic multilevel modeling. While time-series analysis focuses on predicting the current observation from previous observations of the same or different variables [27], multilevel models indicate how much of the variance in the outcome's variable can be attributed to between-person differences by calculating the intraclass correlation [12]. Indeed, Križanić and colleagues [46,47], as well as Knežević et al. [49], used multilevel models, as suggested by Bolger and Laurenceau [12]. In contrast, Peserl [50] and Pavlović and Zezelj [51] averaged data across situations or participants, and, by calculating the mean, information about intraindividual variability was lost. The methods of data analysis described and used are also related to the fact that most of the studies were conducted a decade ago and that this area of complex analysis and program packages (e.g., for Mplus and R) has also improved and become really advanced in recent years. An example of this is the DSEM framework, which integrates not only time-series analysis and multilevel models, but also structural equation modeling [54,55].

Studies that focus on emerging adults, i.e., recruit mostly university students who are easily accessible to researchers and rarely use smartphone apps, also suggest that Croatian, Serbian, and Slovenian researchers have difficulties funding intensive longitudinal studies. It should be noted that smart phone apps for momentary assessment, especially those that allow passive sensing, can be quite expensive, and that motivating participants to complete studies that last a week or longer often requires financial incentives. Thus, funding

for daily life studies in our region may be the main reason researchers do not conduct them more frequently. Unfortunately, the same is true for the use of mobile interventions based on experience sampling. On the other hand, the use of smartphone-based research methods can itself lead to biased samples. Not only may the subpopulation with the lowest socioeconomic status be unable to participate [53], but the sample may not include people who fear for their privacy [56]. This is especially true in less developed countries where there is less trust in data protection and privacy, as well as in science and research practices, or where ethical considerations cause controversy.

Our scoping review resulted in seven original research studies, published in six scientific papers, that had implemented experience sampling methods or ecological momentary assessment when studying adolescence and emerging adulthood. The fact that we excluded grey literature is a possible limitation of the evidence included in this review. Moreover, we did not analyze different Croatian, Serbian, and Slovenian scientific projects; perhaps, some of these projects included daily life methods and could have yielded more studies for our scoping review. Finally, we focused on analyzing the methodological aspects of the included studies, but it would also be interesting to analyze the main findings of these studies.

5. Future Directions

For developmental scientists, adolescence and emerging adulthood are particularly interesting because they represent an intense period of transformation from child to adult. Intensive longitudinal design enables researchers to study both intraindividual and interindividual change, and, thus, presents an opportunity for a greater understanding of developmental changes, especially those related to modern development immersed in multiple crises and uncertainty [53]. The majority of the world's youth lives in low- and middle-income countries, where the barriers to their well-being and positive development are even greater [57]. Given that development is related to a country's income and is culture-specific [42,43], it is plausible to argue that it would be valuable if intensive longitudinal methods were used more frequently in Croatia, Serbia, and Slovenia. By using these novel methods, researchers could capture core characteristics of adolescence and youth trajectories specifically in regional context by measuring the everyday affect or quality of friendships, romantic relationships, and relationships with parents. This is necessary to meet the educational and health demands of modern youth. Dahl and colleagues [58] argue that investing in youth with the necessary policy initiatives will yield higher returns in countries and regions with greater disparities. This direction is in line with international recommendations on youth development, such as the Lancet Commission on Adolescent Health and Wellbeing [59] and the Second Lancet Commission [60]. This could also enrich the quality of national and regional youth policy planning and ensure the further inclusion of young people with different life trajectories, especially those at risk.

Mobile apps based on the experience sampling method can also be a useful tool for intervention. Not only can therapists use them during the therapy process to help their clients keep track of their emotions and triggering situations, but these apps can also help change eating and sleeping patterns [61]. Grow It!, for example, is a multiplayer serious-game app for youth aged 12 to 25 that not only uses an experience sampling method to monitor emotions, thoughts, and behaviors in everyday life, but also promotes adaptive coping through daily challenges based on cognitive behavioral therapy. It was offered and used by more than 1700 youth during the COVID-19 crisis. Between 32% and 50% of users completed the challenges, and more than 70% of them would recommend the app to their friends [62].

6. Conclusions

The results of the current scoping review indicate that there are few studies in Croatia, Serbia, and Slovenia that use daily life methods. Although it is known that this type of study provides valuable insights into the developmental trajectories during adolescence,

it seems that it is not yet recognized in our region. The publication years of the reports identified in this review indicate that, in Croatia, the first wave of implementation of daily life methods took place in the early 2010s, while the studies from Serbia and Slovenia are more recent and were published in 2022. Despite intensive longitudinal studies being rare in this region, researchers have implemented some of the best-practices described in the literature. We hope that this scoping review will help recognize the importance of studying adolescents' and emerging adults' daily lives for both scientific and practical purposes and motivate researchers to advocate for funding for daily life studies.

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