Improving mental health of early-career researchers

The current mental health status of early-career researchers in academia is disconcerting, with around half of the PhD candidates having an increased risk of mental health problems[A]. Further, recent studies have shown that about ⅓ of all PhD candidates already suffer from mental health related problems such as burnout[B] . Mapping the situation for Postdocs is hampered by the fact that they are not a separate category in the job classification system (UFO). Surveys have indicated that more than ⅓ of the Postdocs are at risk of developing serious mental health issues such as anxiety and depression[C]. Common underlying causes seem to be related to high work pressure, publication/grant pressure, lack of academic career prospects/support, and work-life imbalance.

This situation is alarming and requires action by the government, institutions employing early-career researchers and the early-career researchers and their supervisory teams themselves. Recognizing this need for action, NWO initiated and facilitated a workshop for which different stakeholders were invited: Advisory Committee DIHOO[D], KNAW[E], LNVH[F], Ministry of OCW[G], NFU[H], NWO[I], PNN[J], PostdocNL[K] and UNL[L]. During the workshop, participants were asked to provide recommendations aimed at improving the mental health and psychosocial well-being of early-career researchers in the Netherlands. The resulting compilation of recommendations was based on input from all participants: as such, not all recommendations are necessarily unanimously endorsed by all organizations mentioned.

In the following, PNN and PostdocNL (the national platforms for PhD candidates and Postdocs, respectively) summarized the list of recommendations and compiled this report. Specifically, 8 areas were identified in which action is needed:

(1) Representation and involvement,
(2) Supervision and support by leadership,
(3) Performance evaluation and job requirements,
(4) Funding and career perspectives,
(5) Monitoring and creating awareness of mental health,
(6) Providing (access to) help,
(7) Specific actions in relation to the aftermath of the COVID-19 pandemic,
(8) Specific actions aimed at international early-career researchers.

1. Facilitating representation and involvement

PhD candidates and Postdocs hold temporary positions which often makes it difficult to join participatory bodies. Additionally, early-career researchers are less or not at all involved in staff meetings. This hampers representation of their interests.

Despite the existence of several local organizations that represent the interests of early-career researchers, PhD candidates and Postdocs are not always involved in the decision-making process on policies concerning themselves. We believe it is crucial to improve this in order to effectively address the issues that early-career researchers face.

Area	Action Point	Outcome	Responsible
Representation and involvement	Integrate positions in participation bodies for employees with temporary contracts: lower	Representative participation bodies	Institutions[M], Government

			G
	minimum appointment durations and allocate contract hours for employee participation		
	Actively recruit early-career researchers within participation bodies, compensate/acknowledge time spent on representation by extending contracts/reducing teaching hours	Representative participation bodies without additional work pressure	Institutions[M]
	Structurally involve local PhD/Postdoc network in policy-making for early-career researchers	Shared-decision making	Institutions[M]

2. Supervision and support by leadership

Often supervisors and direct managers are the first point of contact when issues arise. Therefore, these persons play an important role in the well-being and mental health of PhD candidates and Postdocs. They need to be equipped to adequately deal with such situations. The role of supervisors and managers should be clearly defined and suitable training has to be provided.

Important to consider is that early-career researchers are very dependent on their direct supervisors. If something goes wrong in this relationship, it can have a great impact on the work, career (prospects), and wellbeing of the PhD candidate or Postdoc. Safeguards and additional support routes need to be in place to deal with this dependency and prevent abuse of power.

Clear leadership and policies are essential. Large differences in leadership within and between institutions, as well as opaque policies, often raise the threshold to seek help.

Area	Action Point	Outcome	Responsible
Supervision and leadership	Provide leadership/mentoring training to supervisors that equips them to address issues with mental health	Ensured quality standard for supervision and mentoring	Institutions[M]
	Explicitly evaluate supervision of early-career researchers	Improvement of supervision	Institutions[M]
	Actively involve senior researchers in changes	Ensure success of interventions	Institutions[M], Government[G]
	Investigate possible value of a maximum number of PhD candidates that a promoter may supervise	Ensure sufficient supervision for every PhD candidate	Institutions[M]
	Ensure adequate policies and procedures for preventing and dealing with supervisory misconduct / abuse of power	Decreased dependence on supervisor	Institutions[M]

3. Job requirements and performance evaluation

Early-career researchers suffer from high work pressure. This pressure is partly connected to unclear or excessive job requirements and a culture of overworking. For example, the rules concerning the required number of publications to qualify for a PhD degree differ a lot depending on the promoter, faculty, discipline, and institute. To relieve pressure, the way performance evaluations are done for early-career researchers should be reconsidered: the rewards and recognition principles[N] should be applied and more attention for personal well-being is needed.

Approximately ¼ of those who start a PhD trajectory as an employed candidate do not obtain their doctorate.[O] For Postdocs, i.e. the category of academic employees that most likely includes Postdocs*, ¼ leave each year and only 18% of them move into a higher staff position.[P] The reasons for quitting are not recorded or evaluated. As a result, possible patterns (e.g., a correlation with the

number of other PhD candidates supervised by the same promoter) cannot be detected. This hampers the development and implementation of beneficiary policies that tackle this issue.

Area	Action Point	Outcome	Responsible
Job requirements	Define central policy for publication standards to obtain a PhD degree	Relief pressure due to publication requirements	Institutions[M]
	Sharpen definition of Postdoctoral researchers at central level; integrate various function profiles that are currently in place	Increased visibility and clear definition of Postdoc, tasks, and corresponding salary scales	Institutions[M]
Performance evaluation	Implement rewards and recognition principles for early-career researchers	Relief pressure due to publication requirements	Institutions[M]
	Ensure that (early career) researchers are taking vacations and discourage structurally working overtime by evaluating this at R&D conversations	Increased work-life balance	Institutions[M]
	Include mental well-being in the formulation of future objectives of early-career researchers	Weigh personal aspects in assessment of early-career and allow for time allocated to personal development and self-care	Institutions[M], Funding bodies[Z]
	Monitor quality of PhD trajectories and reasons for early-career researchers to finish or quit	Exit interviews for all PhD candidates (irrespective of PhD completion) and postdocs	Institutions[M]
	Implement policy for drop-out due to (mental) health issues, e.g. related to conditions to complete projects, or flex law/contract extension (clause option)	Support of struggling early-career researchers, more projects completed	Institutions[M]

4. Funding and career perspectives

Postdocs specifically suffer from much uncertainty and short-term positions. At the same time, further career options and grant possibilities are not always clear. There is a need for a well-defined career perspective in and outside of academia, transparent policies, and more certainty for individual researchers. Initiatives like Casual Academy[Q] and 0.7[R] already fight for better labor rights, social safety, and career perspectives for academics.

An important point to stress is that there is limited possibility for maternity leave during the postdoc phase, which causes additional strain on female early career researchers and ultimately leads to outflow of a lot of female talent.

Area	Action Point	Outcome	Responsible
Funding and career perspectives	Create funding for long-term stable Postdoc positions	Improved career perspectives for early-career researchers	Government[G], Funding bodies[Z]
	Provide introductions to Dutch academic grant and contract systems	Equal knowledge about career paths among early-career researchers	Institutions[M]
	Facilitate maternity leave for female early career researchers	Retain female talent in academia	Institutions[M]

5. Monitoring and awareness of mental health

While Dutch institutions seem to be aware of the impact of working in academia on the mental health of early-career researchers, it is unclear whether the specific problems are sufficiently clear, whether existing support is visible enough and whether all necessary support is available.

To better understand the scope of the mental health issues, comprehensive studies into the social safety[S] and drivers of researchers[T] within the Netherlands need to be considered. Currently, (international) activities/consortia are trying to map the mental health status of early-career researchers.[U,V] Such monitoring is essential to identify concrete problems and track improvements. Additionally, it is vital to create awareness about issues related to mental health by publishing and disseminating the results of monitoring efforts. Generally it should be kept in mind that minority groups in academia (e.g. ethnic minorities, women, the LGTBQ+ community or individuals with a disability) are affected differently and need special attention when taking action.

Area	Action Point	Outcome	Responsible
Monitoring of mental health	Monitor mental health and influential factors of early-career researchers at different stages of their contracts; Improve current monitoring where necessary	Comprehensive statistics of the mental health status of the early-career researchers; Identification of causes of mental health-related issues in early-career researchers; Identifying what types of help are needed (e.g. courses, counseling)	Institutions[M] Government[G]
	Improve connections and feedback between facilitating parties	Identification of structural patterns and hindering factors contributing to mental health issues; Sharing of best practices	Institutions[M] (occupational physicians, HR), Government[G]
	National coordination on identified problems and required actions	Comprehensive overview of mental health status of early-career researchers across the Netherlands	Institutions[M], Government[G]
Awareness	Publication and wide dissemination of existing data and results on mental health	Awareness and transparency regarding the mental health issues of early-career researchers in the Netherlands; Decrease of stigma	Institutions[M], Government[G]
	Organize local conversations and events related to early career researcher's mental health	Facilitate open conversation and understanding; Decrease of stigma	Institutions[M]

6. Providing (access to) help

Following extensive monitoring, it is important to provide help to early-career researchers, directed at both prevention of mental health issues and intervention when they occur. Often institutions already provide support in different forms - sufficient accessibility and clear communication of support possibilities is key to the success of these efforts. Additionally, we expect that new prevention and intervention actions will be needed once more detailed data is available.

Area	Action Point	Outcome	Responsible
Providing (access to) help	Providing and improving access to and visibility of existing help for mental health-related problems	Improved mental health of early-career researchers by using available resources	Institutions[M]

	Ensure quality of offered support through (1) target-group-specific expert training as well as (2) co-production and feedback involving early career researchers themselves	Targeted, professional mental health support for early-career researchers meeting current needs	Institutions[M]
	Develop a Mental Health Toolkit, aimed at early-career researchers, executives, policy makers and funding bodies	Mental Health Toolkit that provides clear guidance on how to obtain help with specific issues	Institutions[M]
	Offer a mentor or buddy system for early-career researchers	Additional support for early-career researchers; Connection with and integration into the department/institution	Institutions[M]

7. COVID-19

During the COVID-19 pandemic, early-career researchers experienced an increased work pressure, hindered research projects, and a disrupted balance between work and private life.[W,X] Although the peak of the pandemic appears to be behind us, the negative consequences that the pandemic has had on various aspects of society will still be with us for years to come. This requires a long-term vision. The effects of the pandemic should be taken into account in (the extension of) appointments and performance reviews within all institutions. Institutions should also investigate whether there are groups of people that could not make use of existing compensation options (such as the funds of the Nationaal Programma Onderwijs (NPO)).

Area	Action Point	Outcome	Responsible
COVID-19	Consider (long-term) negative effects of COVID-19 pandemic in selecting, appointing, promoting and evaluating employees	Researchers are not unfairly judged for the effects of the pandemic that were outside their sphere of influence, also not in the long term	Institutions[M]
	Map who missed out on NPO-financed contract extensions (e.g. medical researchers that worked extra shifts)	Institutions are aware of those who missed out on NPO-financed contract extensions and can give extra support if necessary	Institutions[M]
	Start a new round of NPO funding	Extra budget for researchers that were overlooked in prior rounds or still negatively affected by COVID-19	Government[G], Funding bodies[Z]

8. Internationals

International researchers form an integral part of Dutch academia, and their share is largest among researchers in the early stages of their career.[Y] International researchers are often seen as a homogeneous group, but their needs and issues can vary widely. Currently, there is insufficient knowledge on these needs and differences and more in-depth insight is needed. Do international early-career researchers experience a different level of work pressure compared to Dutch early-careers? For instance, do they have equal chances to get funding, embedding guarantees, and contract extensions? In addition, early-career international researchers should be encouraged to be more involved in all aspects of Dutch academia, including policymaking and representative bodies.

Extra attention should be paid to early-career researchers who are a parent or a caregiver. Maintaining a sustainable work-life balance is difficult for any parent or caregiver working in

academia, but for international researchers this is even more challenging: they generally have fewer options to fall back on a 'social safety net'.

Further special attention should also be paid to international PhD candidates on a scholarship. Scholarships are often 70 percent of minimum wage or less, exposing these researchers to financial hardship. Moreover, as scholarship researchers are not employed, they cannot apply for social benefits such as childcare allowance or national healthcare insurance. These researchers are also not protected by the collective labor agreement, and do not always get access to institution facilities (for example the PhD psychologist). Finally, the theme 'internationals' should not be seen as an isolated issue, but instead needs to be integrated in the various important discussions within academia, such as social safety and co-participation.

Area	Action Point	Outcome	Responsible
International academics	Map the (variation in) problems and needs of international early-career researchers, publish the findings, and adjust policy accordingly	Awareness of issues among international early-careers 🞄 can be taken into account when designing new policies	Institutions[M]
	Investigate the current (financial and social wellbeing) conditions of internationals working on scholarships	Clear working/living conditions for international scholarship (PhD) candidates, allowing a well-informed debate on their position	Government[G]
	Introduce the Dutch health care system to internationals, ensure that international scholars working here have access to it	Access to healthcare	Institutions[M], Government[G]
	Improve and extend policy on international early-career researchers who are parent or caregiver	International early-career researchers who are a parent or a caregiver feel supported	Institutions[M]
	Map funding pressure of international early-career researchers, equal chances? - Has number of proposals changed upon implementing embedding guarantee? - Grant options: equal access/chances? Improve policies/access where needed	Clear and equal policy regarding embedding guarantees for all early-career researchers, including internationals; Equal chances and accessibility for funding	Funding bodies[Z], Institutions[M]
	Lower the threshold to connect within the institution (for example, encouraging, facilitating and not charging costs for learning the Dutch language)	Internationals and early-career researchers are well connected and integrated into institutions as integral part of the workforce	Institutions[M]

Concluding remarks

Alarming statistics on the mental health status of early-career researchers in the Netherlands warrant action to bring about a cultural change in academia. Comprehensive mapping of the current situation as well as improvements in awareness, policies, and support are needed to foster and safeguard a healthy working environment. We have outlined a list of recommended action points, grouped into 8 themes. This should be a concerted action of all responsible parties, including the academic institutions, the government, funding bodies, supervisors, and the early-career researchers themselves. It is crucial to not only target early career researchers, but rather strive for a systemic transformation in academia, which will eventually lead to an improvement for all members. With our recommendations, we hope to encourage action towards a healthier academic environment.

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