ALC Mid-Generation Review Paper No. 2

Life Trajectory and Social Sequence Analysis of ALC Fellows (5 Years Before and 5 Years After the Fellowship)

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Introduction

Fellowships and scholarship programs have encountered numerous challenges in their assessments and evaluations.[1,2,3] Questions such as what to measure, how to measure, when to measure, and who should measure have perplexed assessors and evaluators. Criticism has been directed at the assessments of the impacts of fellowship programs. For instance, critics of United Nations (UN) System's agencies have highlighted the inadequacy of assessing the impacts of their training and fellowship programs. They "point out that beyond documentation of the number of fellows that underwent training, and their immediate reaction to the experience, it is necessary to ascertain that fellows are using what they have learned, and most importantly that their institution and country are benefiting from the significant investments made in the fellowship programmes."[4] This perspective encapsulates the challenges faced by both internal and external evaluators of most fellowship programs: measuring or determining the impacts and effective outcomes of program objectives.

The nature of these evaluations is also subject to different interpretations. A popular definition by Michael Quinn Patton states that: "evaluation involves a systematic collection of information about the activities, characteristics, and outcomes of programs, personnel, and products for use by specific people to reduce uncertainties, improve effectiveness, and make decisions with regard to what those programs or products are doing and affecting."[5] This description delineates an examination of the outcomes and impacts of the program. In other studies, evaluations are often broadly categorized into two types – formative and

[1] Morris, M. (2006). Addressing the Challenges of Program Evaluation: One Department's Experience after Two Years. *The Modern Language Journal*, *90*(4), 585-588.
[2] Gallagher, C. W. (2012). The Trouble with Outcomes: Pragmatic Inquiry and Educational Aims. *College English*, *75*(1), 42-60.
[3] Chaplowe, S. G., & Engo-Tjega, R. B. (2007). Civil Society Organizations and Evaluation: Lessons from Africa. *Evaluation*, *13*(2), 257-274.
[4] Rotem, A., Zinovieff, M. A., & Goubarev, A. (2010). A framework for evaluating the impact of the United Nations fellowship programmes. *Human Resources for Health*, *8*(1), 1-8.
[5] Patton, M.Q. 1982. Practical Evaluation. Beverly Hills, CA: Sage Publications, Inc. 15.

summative evaluations. Formative evaluation aims to enhance the performance of the program or policy, typically conducted before, during, or immediately after the program's initiation. Summative evaluation is judgment-oriented, focusing on assessing the impacts or effectiveness of the program. Beyond these two, there is another conceptual evaluation aimed at generating knowledge from the experiences recorded throughout the program's lifespan.[6,7] Apart from the arbitrariness of assigning definitive meanings to the subject, there are consistent characteristics across various expositions, including but not limited to value extraction, value judgment, and value improvement. Funders, policymakers, and assessors are confronted with the daunting task of determining which aspects to prioritize when examining whether the programs have met the stated objectives.

Various models and classifications have been proposed for evaluating training programs, each focusing on different aspects of the program for assessment. Donald Kirkpatrick's four levels of measurement are listed as follows: reaction (what trainees/fellows thought about the program), learning (end-of-training assessment of the increase in acquired knowledge), behaviour (change in behaviour and capability of fellows/trainees after the program), and results (effects on the institutional environment attributed to fellows' performance).[8] Jack J. Phillips expanded on Kirkpatrick's model by adding Return on Investment (ROI), which compares the financial benefits and cost savings associated with the development and delivery of the training.[9] Additional models include Elliot Eisner's connoisseurship assessment model, Daniel Stufflebeam's CIPP Model, Robert Stake's Responsive Evaluation Model, Robert Stake's Congruence-Contingency Model, among others.[10,11]

These assessment models are pedagogical, with attention devoted to the various components of program design and the aspirational results framed as outcome effectiveness and impacts. Michael Scriven's Goal-Free Evaluation (GFE) Approach seeks a different path to program assessment. The evaluator is shielded from the program's intentions (goals and objectives) because what matters are the outcomes, impacts, and effectiveness of the program. For Scriven, goal-free evaluation entails discovering what the program is actually accomplishing without being guided as to its intentions. If the program is attaining its stated goals and objectives, then these achievements should be evident; if not, it is argued, they are irrelevant.[12] The underlying assumption of this model is the extrication of the evaluator from being tainted by prior exposure to the goals of the programs. Rather, the expectation is that a goal-free evaluation must be able to identify specific objectives of the program from its outcomes which can then be compared with the goals The underlying assumption of this model is the removal of the evaluator from being influenced by prior exposure to the goals of the programs. Instead, the expectation is that a goal-free

[6] Leviton, L. C., & Hughes, E. F. (1981). Research on the Utilization of Evaluations: A Review and Synthesis. *Evaluation Review*, *5*(4), 525-548.
[7] Patton, M. Q. (1996). A World Larger than Formative and Summative. *Evaluation Practice*, *17*(2), 131-144.
[8] Rotem, A., Zinovieff, M. A., & Goubarev, A. (2010). A framework for evaluating the impact of the United Nations fellowship programmes. *Human Resources for Health*, *8*(1), 1-8.
[9] Phillips, J. J. (1998). The return-on-investment (ROI) process: Issues and trends. *Educational Technology*, *38*(4), 7-14.
[10] Stake, R. E., & Kemmis, S. (1988). *Evaluating curriculum*. Geelong, Vic.: Deakin University Press.
[11] See https://www.businessballs.com/training-assessment-and-quality-assurance/kirkpatrick-evaluation-method/
[12] Tudevdagva, U. (2020). *Structure-Oriented Evaluation*. Springer International Publishing, 1-19.

evaluation must be capable of identifying specific objectives of the program from its outcomes, which can then be compared with the goals set up at the program's outset to determine if the it achieved its objectives.

Scriven himself criticised this approach in his work where he noted a case where a product (project/program) "finished in the Top Ten in spite of zero results with respect to its intended outcomes because it did so well on an unanticipated effect."[13] A program may fail to meet its preset objectives, but this should not deem its impacts ineffective, as it might generate new unintended "side-effects" that could be considered positive. Reflecting on Scriven's perspective, Jane F. Irvine suggests that "all that should concern the evaluator is determining exactly what effects the product has, and evaluating those — whether they are intended or not."[14]

In addition to unintended consequences, another issue is ensuring a goal-free evaluation methodology. Since evaluators are humans and not entirely free from goals or values, their ideologies, expectations, and culture may influence how they interpret the outcomes of these programs as effective or not. These models propose evaluating various aspects of the program – formative, conceptual, and summative. I chose to incorporate these while acknowledging the persistent challenge of determining which features or aspects of the program, if any, contributed to the observed effective impacts or outcomes in the program participants or fellows.

These fellowships often feature testimonials and reviews from their past alumni fellows, aiming to validate the program and serve as markers of successful outcomes toward fulfilling its objectives. However, this approach is problematic for several reasons. For instance, these reviews are selectively extracted, and the methods behind their sample selections are often undefined, rendering the approach vague. Additionally, while these reviews tend to be predominantly positive, dissenting opinions from alumni dissatisfied with the program are typically not accommodated or presented.

Many fellowships and programs attribute the success of their former fellows solely to their programs, presenting them as evidence of program efficacy. However, they often fail to include control cases of individuals who did not participate in the program but achieved similar outcomes, or those who participated but did not generate the same celebrated results. There is a pressing need for a method that incorporates historical narratives of participants both before joining and after leaving programs, utilizing verifiable and replicable instruments instead of the selective and subjective approaches common in most program assessment exercises.

Another issue is the presence of "forced" constrained loyalty. Alumni may feel compelled to write positive reviews or assessments due to the resources invested in them by the program, potentially compromising their objectivity. In a closed-review feedback method, where alumni have limited review options, would the outcome still be the same as the open approach?"

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[13] Scriven, M. (1991). Prose and cons about goal-free evaluation. *Evaluation Practice*, *12*(1), 55-62.
[14] Irvine, J. F. (1979). Goal-free evaluation: Philosophical and ethical aspects of Michael Scriven's model. *California Journal of Teacher Education*, 89-99.

Another challenge is determining if and what aspects of the past fellows' achievements or results, can be convincingly credited to the fellowship program. Some of these fellowship programs (e.g. The Ibrahim Leadership Fellowships)[15] target 'mid-career', emergent leaders in their field with previous experiences. The Archbishop Tutu Leadership Fellowship states on its website that it "welcomes an elite group of Africa's highest potential young leaders, representing a wide range of sectors."[16] It further notes that its awards "are aimed at the cream of the continent's future leaders, specifically targeting the next generation of Africa's leaders in all sectors of society, between the ages of 30 and 40."[17] This approach faces the dilemma of determining the true contributions of the program to its eventual "achievements" or desired objectives. It can be argued that considering the characteristics and trajectories of the selected fellows, they are equally likely to achieve these outcomes whether or not they participate in the program. Relatedly, there are past fellows who have participated in other programs before or after leaving these fellowships. To which of these programs should the achievements or outcomes be attributed? What open and reproducible approach can help link these outcomes with the specific programs?

Addressing these challenges, an adaptive system that combines cross-sectional and longitudinal life history evaluations of participants across different cohorts of the program without excluding contextual relevance of socio-cultural markers such as gender, age, nationalities, marital status, guardianship of children etc., is needed. The pre-and post-fellowship experiences, including social, cultural, economic, and aspirational factors, could help to understand how cohorts performed on the program objectives through their career and life trajectories. For instance, certain characteristics such as age, marital status, guidance of children, and the economic status of the fellows' country might determine their life trajectories and career progression before and after the fellowships. These micro-variables have been identified as determining factors in several studies.[18,19] It is therefore crucial to examine what roles they played in the life of fellows.

This paper proposes the adoption of a social sequence analysis for understanding the life trajectories of fellows' experiences five (5) years before and after participating in the different fellowships of the African Leadership Centre, King's College London. It allows a retrospective and prospective sequential life trajectory study approach with transversal and longitudinal capabilities for examining alumni career pathways and emergent characteristics over the years. This approach helps to ascertain the effectiveness of programs' founding objectives, although they are difficult to determine because frequently, evaluations are cross-sectional with special emphasis on the contributions of the fellows after the program, leaving out the significant insights that the individual and others extenuating characteristic features contributed to the observed outcome effectiveness. Since each cohort is different,

[15] See https://mo.ibrahim.foundation/fellowships
[16] See https://alinstitute.org/our-programmes/archbishop-tutu-fellowship-programme
[17] See https://alinstitute.org/our-programmes/archbishop-tutu-fellowship-programme
[18] Pollock, G. (2007). Holistic trajectories: a study of combined employment, housing and family careers by using multiple-sequence analysis. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, *170*(1), 167-183.
[19] McKetta, S., Prins, S. J., Platt, J., Bates, L. M., & Keyes, K. (2018). Social sequencing to determine patterns in health and work-family trajectories for US women, 1968–2013. *SSM-population health*, *6*, 301-308.

this approach gives room for cross-sectional analyses to help understand peculiarities and nuances of the trajectories of the different cohorts.

The metric instrument must confidently aspire to be transparent, replicable, objective, and introspective. It is not enough to simply ask alumni if they have been impacted or not, the impact must be concrete and demonstrable to an observable extent. Therefore, the choice of a longitudinal life trajectory sequence analysis and the development of a system for continuous tracking of the programs and alumni performances, across different timescales – monthly, quarterly, yearly, and every five years before the commencement and after the conclusion of the fellowship.

About the African Leadership Centre (ALC) Fellowships

The African Leadership Centre (ALC), established over a decade ago, has been pivotal in shaping the future generation of African leaders by fostering talent and nurturing African ideas. Operating in Nairobi, Kenya, and King's College London, UK, it endeavours to influence academic, research, and policy dialogues on leadership, peace, security, and development both locally and globally. Guided by core values such as promoting African-led change, excellence, independent thinking, and respect for diversity, the ALC aims to advance the transformation of African societies.

To fulfil its mission, the centre offers two degree-awarding and one non-degree fellowship programs. The Fellowships for African Scholars in Peace Security and Development and the Fellowships for African Women in Leadership and Peacebuilding are degree-awarding programs, aiming to equip young African scholars and women, especially from conflict-affected areas, with research, policy, and leadership skills. These programs include post-graduate studies at King’s College London and tailored mentoring sessions. Additionally, the Fellowships for African Women in Peace, Security, and Development provide non-degree awards, targeting young African women in the early stages of their careers. This program, based at the ALC in Nairobi, Kenya, offers a residential experience to deepen participants' understanding and expertise in leadership, peace, security, and development.

These fellowship programs contribute to the ALC's ten-year research agenda titled "Peace, Society, and the State in Africa," providing fellows with opportunities for academic growth, practical experience, and networking within African institutions and communities.

Methods

Longitudinal data were collected using a multimethod approach, which included an online retrospective survey instrument for a historic multicohort study combined with available data on the fellows stored in the ALC Data Lab database. Invitations were sent to past fellows from various cohorts of fellowships, including the Peace and Security Fellowships for African Women program, the Peace Security and Development Fellowships for African Scholars, and other associated fellowships such as ECOWAS, CSDG, and associate fellowship programs. The latter fellowships were collapsed into the previous two for ease of analysis.

Out of a population of 120, 100 past fellows or alumni participated in the survey. The sample questions can be found in Appendix 1 (Supplementary Materials).

Career progression information was harvested from the participants' LinkedIn profile pages to validate some of the data provided in the questionnaires. Research findings have confirmed that information collected from LinkedIn profiles can be used to assess the long-term outcomes of program alumni. [20,21] False misrepresentation and unverified self-promotion were mitigated by requesting updated curriculum vitae/resumes. Research assistants validated some of the reported career progression and trajectories. Links to institutional websites were also requested. Questions requesting lists of activities for each career point with evidence were included in the questionnaire. Throughout this paper, the terms "participants" and "alumni" are used interchangeably.

Of the 100 alumni who completed the retrospective survey, twenty-seven (27) participated in the Peace and Security Fellowships for African Women program, sixty-nine (69) were involved in the Peace, Security & Development Fellowships for African Scholars, and two (2) were part of the Conflict, Security & Development (CSDG)-KCL Fellowship. Forty-three (43) alumni identified as male, fifty-six (56) as female, and one (1) as non-binary. The timeframe spanned ten (10) years - five (5) years before the ALC fellowship and five (5) years after the fellowship, totalling 120 months. These time frames serve as reference markers indicating the end of the fifth year before joining the ALC fellowship and the beginning of post-ALC fellowship life trajectories.

Defining the life trajectory states proved challenging, given that most participants were residents of countries with less formalized economic statuses. According to the OECD, "the unemployed are people of working age who are without work, are available for work, and have taken specific steps to find work." [22] According to the ILO, in most OECD countries such as the United Kingdom, Norway, and the United States, the unemployed are those without a job during a reference period, willing to work, laid off, or waiting to start a new job. They are considered unemployed. [23] The definition of unemployed status varies in developing countries. In Nigeria, the unemployed are persons who, in the week preceding a job interview, "did not work for at least 39 hours but were available for work." [24]

During a pre-study meeting, a few individuals were asked for definitions of these career trajectories, including Unemployed (U). There was no definitive agreement on what constitutes being unemployed; the only recurring word in all the submissions provided is

[20] Case, T. L., Gardiner, A., Rutner, P., & Dyer, J. N. (2013). A LinkedIn analysis of career paths of information systems alumni. *The Journal of the Southern Association for Information Systems*, *1*(1), 1-13.
[21] Li, L., Zheng, G., Peltsverger, S., & Zhang, C. (2016, September). Career trajectory analysis of information technology alumni: a LinkedIn perspective. In *Proceedings of the 17th Annual Conference on Information Technology Education* (pp. 2-6).
[22] https://data.oecd.org/unemp/unemployment-rate.htm#:~:text=The%20unemployed%20are%20people%20of,on%20national%20definitions%20of%20unemployment.
[23] See ILO https://www.ilo.org/ilostat-files/SSM/SSM3_NEW/E/Sources%20and%20Methods%20Volume%203%20-%202011.doc
[24] See ILO https://www.ilo.org/ilostat-files/SSM/SSM3_NEW/E/Sources%20and%20Methods%20Volume%203%20-%202011.doc

"being without work" for most of the reference month. Other career states (e.g., fJ: full-time junior position, pSM: part-time senior management position, etc.) were relatively easier to code. To navigate the associated complexities, states apart from Fellowship and Unemployed were divided into full and part-time.

Social sequence analysis was conducted to identify the various trajectories across different frameworks and to identify state sequence patterns across different variables, using the R TraMiner Package. [25] Participation in the study was voluntary, and consent was obtained for the data demanded and provided, although some of this information is already publicly available on their LinkedIn profile pages. Personal identifiers in the datasets were masked to ensure further anonymity.

Results, Analysis, and Discussion

In the study, there were 57 females, 24 males, and 1 non-binary individual who participated. Refer to Table 1 for details. The mean age of the alumni at the beginning of the fellowship was 27.98 for females and 31.12 for males. The most prominent age group was the 25-29 years cohort for females (n=21, relative percentage = 36.8%) and the 30-34 years cohort for males (n=20, relative percentage = 47.6%). Overall, significant participation in the study was observed across age cohorts ranging from 20 to 34 years, reflecting the core values of youth agency upheld by the ALC. Fellows from countries with low economic status were more represented in the study. Additionally, a higher proportion of participants had postgraduate education before joining the fellowships: 36 females (relative percentage = 63.2%) and 30 males (relative percentage = 71.4%). There were more single females than males before and during the fellowship, whereas more males than females reported parental or child guardianship responsibilities before and during the fellowship.

Table 1: Socio-Demographic Characteristics of Participants (N=100)

Characteristics	**Female**	**Male**	**Non-binary**	***p*-Value**
n (Total)	57	42	1	
Age at the start of Fellowship (mean (SD))	27.98 (4.38)	31.12 (4.77)	25.00 (NA)	
Age Cohort (%)				**0.084**
20-24	14 (24.6)	2 (4.8)	0 (0.0)	
25-29	21 (36.8)	11 (26.2)	1 (100.0)	
30-34	18 (31.6)	20 (47.6)	0 (0.0)	
35-39	2 (3.5)	7 (16.7)	0 (0.0)	
40-44	2 (3.5)	1 (2.4)	0 (0.0)	
45-49	0 (0.0)	1 (2.4)	0 (0.0)	
Fellows Country's Economic Status (%) [a]				**0.233**
High	6 (10.5)	0 (0.0)	0 (0.0)	
Low	32 (56.1)	27 (64.3)	0 (0.0)	
Medium	19 (33.3)	14 (33.3)	1 (100.0)	
Very High	0 (0.0)	0 (0.0)	0 (0.0)	
Fellowship type (%) [b]				**<0.001**

[25] Gabadinho, A., Ritschard, G., Müller, N. S., & Studer, M. (2011). Analyzing and visualizing state sequences in R with TraMineR. *Journal of statistical software*, *40*, 1-37.

PSDF African Scholars	29 (50.9)	42 (100.0)	1 (100.0)	
PS African Women	28 (49.1)	0 (0.0)	0 (0.0)	
Fellowship Cohort (%)				**0.741**
2007	3 (5.3)	2 (4.8)	0 (0.0)	
2008	3 (5.3)	2 (4.8)	0 (0.0)	
2009	5 (8.8)	0 (0.0)	0 (0.0)	
2010	5 (8.8)	5 (11.9)	0 (0.0)	
2011	8 (14.0)	8 (19.0)	0 (0.0)	
2012	2 (3.5)	3 (7.1)	0 (0.0)	
2013	6 (10.5)	5 (11.9)	0 (0.0)	
2014	3 (5.3)	7 (16.7)	0 (0.0)	
2015	3 (5.3)	3 (7.1)	0 (0.0)	
2016	3 (5.3)	1 (2.4)	0 (0.0)	
2017	3 (5.3)	1 (2.4)	0 (0.0)	
2018	5 (8.8)	2 (4.8)	1 (100.0)	
2019	5 (8.8)	2 (4.8)	0 (0.0)	
2020	2 (3.5)	1 (2.4)	0 (0.0)	
2021	1 (1.8)	0 (0.0)	0 (0.0)	
Higher Degree before Fellowship (%)				**0.536**
Yes	36 (63.2)	30 (71.4)	1 (100.0)	
No	21 (36.8)	12 (28.6)	0 (0.0)	
Marital Status during Fellowship (%)				**0.611**
Married	6 (10.5)	11 (26.2)	0 (0.0)	
Single	29 (50.9)	19 (45.2	1 (100.0)	
Partnered	2 (3.5)	0 (0.0)	0 (0.0)	
Separated	1 (1.8)	0 (0.0)	0 (0.0)	
Other	1 (1.8)	2 (4.8)	0 (0.0)	
Not disclosed	18 (31.6)	10 (23.8)	0 (0.0)	
Child Guardianship/Parenting during Fellowship (%)				**0.43**
Yes	8 (14.0)	11 (26.2)	0 (0.0)	
No	24 (42.1)	16 (38.1)	1 (100.0)	
Not disclosed	25 (43.9)	15 (35.7)	0 (0.0)	
If Yes (Child Guardianship), How many? (mean (SD))	1 (100.0)	2.09 (1.22)	(NA)	**0.048**

Note. N = 100

[a] Reflects the number and percentage of participants answering "Yes" to this question.

[b] Fellowship type: PSDF African Scholars = Peace, Security & Development Fellowship for African Scholars, PS African Women = Peace & Security Fellowship for African Women

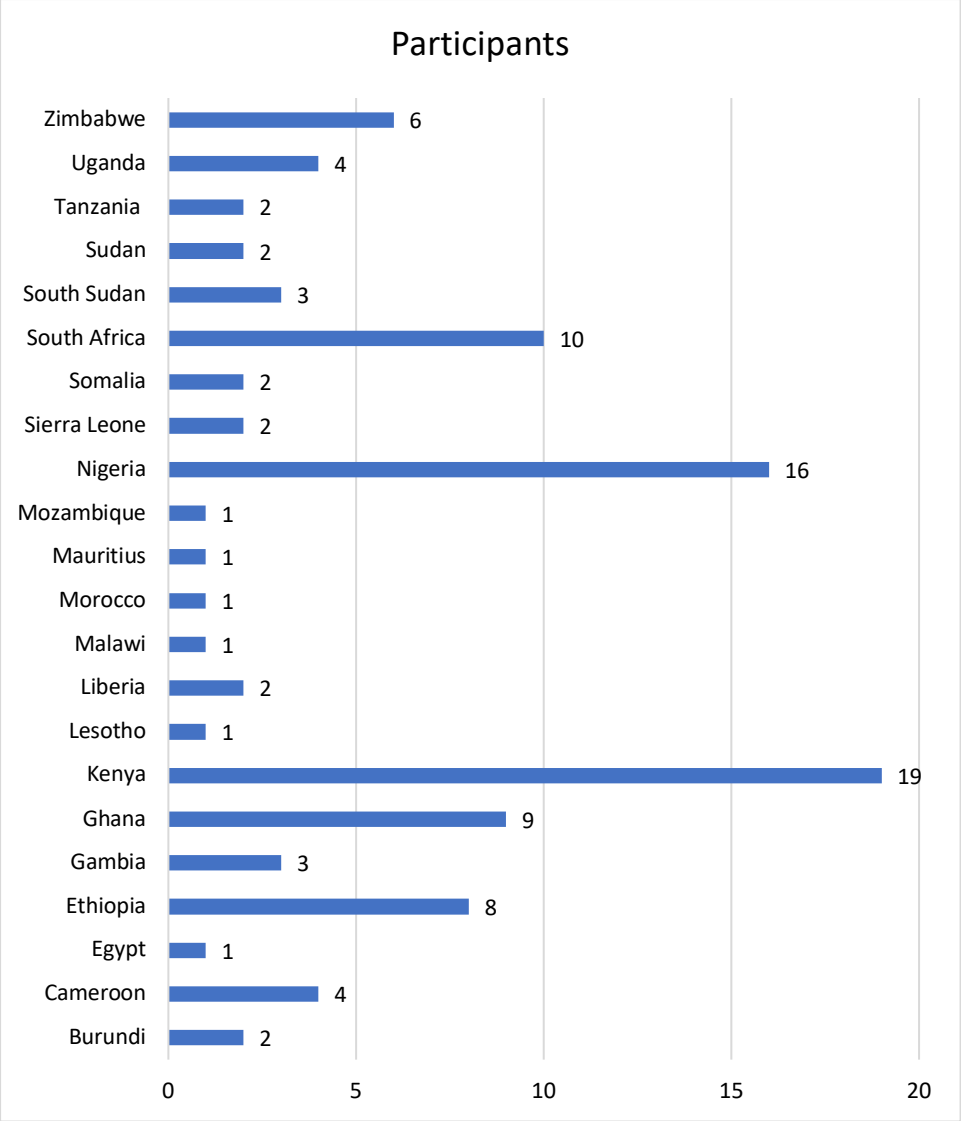

Fig. 1: Nationalities of Survey Participants

Figures 2a and 2b depict charts illustrating the participants' disciplines before and after the fellowship. It is evident that the ALC Fellowships significantly influenced their subsequent career trajectories, leading them to transition from disciplines such as Law, Philosophy, Sociology, Agriculture, History, Geography, Accounting, etc., to fields related to peace and security. More than 90% of the participants shifted into peace and security-related domains. Sub-disciplines such as leadership, youth studies, gender studies, and mediation were particularly favored by these participants following the ALC fellowship.

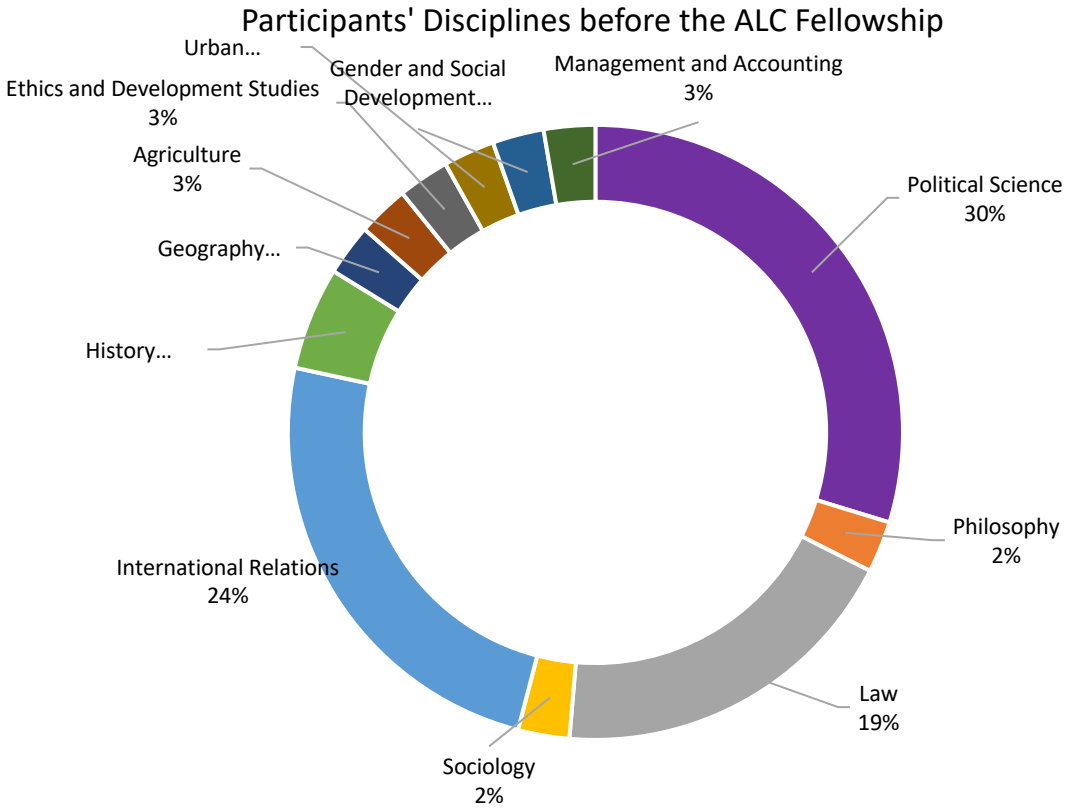

Fig. 2a: Disciplines of Participants before the ALC Fellowship

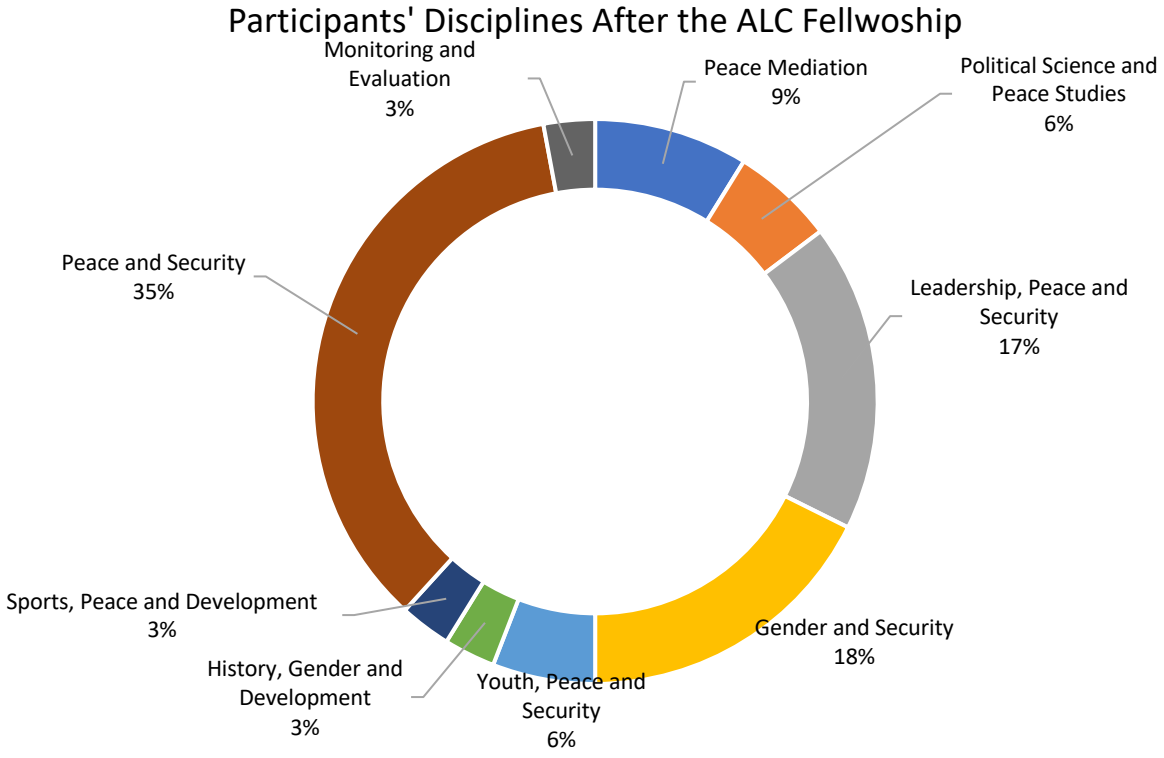

Fig. 2b: Disciplines of Participants after the ALC Fellowship

Career Trajectory 5-Year Pre- and Post-ALC Fellowship

Table 2 presents the top 10 most frequent life-course states before and after the ALC fellowship among participants. Prior to the fellowship, the most prevalent state is a 56-month period of Unemployment (U), followed by a 3-month period at the outset of the fellowship (Flw) spanning from September to December of the fifth year. Thirteen participants experienced this scenario, constituting 13% of the total 100 surveyed (U/56-Flw/3, n=15). Following this, the subsequent state involves participants holding full-time mid-level positions (fM) for 56 months, succeeded by the 3-month fellowship initiation (Flw). Eleven participants were observed in this situation (fM/56-Flw/3, n=11). The third sequence encompasses a 56-month tenure in full-time Junior positions (fJ) for three participants preceding the fellowship (Flw) (fJ/56-Flw/3, n=3).

Post-ALC fellowships, 15 participants secured full-time mid-level positions (fM) for 60 months (5 years) (fM/60, n=15). Seven participants held full-time Senior management positions (fSM) continuously for 60 months following the fellowship. Four individuals were engaged in full-time self-employment (fSE) throughout the entire 5-year period, while two pursued further education (fED), predominantly PhD/doctoral degrees, over the same duration. Apart from these single states, there were instances of sub-sequences and varied spells across different states. For instance, two individuals were unemployed (U) for 2 months in the subsequent year after the fellowship, followed by 58 months of full-time mid-level positions (fM).

The distribution plots in Fig. 2c and 2d visualize the month-by-month longitudinal succession of states for the 100 participants five years prior to and following the ALC fellowship. Unemployment dominates the plot in Fig. 2c, followed by full-time mid-level and junior positions. Another prominent state is the ALC Fellowship, commencing in September of the fifth year for all participants. Post-fellowship (Fig. 2d), the unemployment rate significantly decreases, along with a reduction in full-time junior roles. This decline initiates in January of Year 1 post-fellowship (Yr1.B). The most prevalent state thereafter is full-time mid-level positions, closely followed by participants in full-time senior management roles.

A comparison of the two state sequence distribution plots indicates a significant impact on the career trajectories of participants after completing the fellowship, evident in a consistent pattern of state changes.

The modal state sequence plots in Fig. 3a and 3b further underscore these observations. The plots depict the most recurring state in each month pre- and post-ALC fellowship. In Fig. 3a, Unemployment and mid-level positions emerge as the modal states preceding the fellowship. During the initial two months post-fellowship (Yr1.JanB and Yr1.FebB), participants reported a higher incidence of unemployment states, reflecting transitional periods for fellowship graduates. From March of Year 1 (Yr1.MarB) to September of Year 4 (Yr4.SeptB) post-fellowship, the most reported state is full-time mid-level career positions. A majority of participants reported a shift to full-time senior positions in October and November of the fourth-year post-fellowship.

Table 2: Top 10 most frequent sequences

5-year Pre-ALC Fellowship		
Spells	**Freq**	**Percent**
U/56-Flw/3	13	13
fM/56-Flw/3	11	11
fJ/56-Flw/3	3	3
fSM/56-Flw/3	3	3
U/34-fM/22-Flw/3	2	2
U/36-fM/20-Flw/3	2	2
U/43-fJ/13-Flw/3	2	2
U/44-fJ/12-Flw/3	2	2
fJ/1-U/24-pJ/31-Flw/3	1	1
fJ/11-fSE/4-U/4-fSE/2-U/1-fM/8-fSM/26-Flw/3	1	1
5-year Post-ALC Fellowship		
Spells	**Freq**	**Percent**
fM/60	15	15
fSM/60	7	7
fSE/60	4	4
fED/60	2	2
U/2-fM/58	2	2
fED/12-U/10-fJ/38	1	1
fED/24-U/4-fSE/32	1	1
fED/34-fSM/26	1	1
fED/57-U/3	1	1
fJ/10-U/17-fSM/33	1	1

Alphabet and Label for Spells and Sequences	
Alphabet	**Long Label**
fED	Further Education
fJ	Full-time Junior position
Flw	ALC Fellowship
fM	Full-time Mid-level position
fSE	Full-time Self Employed
fSM	Full-time Senior Management position
pJ	Part-time Junior position
pM	Part-time Mid-level position
pSM	Part-time Senior Management position
U	Unemployed

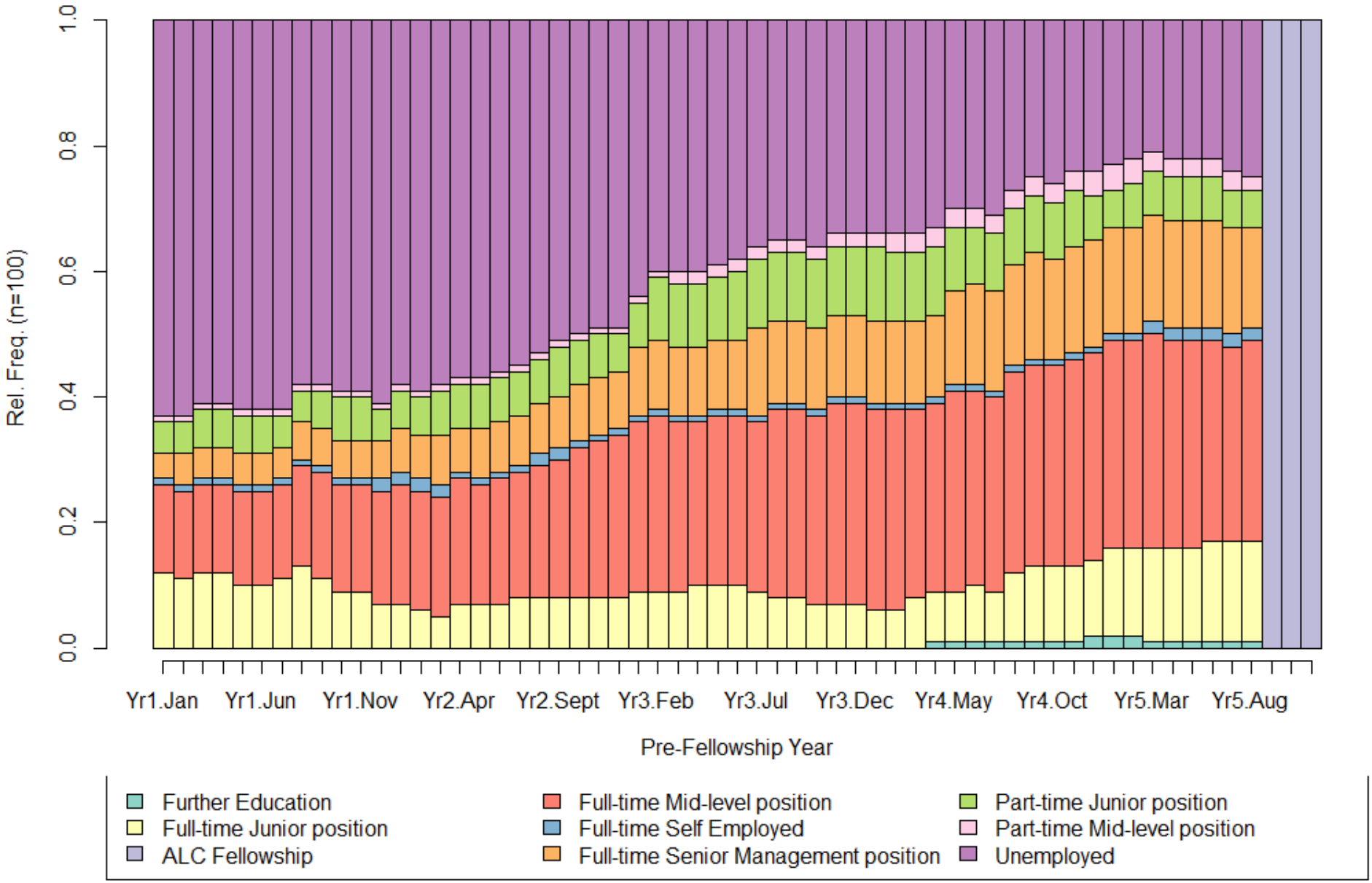

Fig. 2c: State Sequence Distribution Plot (5-Years Pre-ALC Fellowship)[26]

[26] Sequences are sorted in descending order of their frequency in the dataset.

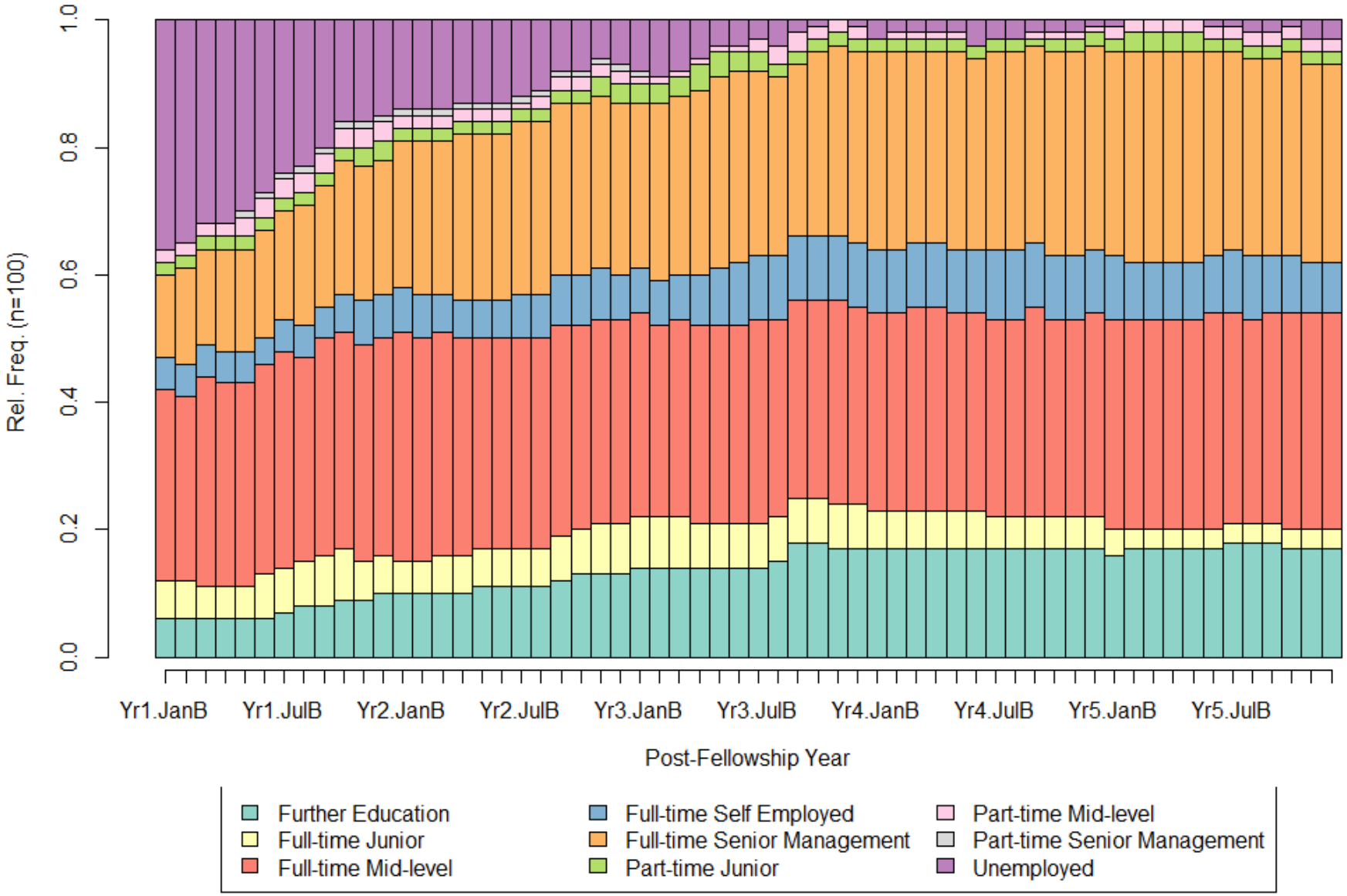

Fig. 2d: State Sequence Distribution Plot (5-Years Post-ALC Fellowship)

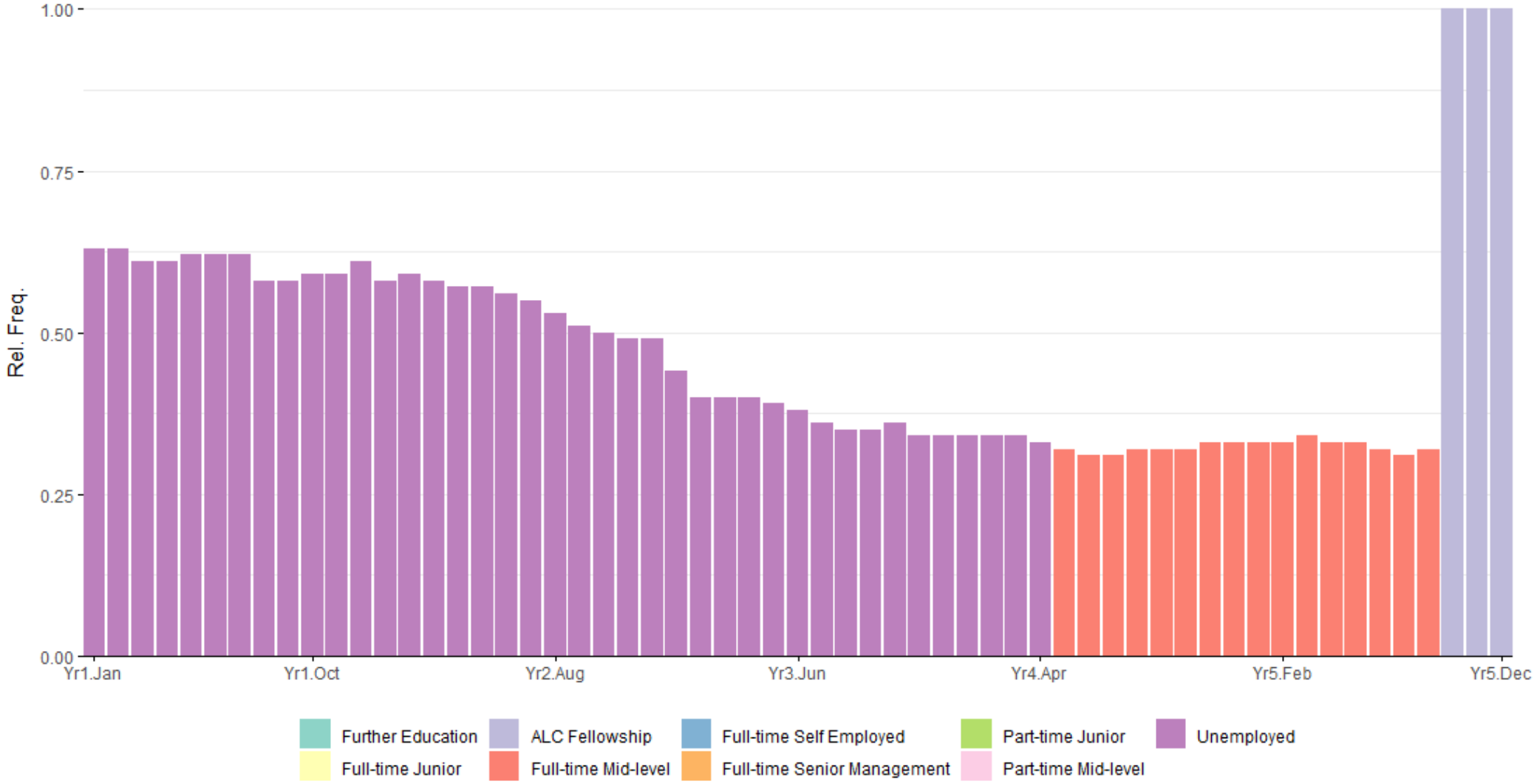

Fig. 3a: Modal State Sequence Plot (5-Year Pre-ALC Fellowship)

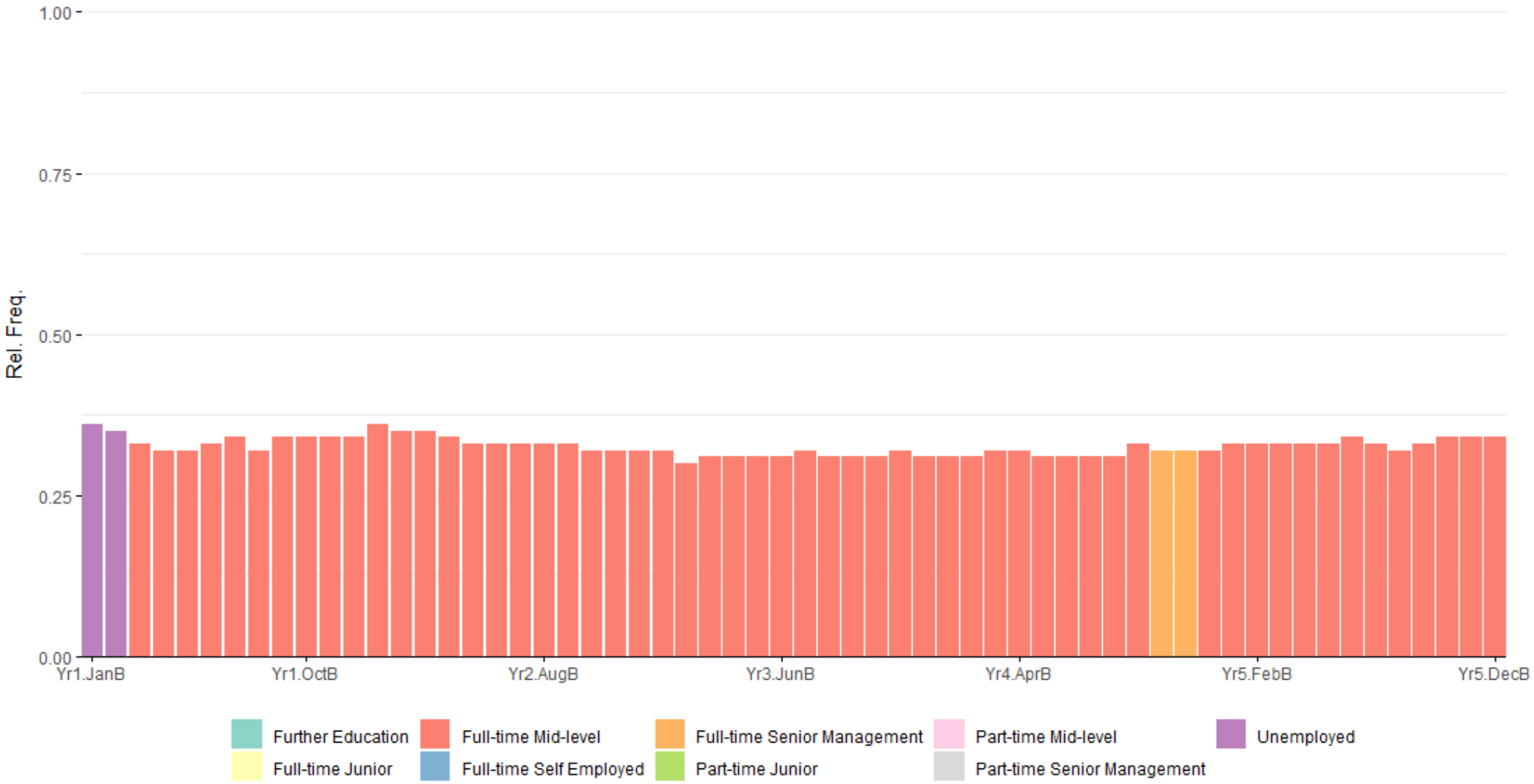

Fig. 3b: Modal State Sequence (5-Year Post-ALC Fellowship)

Life Course and Career Trajectory by Sex/Gender

This section delves into the various life trajectories and career paths categorised by sex/gender. The transversal state sequence distribution plots in Fig. 5a and Fig. 5b illustrate the relative frequencies of sequence transitions among participants according to sex. Fig. 6a and Fig. 6b present plots depicting the average time spent by men and women in each state within the sequence. Fig. 10 reveals that, five years prior to the ALC fellowship, women reported slightly more instances of unemployment compared to men, albeit the distinction is scarcely discernible. Conversely, men held relatively more part-time and full-time mid-level positions than women before joining the fellowship (Refer to Fig. 11 and Fig. 12). Both women and men occupied roughly the same number of full-time junior employment positions before the fellowship. Men reported a higher prevalence of pre-ALC fellowship full-time self-employment than women. Additionally, women held a slight advantage over men in full-time senior management positions prior to the fellowship.

Following the ALC fellowship, women tend to experience higher rates of unemployment than men. However, the gender disparity post-fellowship widens as women assume more senior management roles than men (Refer to Fig. 11 and 13). Conversely, men are more inclined to pursue further higher education than women. They also tend to occupy more full-time mid-level positions compared to women post-fellowship. Women are more likely to engage in full-time self-employment than men. Conversely, men hold more part-time junior and mid-level positions than women after the ALC fellowship.

Given that only one individual identifies as non-binary in the survey, making broader inferences to the larger population is challenging due to insufficient data for this category.

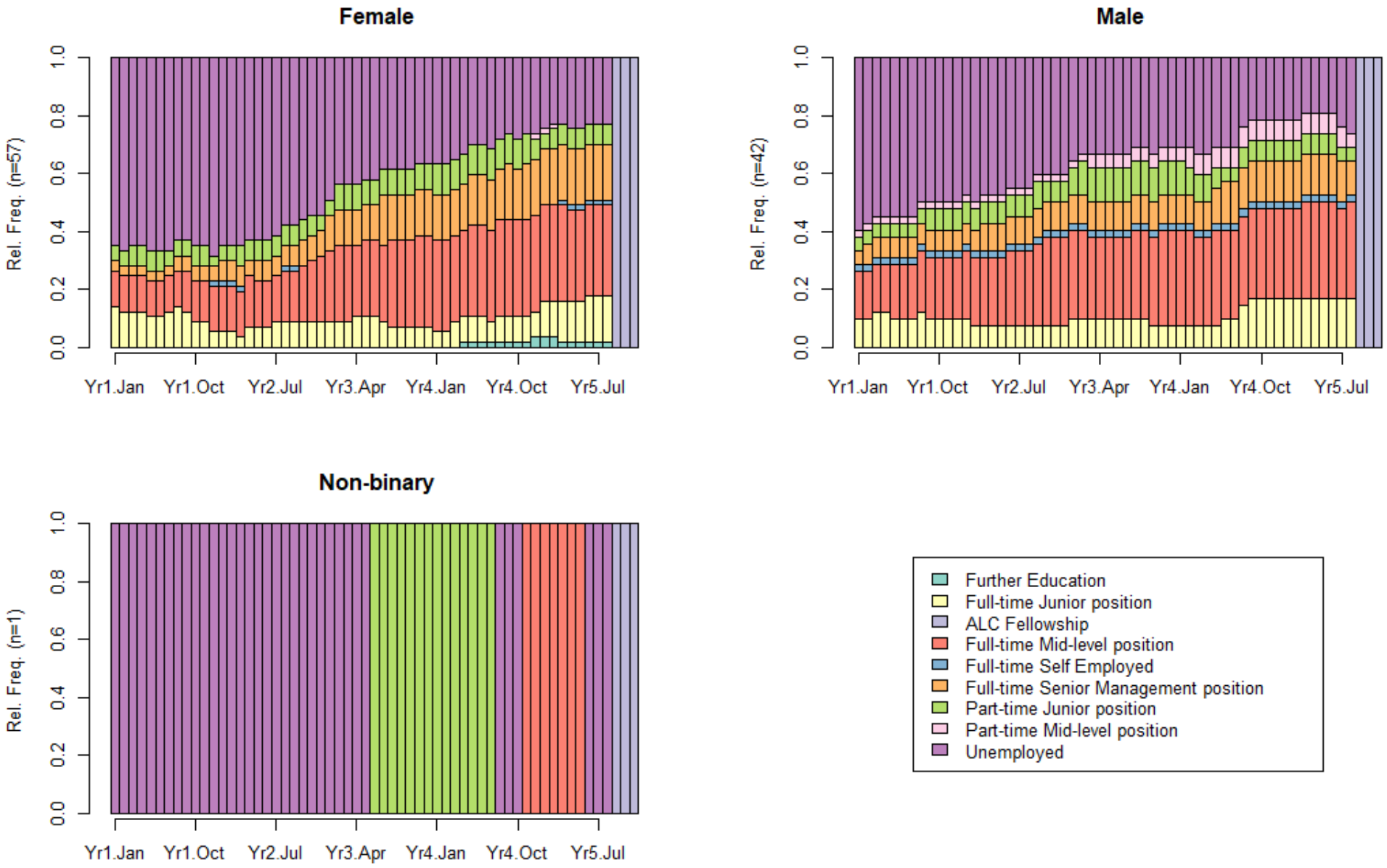

Fig. 5a: State Sequence Distribution Plot of Participants by Sex (5-Years Pre-ALC Fellowship)

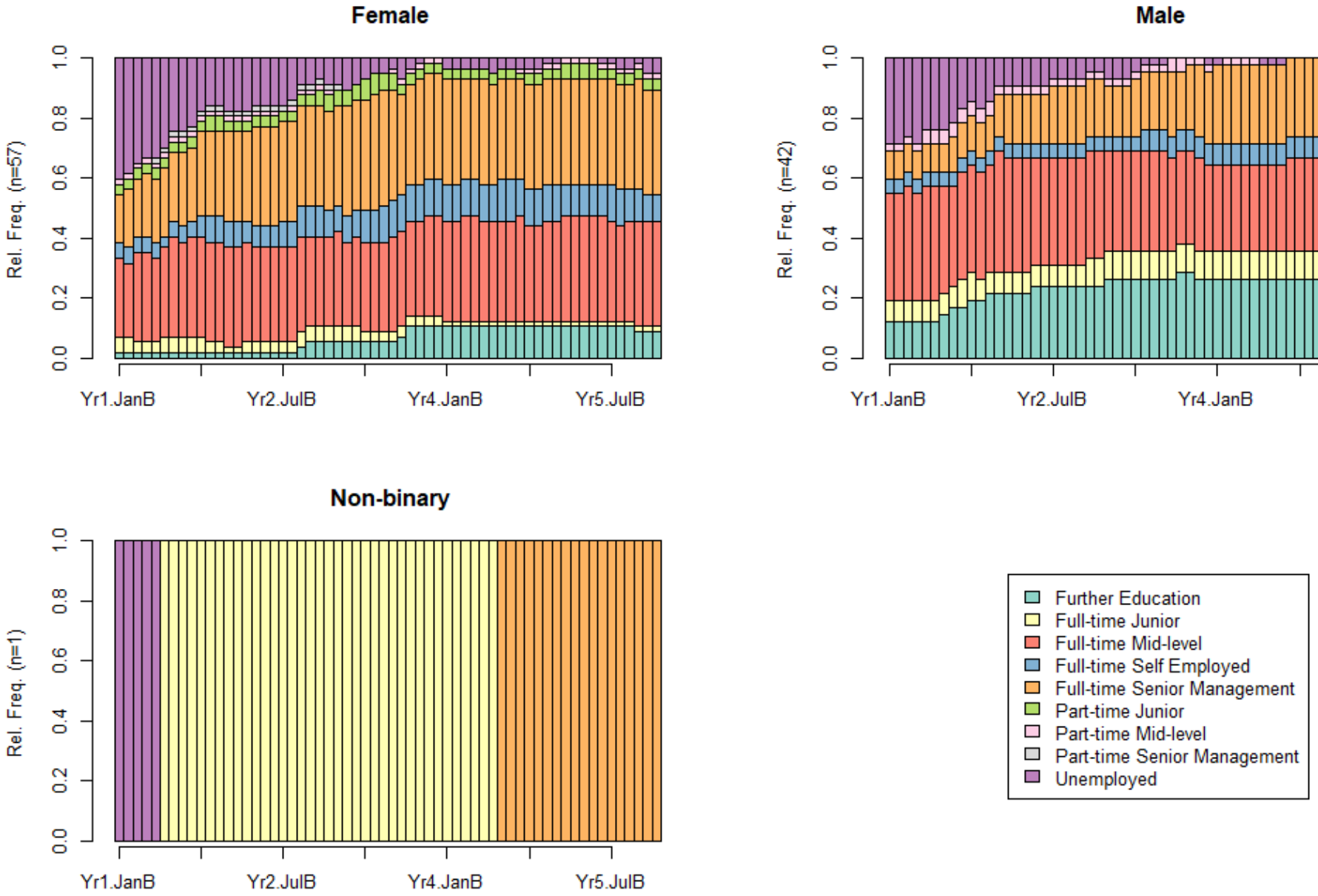

Fig. 5b: State Sequence Distribution Plot of Participants by Sex (5-Years Post-ALC Fellowship)

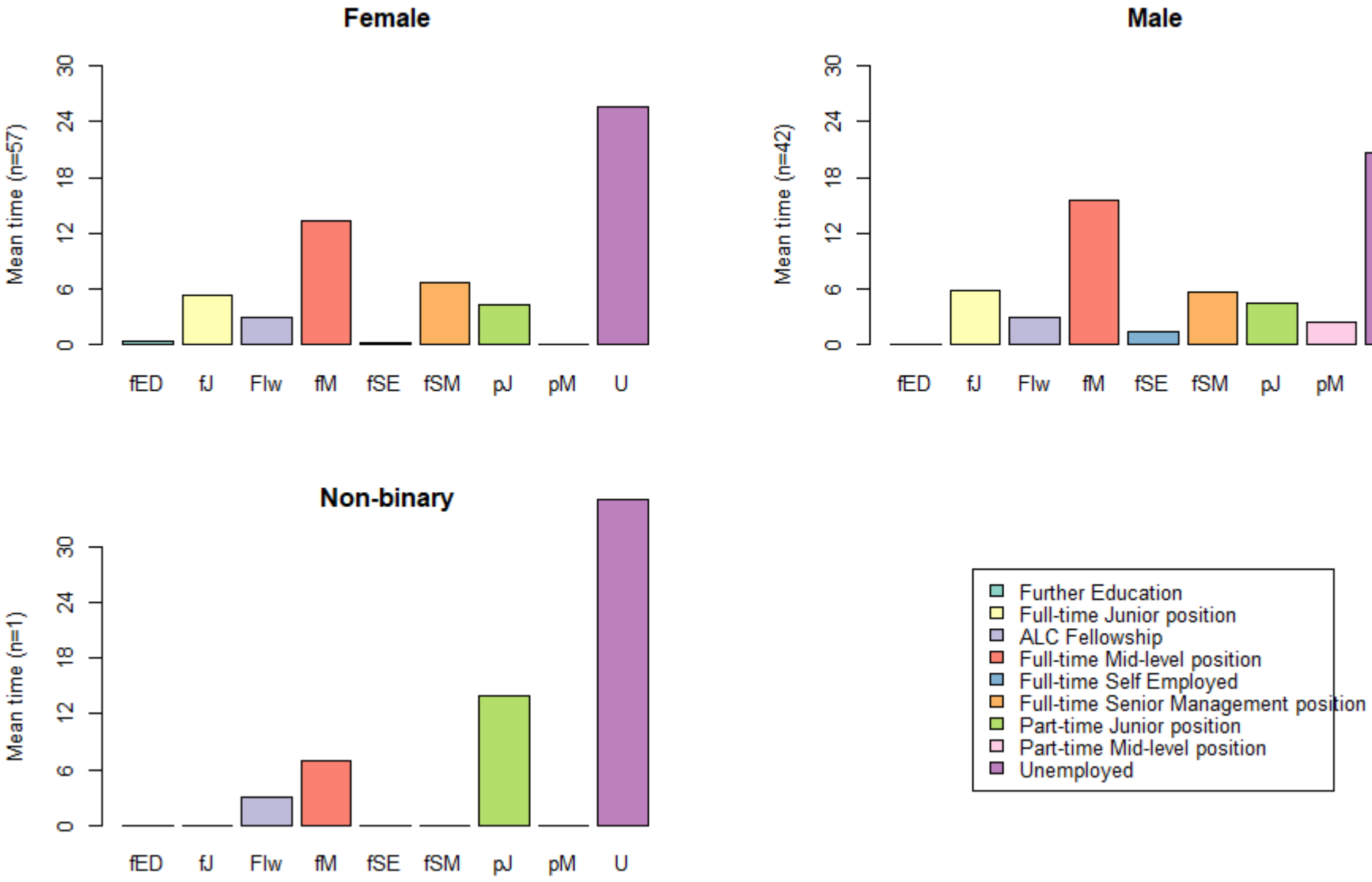

Fig. 6a: Meantime in each state by Sex (5-Years Pre-ALC Fellowship)

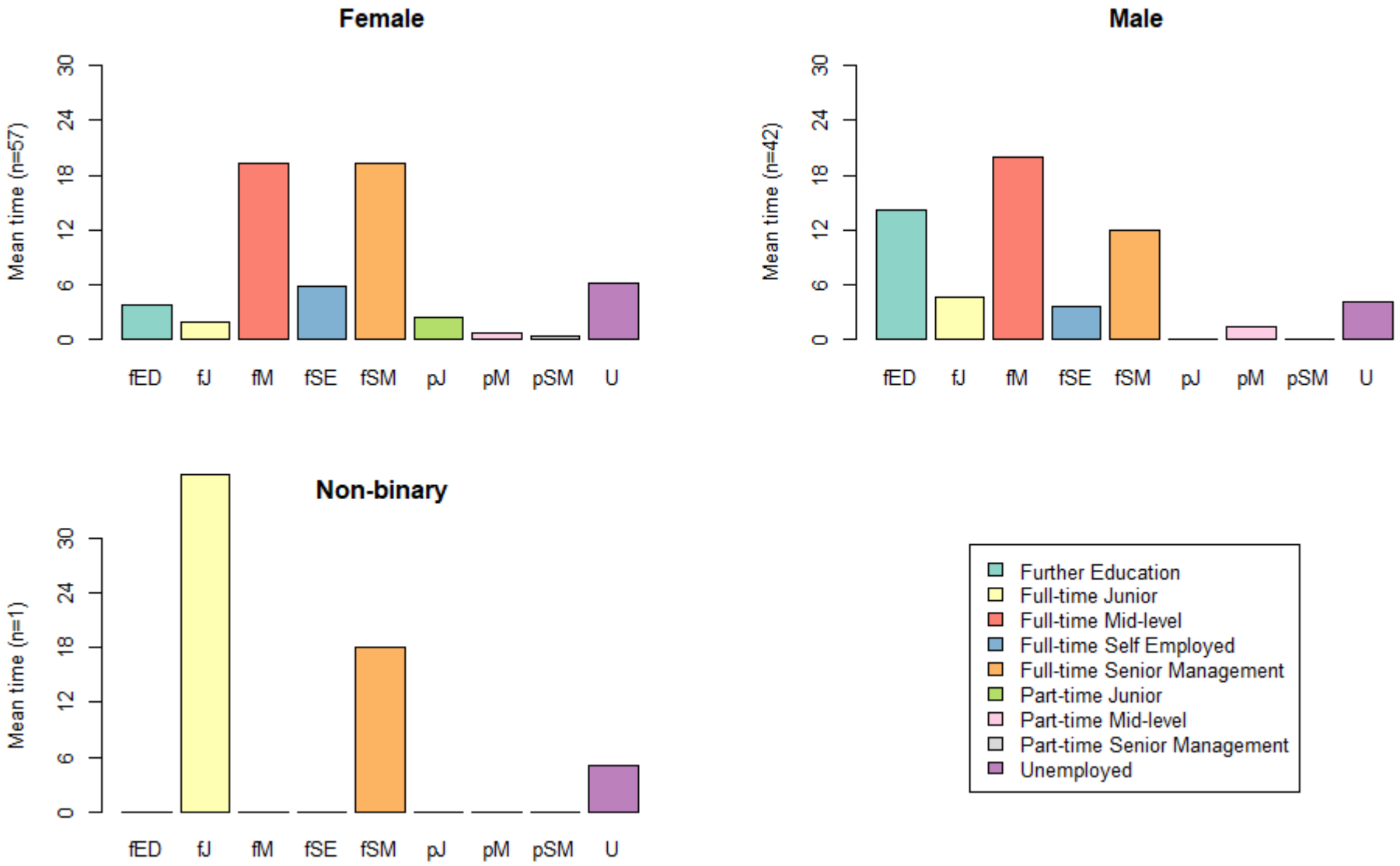

Fig. 6b: Meantime in each state by Sex (5-Years Post-ALC Fellowship)

Life Course and Career Trajectory by Age Cohort

The state sequence distribution plots in Figures 7a and 7b depict the career trajectories of participants across different age cohorts before and after the fellowship. Comparison of these plots reveals a consistent reduction in unemployment status immediately following the fellowship. Individuals in the 20-24, 25-29, and 35-39 age cohorts experienced longer periods of joblessness compared to other age cohorts at the onset of the fellowship. However, they fared relatively better than those in the 30-34 age cohort. These observations are further supported by the mean time spent in each state, as illustrated in Figures 8a and 8b. The youngest cohort, aged 20-24, experienced higher unemployment rates. One possible explanation is that they were more likely to have recently graduated from university, leading them to occupy more part-time junior positions compared to older cohorts before joining the fellowship.

As the cohorts aged, they were increasingly likely to secure full-time mid-level and senior management positions compared to other cohorts (e.g., those aged 35-39, 40-44, and 45-49) prior to joining the ALC fellowship. However, following the fellowship (Fig. 7b), participants reported a notable decrease in unemployment rates across age categories (cohorts). Those in the 20-24, 35-39, and 40-44 age groups at the beginning of the fellowship were more inclined towards self-employment positions (e.g., contract staff) than other age groups. This shift underscores a significant alteration in their career trajectory associated with their involvement in the fellowship.

The increase in pursuits of further education is more noticeable among individuals aged 20-24 and 30-34 compared to others. This observation is evident from the plot depicting the mean time spent in each state by age cohorts five years after the fellowship (Fig. 8b). Since participants were mandated to document their career and life events monthly throughout the year, it is apparent that these fellows did not engage in another fellowship apart from the ALC during the reviewed periods. Consequently, this notable shift in trajectories is attributed to the ALC fellowship.

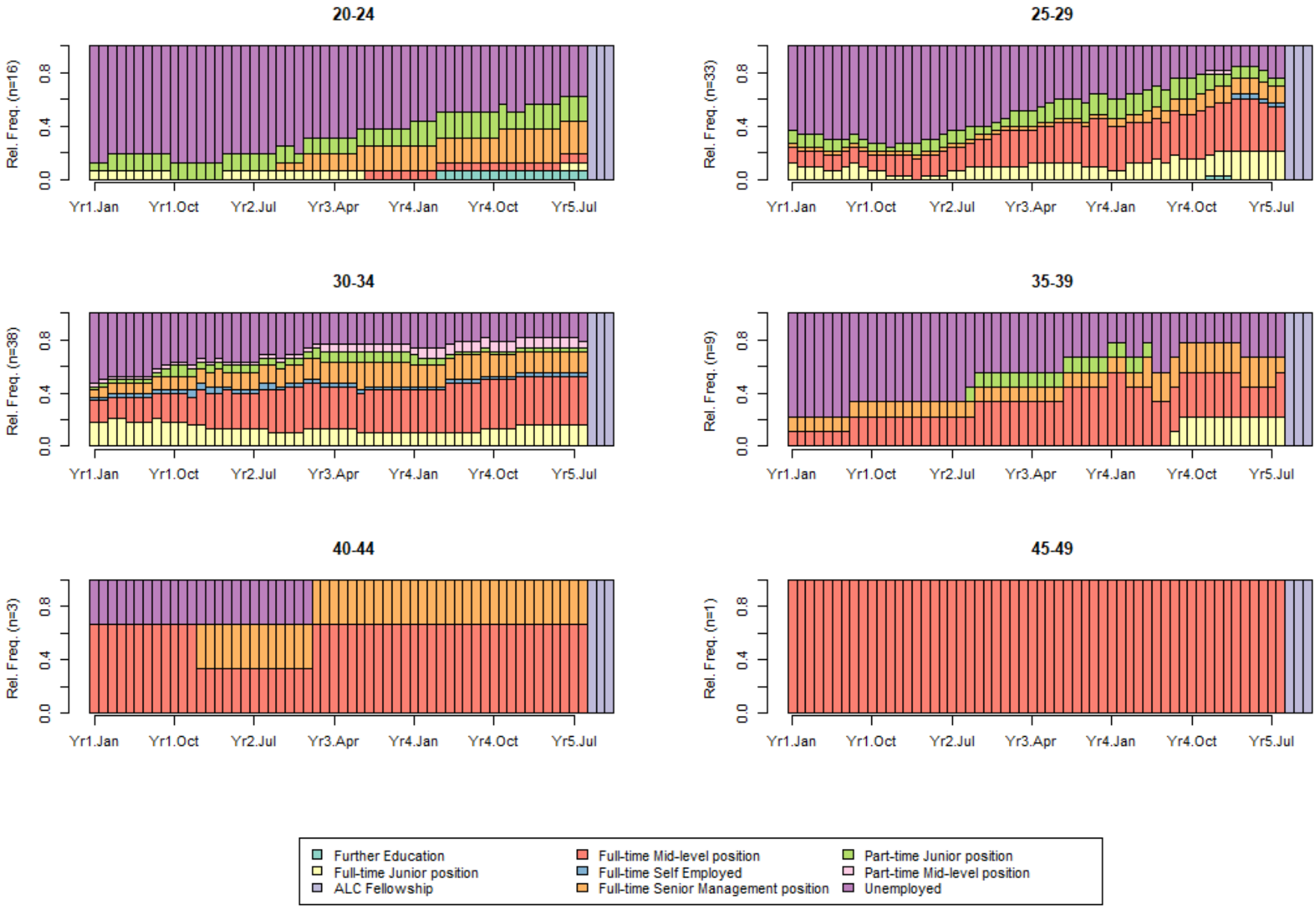

Fig. 7a: State Sequence Distribution Plot by Age Cohorts (5-Years Pre-ALC Fellowship)

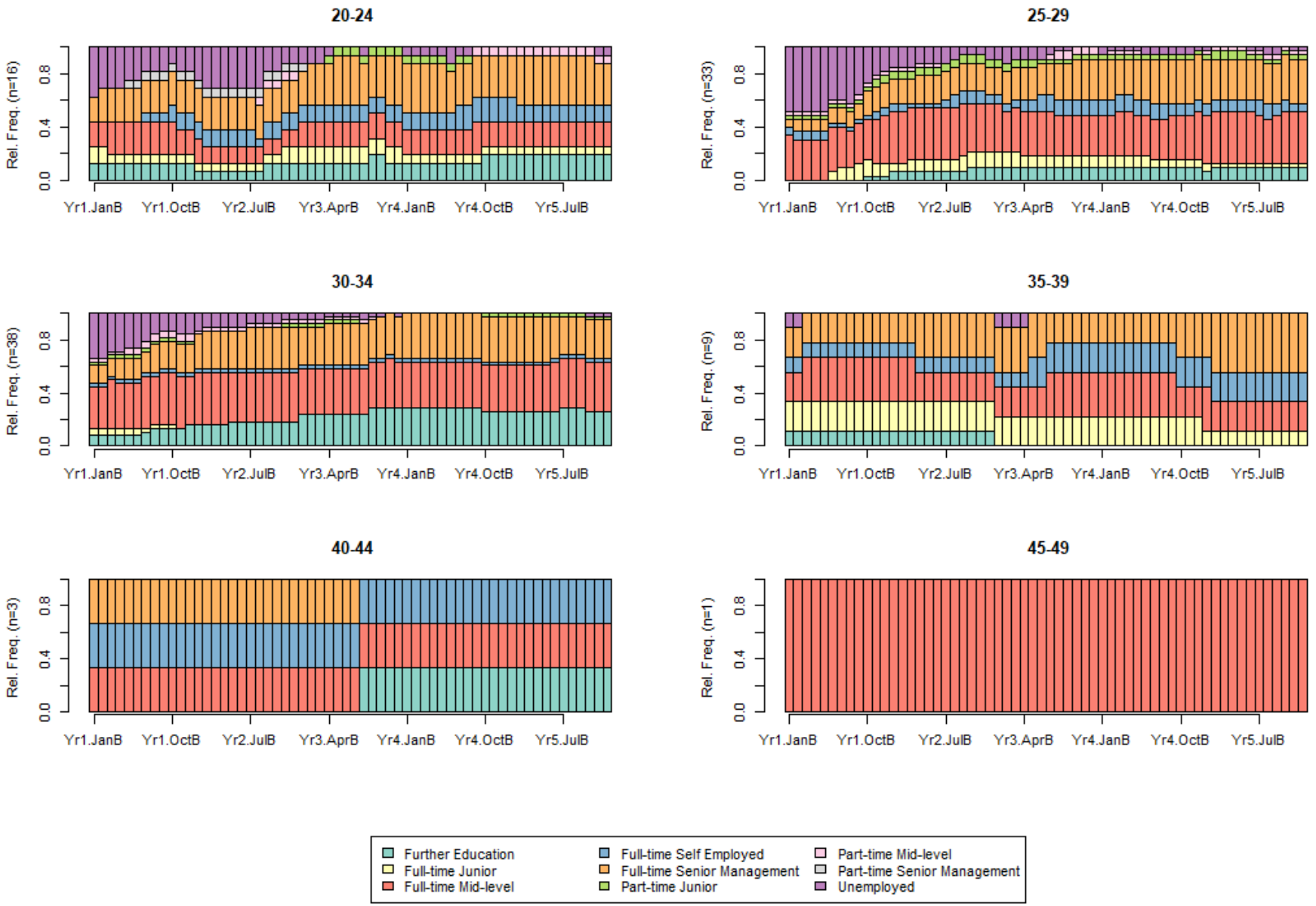

Fig. 7b: Full Sequence Index Plot of Participants by Age (5-Years Post-ALC Fellowship)

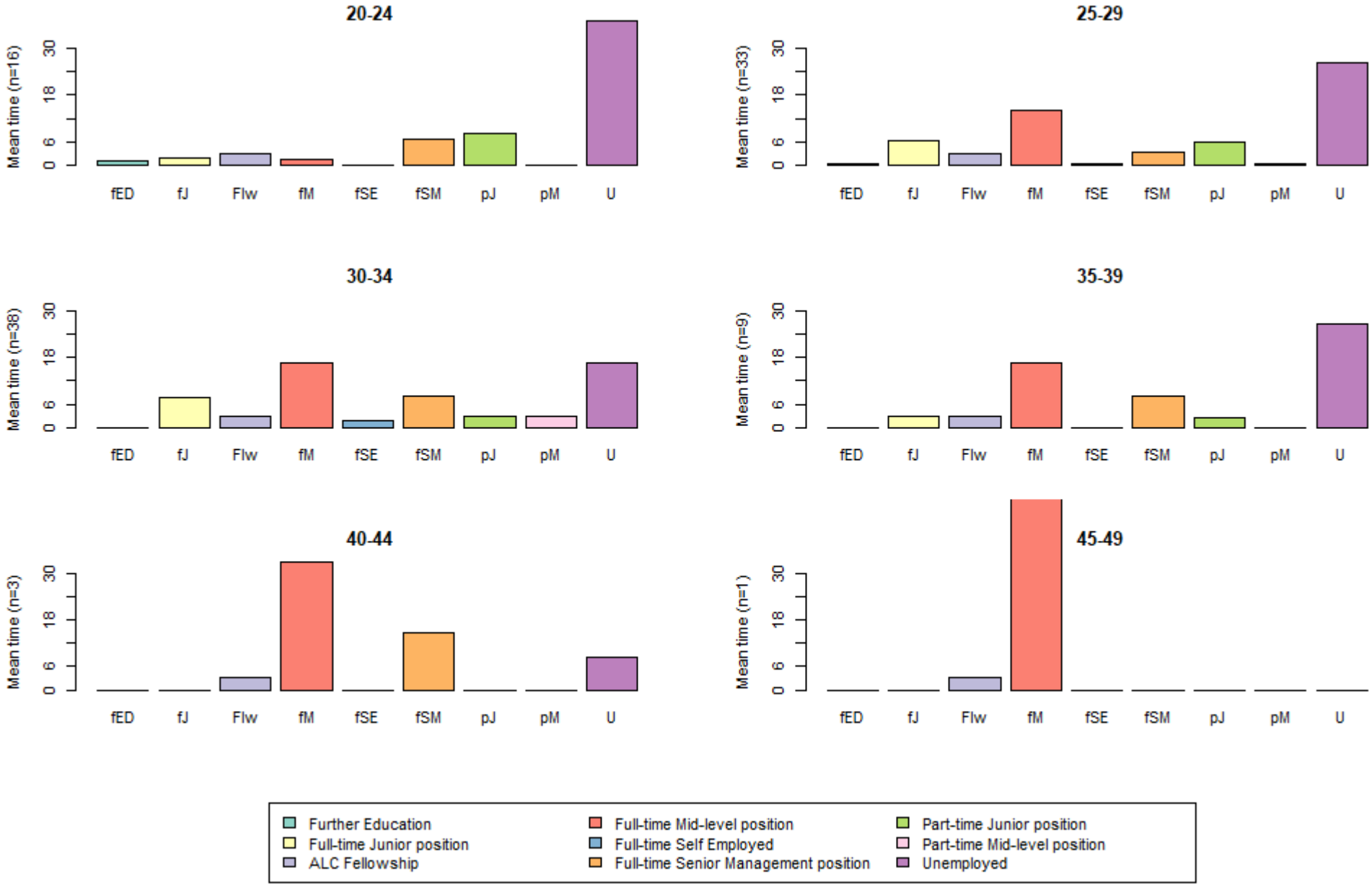

Fig. 8a: Meantime in each state by Age (5-Years Pre-ALC Fellowship)

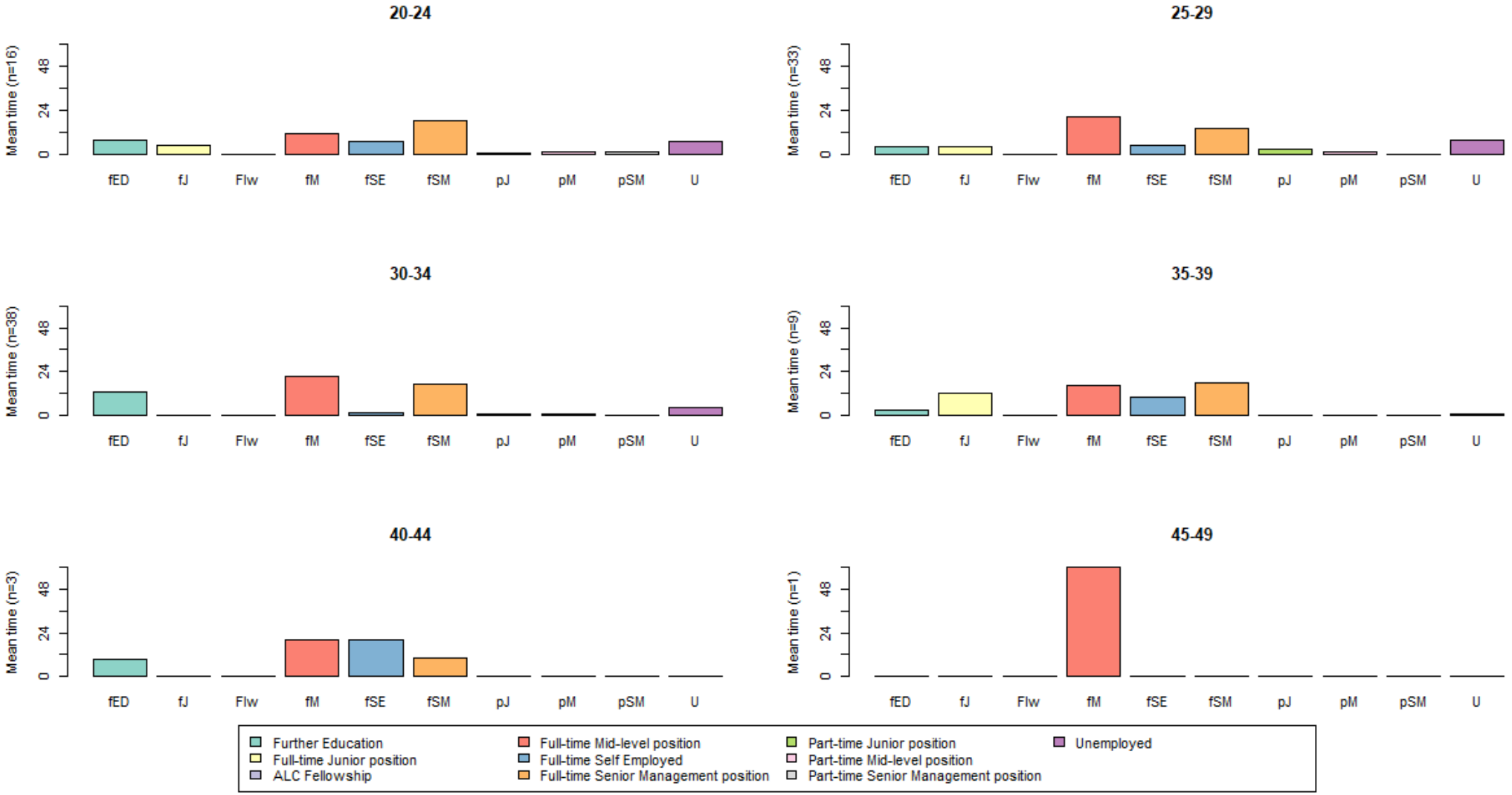

Fig. 8b: Meantime in each state by Age (5-Years Post-ALC Fellowship)

Life Course and Career Trajectory by participants' country's Economic Status, previous postgraduate degree, fellowship cohorts, marital status, and child guardianship

This section explores the impact of participants' nationality or country of birth on their career and life dynamics five years before and after the ALC fellowship (see Fig. 9a and Fig. 9b). The Human Development Index (HDI) of the participants' country of nationality at the time of assuming the fellowship was utilized to gauge the economic status of the country. This calibration facilitated the categorisation of countries into very high, high, medium, and low-income economies.

Five years before joining the ALC fellowship, participants from high, medium, and low-income countries experienced more prolonged periods of unemployment compared to those from other economies (refer to Fig. 10a). However, it's crucial to approach broad generalisations cautiously from this observation, considering that participants from low and medium economies are only 59 and 34 respectively, while only 6 participants are from high HDI countries and merely 1 from a very high economy. Thus, the data exhibits skewness.

Nevertheless, these observations can offer insights into the impact of this economic factor on career trajectories, albeit to a limited extent. For instance, individuals from low and medium economies encountered a wider range of career states than those from high and very high economies. This discrepancy might be attributed to their experimentation with various roles either for survival or due to the challenge of securing stable roles, unlike individuals from more economically developed countries.

After the fellowship, there appears to be a levelling effect across the economic spectrum. The average time spent in each career state, as depicted in Fig. 10b, demonstrates a degree of similarity between individuals from high, low, and medium economies. Notably, unemployment rates significantly decreased for individuals from low and medium economies. Additionally, they exhibited an increased interest in further education compared to their status five years before joining the ALC fellowship. Furthermore, there was a notable surge in the number of participants assuming full-time senior management positions, full-time self-employment, and full-time mid-level positions immediately after completing the ALC fellowship. Given that these participants did not mention undergoing any other fellowship programs within the initial years following the fellowship, it is reasonable to infer a correlation between their progressions and trajectories and the ALC fellowship.

In Fig. 11a, individuals who had obtained a postgraduate degree before joining the ALC pursued further studies after leaving the ALC and tended to experience less unemployment compared to those without such qualifications. However, after the fellowship, participants with prior higher education still spent more time on average unemployed compared to those without (Fig. 11b). Interestingly, individuals without higher degrees before the ALC fellowship tended to spend more time in full-time senior management positions than those with higher degrees.

Fig. 12a indicates that individuals in the African Scholars fellowship cohorts experienced shorter mean durations of unemployment compared to those in the women's fellowship cohorts prior to joining the ALC fellowship. Moreover, participants in the Women's fellowship spent more time on average in senior management and full-time mid-level positions than those in the African Scholars cohort before the ALC Fellowship. African Scholars cohorts tended to hold more full-time junior positions compared to the Women's fellowship cohorts pre-ALC fellowship. Additionally, individuals in the African Scholars' cohorts pursued higher education more often than those in the Women fellowship cohort before joining the ALC. After the fellowship (Fig. 12b), individuals who completed the Women Fellowship held significantly more full-time senior management positions than the African Scholars. They also occupied fewer junior positions compared to the African scholars, who reported spending more time pursuing further education after completing the fellowship.

Fig. 13 reveals that individuals who were single or partnered spent slightly more time on average unemployed than those who were married before the fellowship. Moreover, individuals who were married, partnered, or separated spent more time on average in full-time mid-level positions than singles. Finally, those who were married or separated occupied more full-time senior management positions than those who were single or partnered.

In Figure 14a, prior to the fellowship, individuals who were responsible for or in the guardianship of a child spent less time, on average, unemployed compared to those who did not have children. Those who were in parental or child guardianship roles held more full-time mid-level and senior management positions than those who did not have such responsibilities before the fellowship. Following the fellowship (Figure 14b), unemployment decreased for both those with child guardian/parental responsibilities and those without. After the ALC Fellowship, a greater number of individuals without child caring responsibilities pursued further education compared to those with such responsibilities. Participants who had child caring responsibilities reported spending more time, on average, in full-time senior management positions than those without such responsibilities.

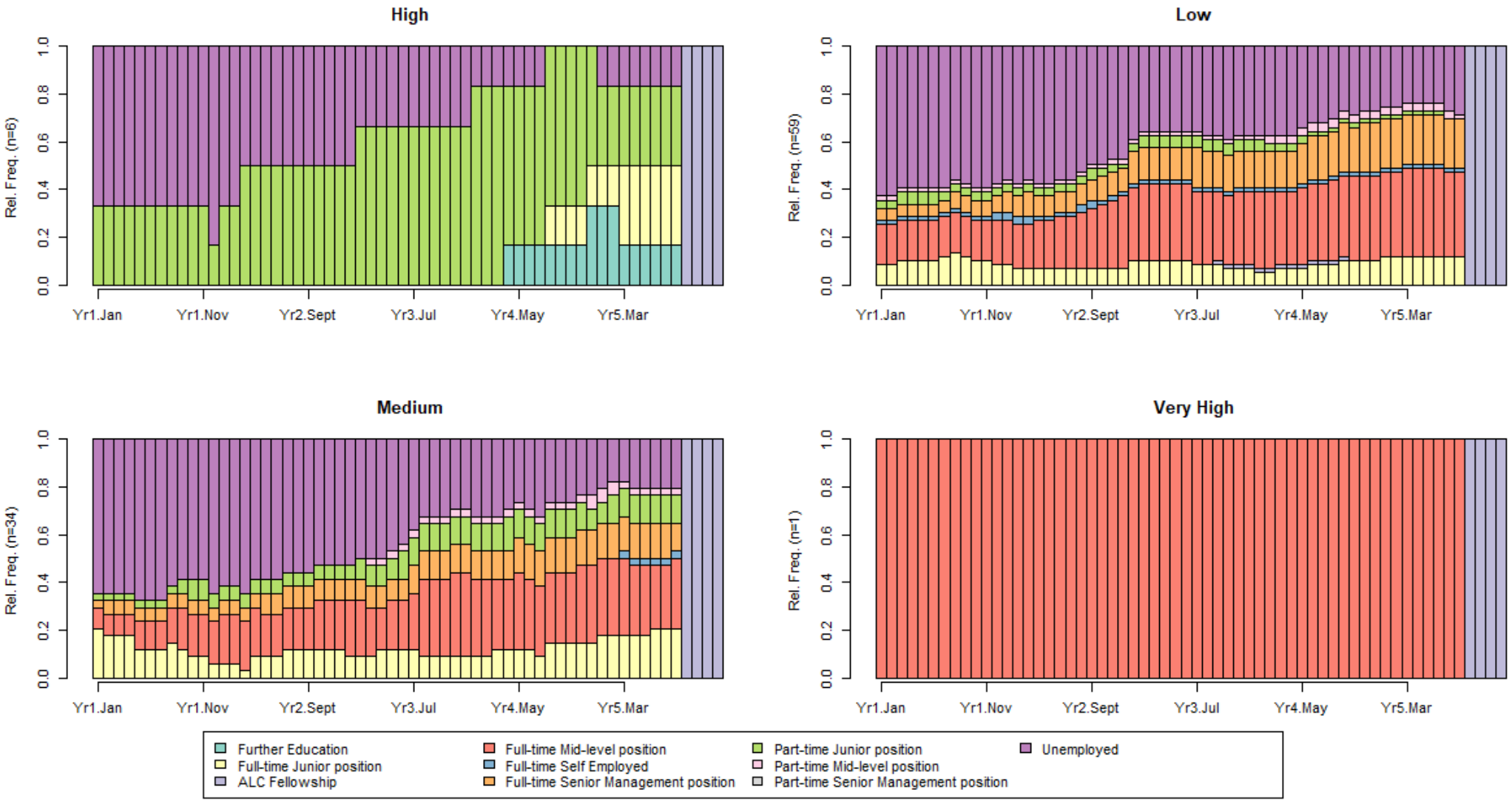

Fig. 9a: State Sequence Distribution Plot of Participants' Country's Economic Status (HDI) (5-Years Pre-ALC Fellowship)

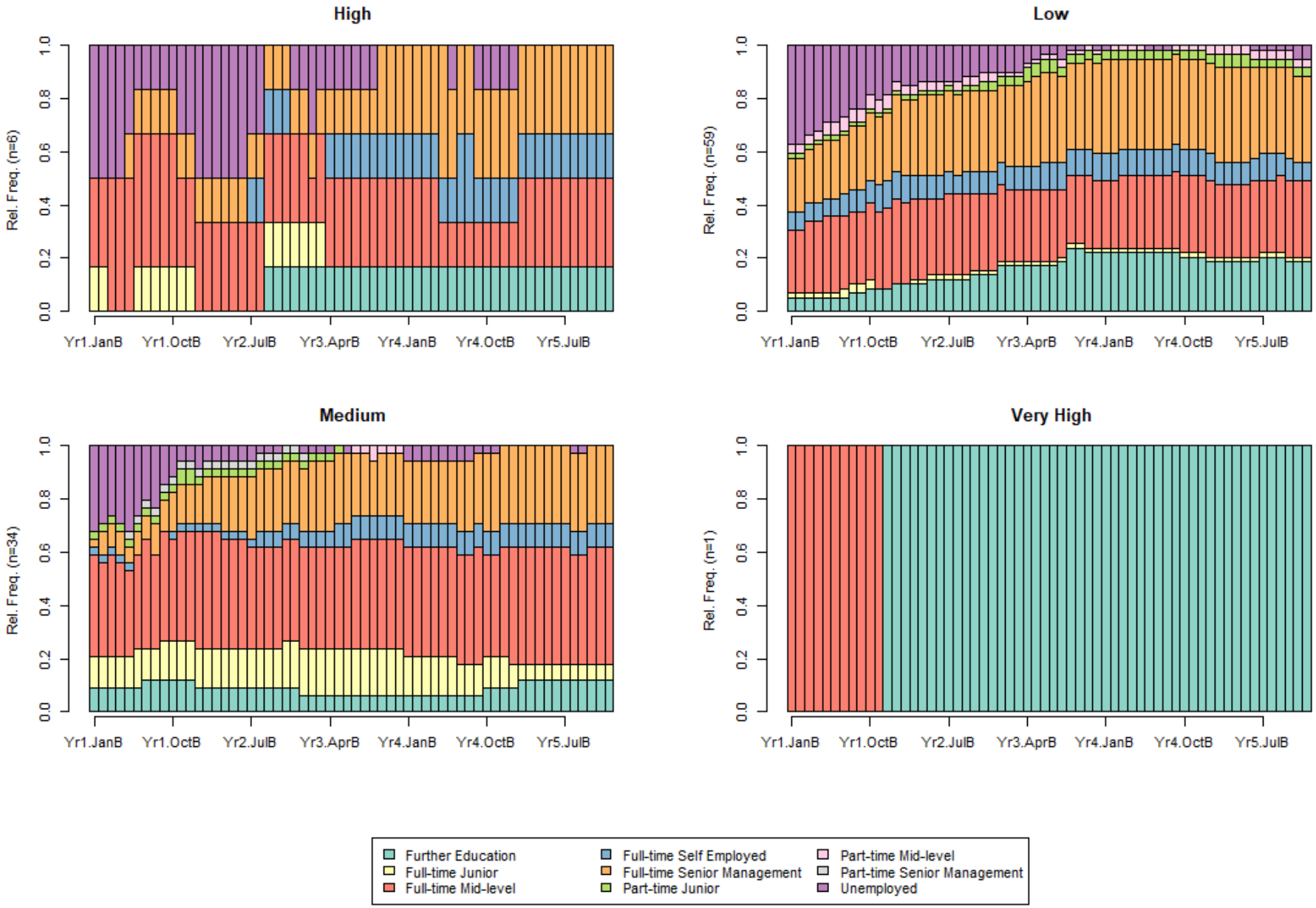

Fig. 9b: State Sequence Distribution Plot of Participants' Country's Economic Status (HDI) (5-Years Post-ALC Fellowship)

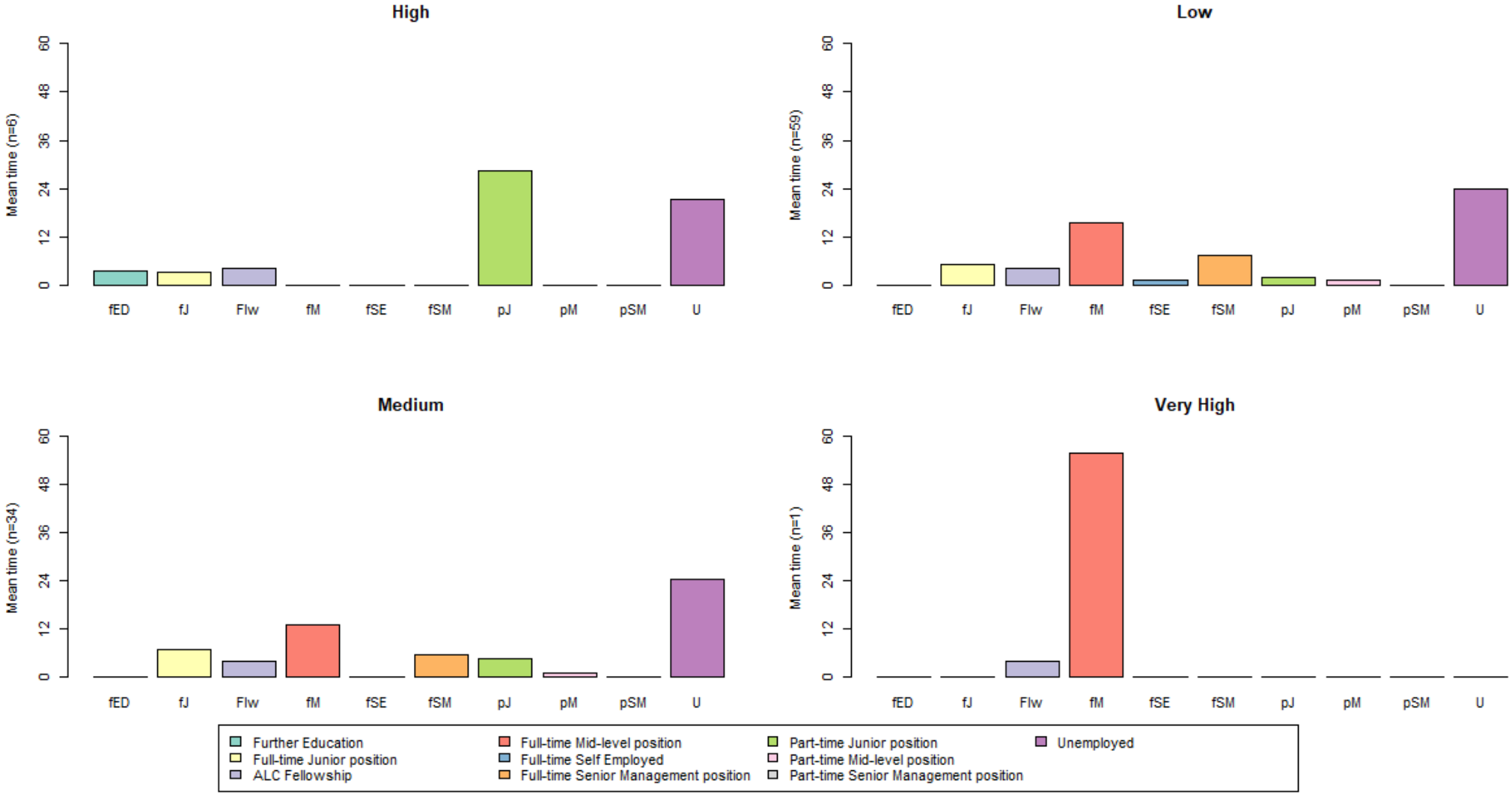

Fig. 10a: Meantime in each state by the Economic Status (HDI) Participants' Country (5-Years Pre-ALC Fellowship)

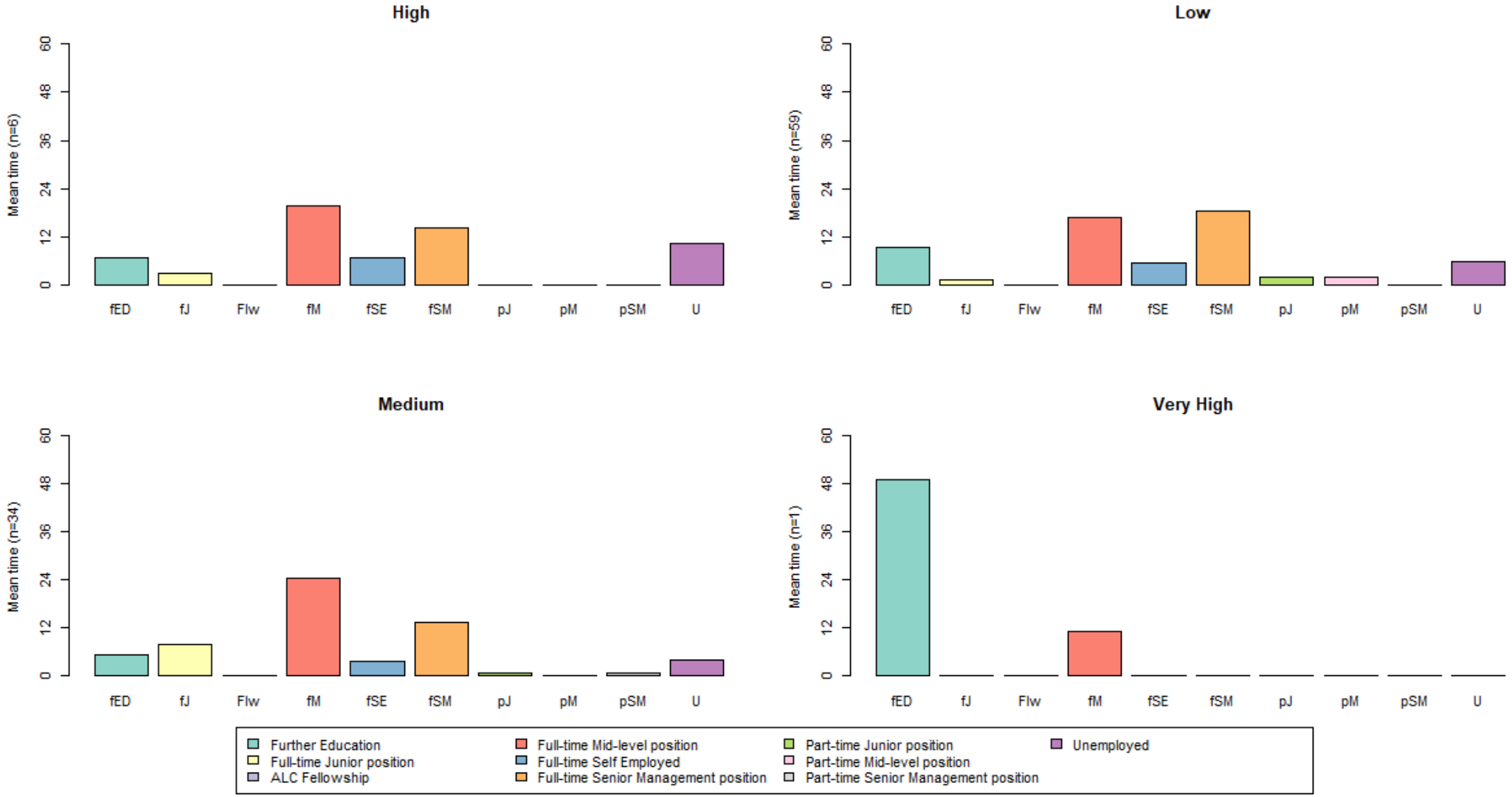

Fig. 10b: Meantime in each state by the Economic Status (HDI) of Country of Participants (5-Years Post-ALC Fellowship)

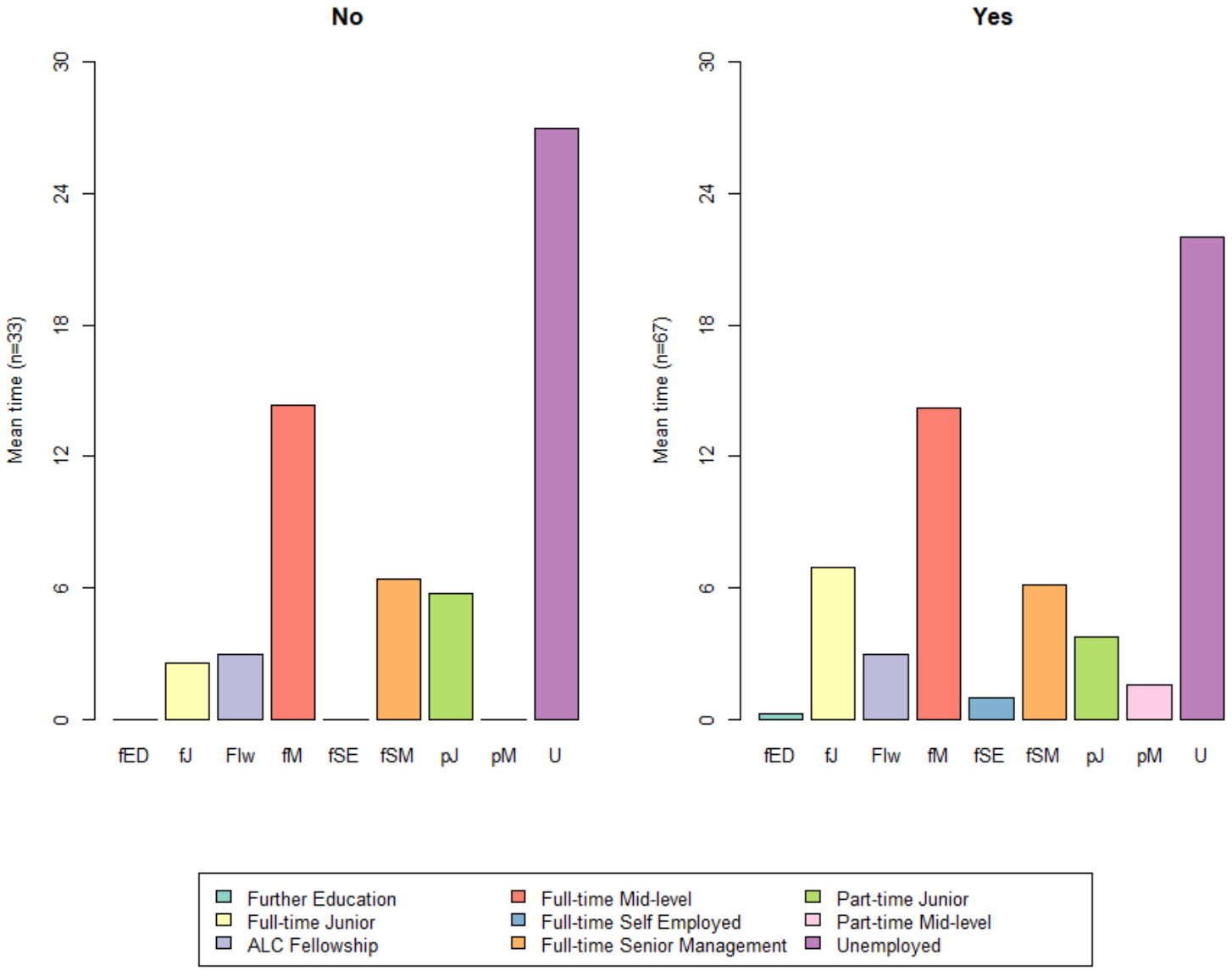

Fig. 11a: Mean time spent in each state by Completion of a Higher Degree (MSc., PhD., PGD, etc.) (5-Years Pre-ALC Fellowship)

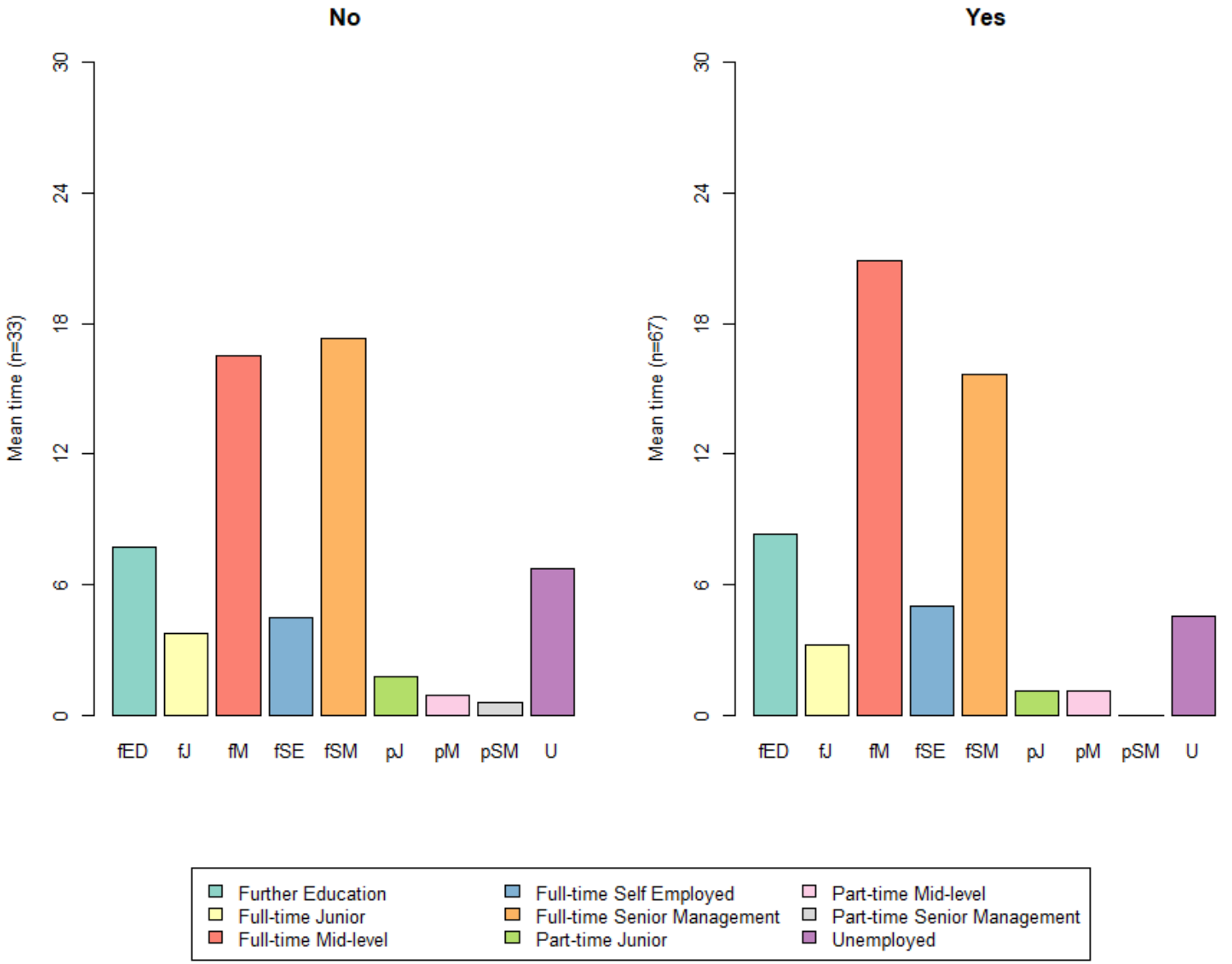

Fig. 11b: Mean time spent in each state by Completion of a Higher Degree (MSc., PhD., PGD, etc.) (5-Years Post-ALC Fellowship)

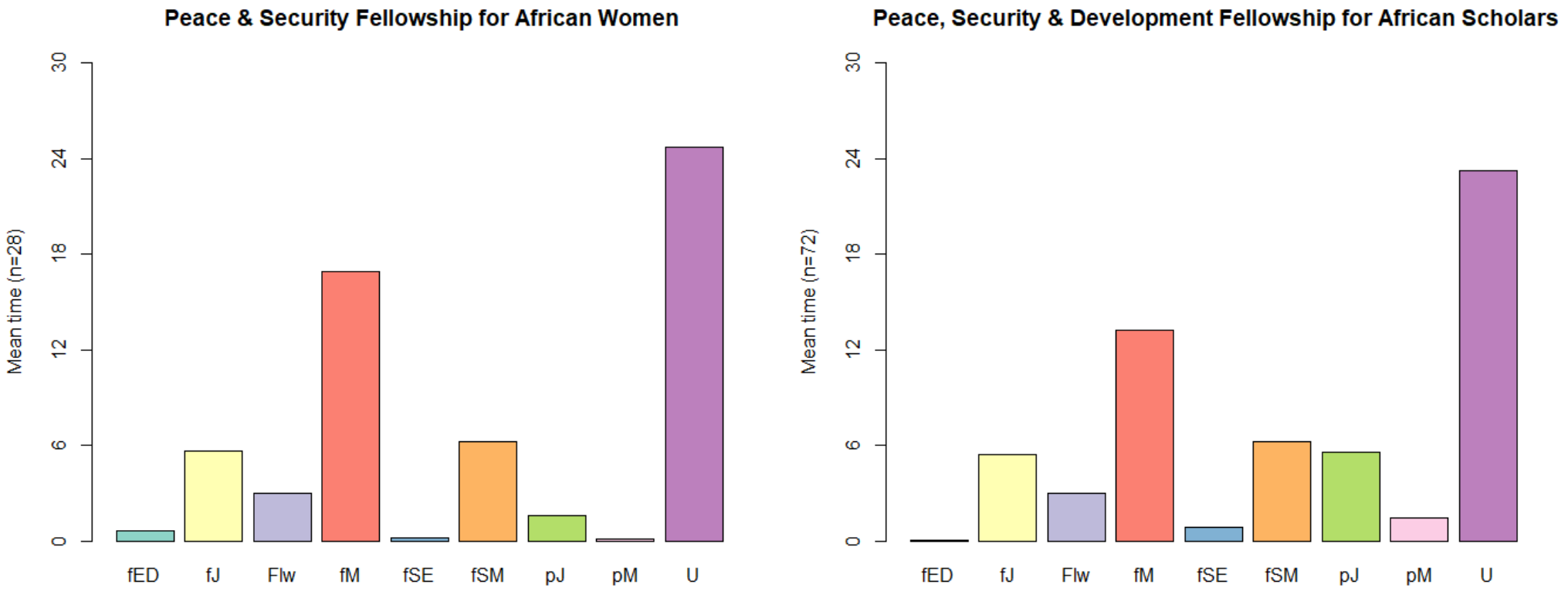

Fig. 12a: Mean time spent in each state by Fellowship type (5-Years Pre-ALC Fellowship)

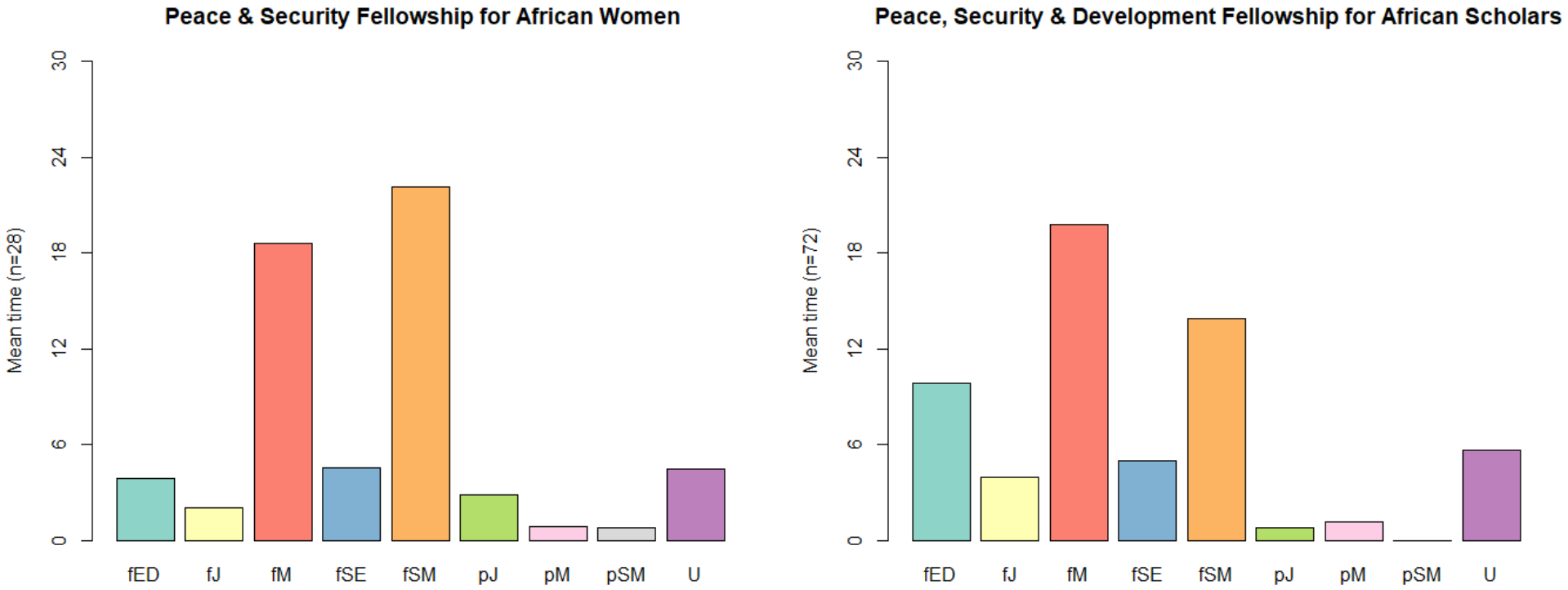

Fig. 12b: Mean time spent in each state by Fellowship type (5-Years Post-ALC Fellowship)

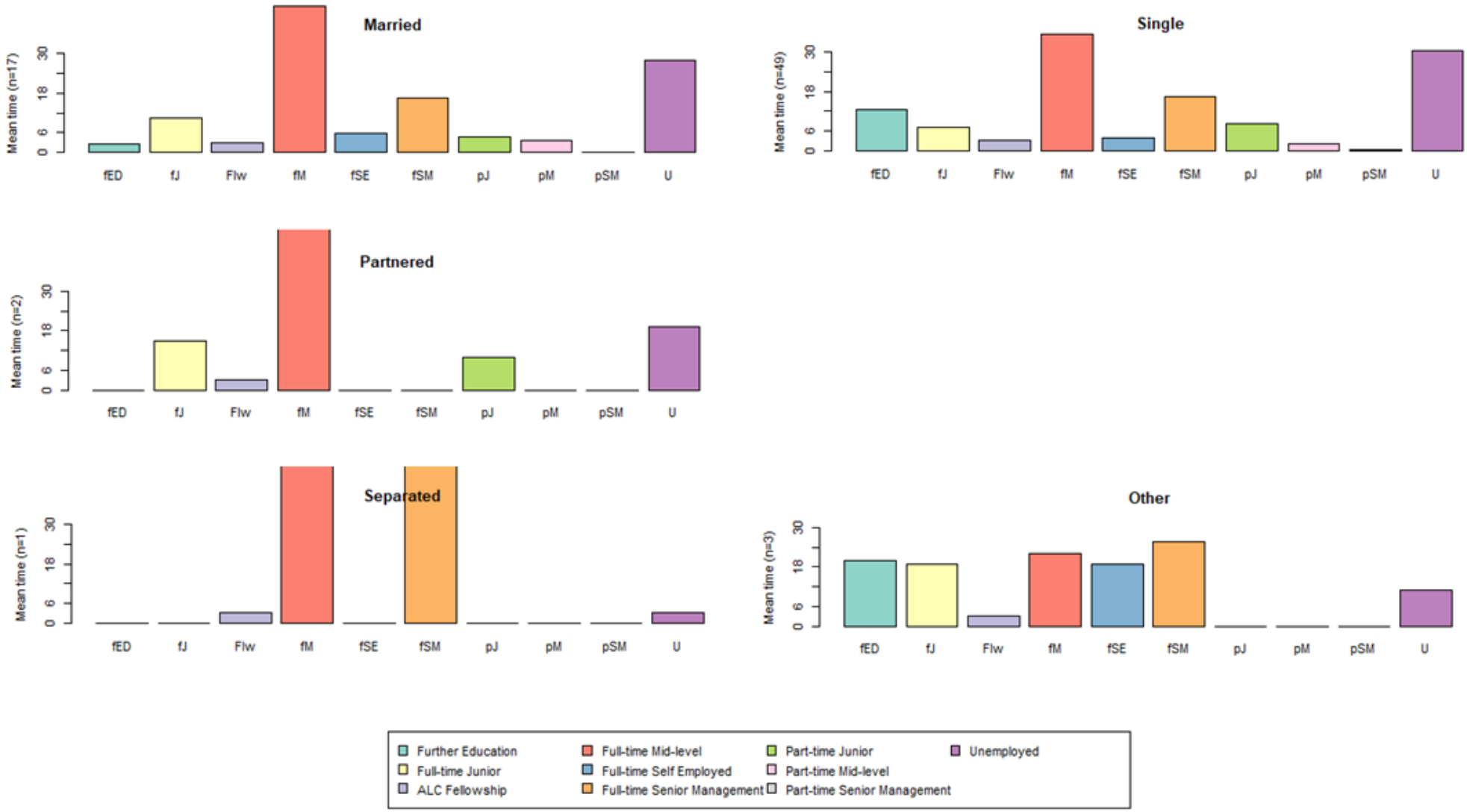

Fig. 13: Mean time spent in each state by Marital Status

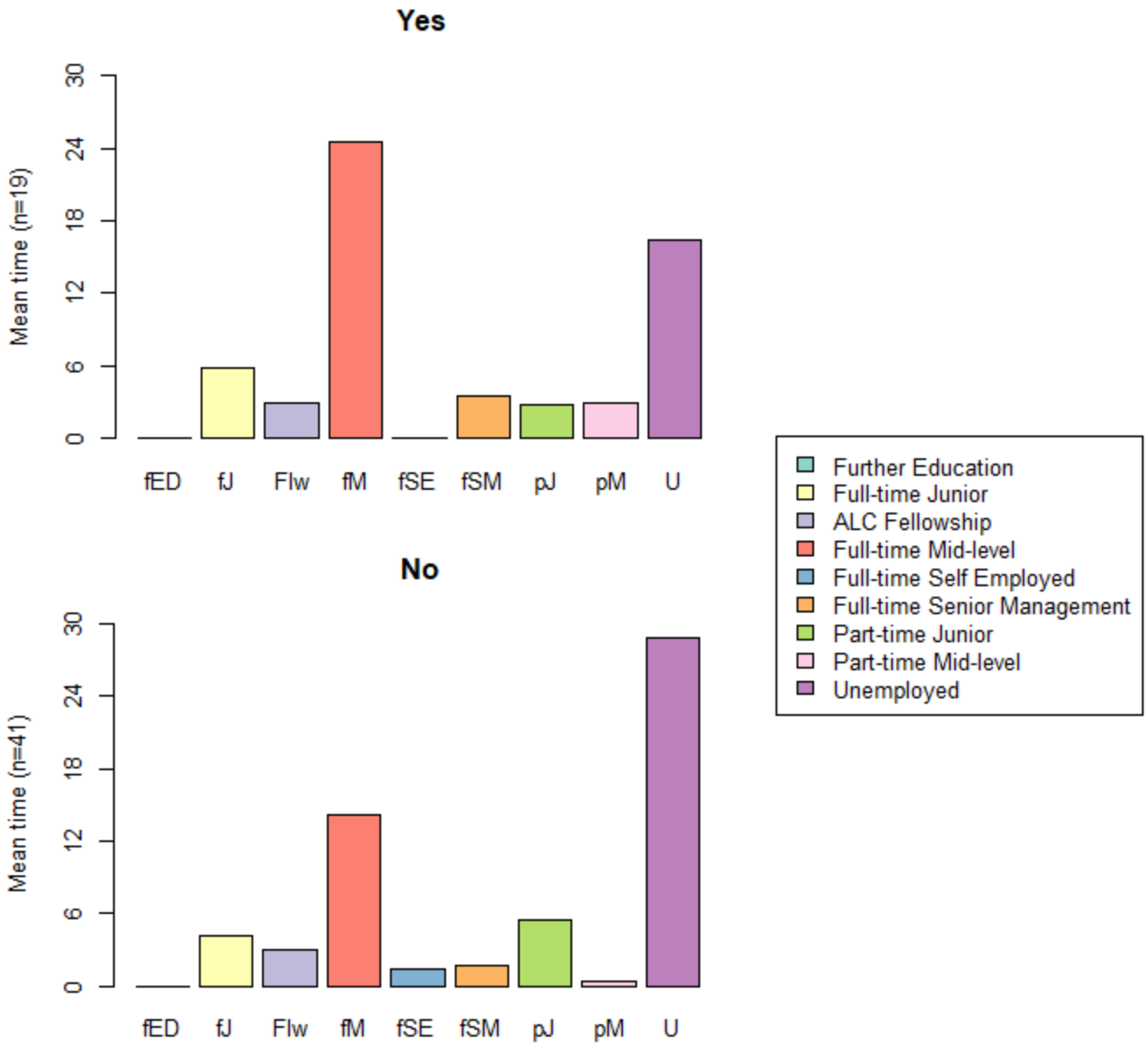

Fig. 14a: Mean time in each state by Child caring (parental or guardianship) (5-Years Pre-ALC Fellowship)

B

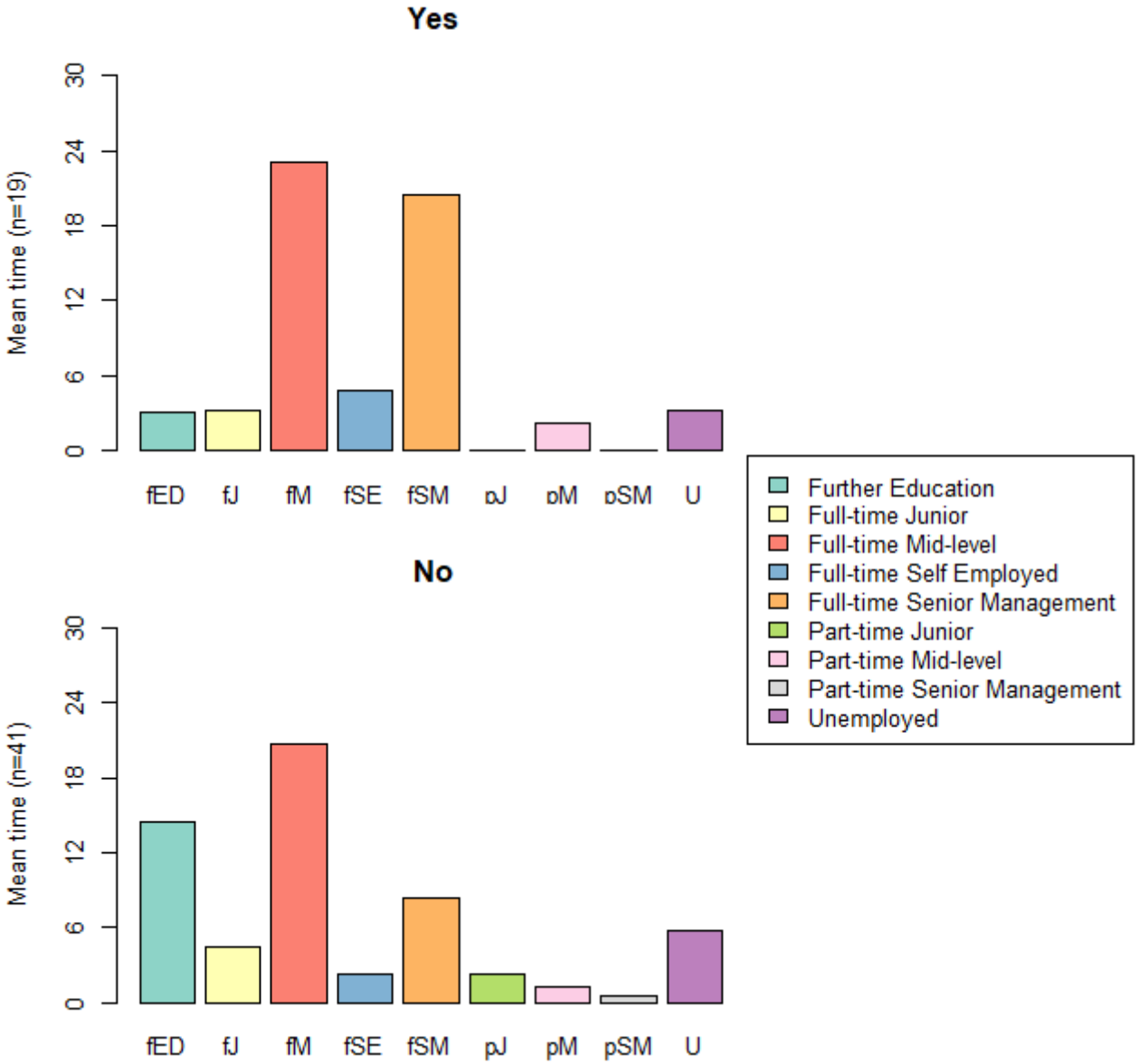

Fig. 14b: Mean time in each state by Child caring (parental or guardianship) (5-Years Post-ALC Fellowship)

Conclusion

Most of the programs have defined timeframes or duration, for example, the African Young Women Leaders (AfYWL) Fellowship (12 months), the Amani African Youth Peace Fellowship in Thailand (42 days online self-development program and a 14-day intensive training program)[27,28] and pre-defined characteristics of individuals who are seen as "leaders" and promising. They are usually of a particular mould, thereby projecting popular leadership norms. The ALC fellowships understand that leadership is a process and a journey; there are no terminal dates to fellows' alumni engagements, as they are provided tools, platforms (e.g. workshops, conferences) and rolling mentoring opportunities for publications, post-fellowship training, thereby enhancing the capabilities of the past fellows. They are also paired with new fellows for one-on-one mentoring sessions.

Since leadership is not fixed, the ALC fellowships welcome all forms and characteristics and recognise their different journey points and trajectories. The Rotary Peace Fellowship Master's degree program operates similar but slightly different components - academic training, two- to three-month applied field experience, networking, workshop seminars and a final seminar where fellows present their master's research.[29] The ALC workshops, seminars, and other components, are not categorically terminal in that sense because they are built to accompany the fellows in their evolution and pathways.

[27] See https://www.undp.org/Africa/AfYWL
[28] See https://www.iefa.org/scholarships/2250/Fellowship_-_Amani_African_Youth_Peace_Fellowship_in_Thailand
[29] See https://www.rotary.org/en/our-programs/peace-fellowships-masters-degree-programs

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