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Mareen Bastiaans
Robert Dur
Anne C. Gielen

I Z A Institute
of Labor Economics
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Mareen Bastiaans
Erasmus University Rotterdam and Tinbergen Institute

Robert Dur
Erasmus University Rotterdam, Tinbergen Institute, IZA and CESifo

Anne C. Gielen
Erasmus University Rotterdam, Tinbergen Institute and IZA

ABSTRACT

Activating the Long-Term Inactive: Labor Market and Mental Health Effects*

In many Western countries, a sizeable group of people live on welfare benefits for a long time. Many of them suffer from mental health issues. This paper studies the labor market and mental health effects of an activation program targeting these long-term inactive people. We exploit the staggered implementation of the program in a difference-in-differences design. We find that the activation program hardly affects labor market outcomes. However, for those on mental health medication prior to the start of the program, the use of mental health medication substantially drops in the years following the start of the program. This effect is particularly pronounced for men. We also study spillover effects on the children of those targeted by the program, finding some suggestive evidence for improved learning and mental health outcomes.

Corresponding author:
Mareen Bastiaans
Erasmus School of Economics
Erasmus University Rotterdam
Burgemeester Oudlaan 50
3062 PA Rotterdam
The Netherlands
E-mail: bastiaans@ese.eur.nl

1 Introduction

Long-term welfare dependency is a concern in many Western countries. For example, in the Netherlands in 2016, about one in every sixty people aged 27 to 65 had lived on welfare benefits for at least the last five years (CBS, 2018). The chances of finding a job and exiting the welfare system tend to be very small for this group. In 2016 – a period of low and declining unemployment in the Netherlands – only 2% of this group succeeded in this (CBS, 2018). Moreover, many of them struggle with mental health issues: about one in five use anti-depressants and one in ten use anti-psychotics (CBS, 2018).

Is there anything that governments can do to help improve the situation for this group, other than paying out welfare benefits and providing (mental) health care? Several countries have implemented activation programs for the long-term inactive.[1] Examples include Bulgaria, Romania, Slovakia, Hungary, Portugal, Belgium, and the Netherlands (Duell et al., 2016). These activation programs – when well targeted to individuals' needs and capabilities – may improve the well-being of the long-term inactive, for instance because participating in the activities expands their social network, creates daily structure or provides meaning. However, little is known thus far about the impact of such programs on the long-term inactive.

This paper examines the effects of an activation program for long-term inactive people in the Netherlands. The program was implemented in Rotterdam – the second largest city in the Netherlands – over the course of five years, from 2013 to 2018. Welfare recipients were invited to a personal meeting with a case manager, in which they discussed the activation program and which type of activity would fit them best. These activities include, for instance, helping staff in community centers, attending a gym multiple times per week, or following a Dutch language course.[2] The activity (or activities) should add up to a total of 20 hours. It was made explicit to the welfare recipient that the activities are compulsory; not doing them implies they risk losing part of their welfare benefit.

To identify the impact of this activation program, we exploit the staggered implementation across 74 different neighborhoods. This creates exogenous variation in the timing of the treatment at the neighborhood level, allowing for a difference-in-differences estimation strategy to estimate intention-to-treat effects, using the method proposed by Callaway and Sant'Anna (2021). We use rich administrative data from Statistics Netherlands that we link to data from the city of Rotterdam.

We focus on two sets of outcomes: labor market outcomes and mental health outcomes. Regarding labor market outcomes, we expect only small effects (at least in the short run) as almost all people in the target group have not had any employment for a very long time. Long inactivity spells typically make it hard to make the transition to a paid job. However, it might be that some of the welfare recipients

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[1]Being inactive here means inactive in the labor market. Some of the long-term inactive perform unpaid activities such as community service and informal care. These activities are commonly considered as a valid substitute for activities offered by an activation program.

[2]Welfare recipients who already perform such activities on a regular basis (and can prove this) can continue doing these instead of participating in the new program.

are active in the informal labor market, earning income that gets unnoticed from the tax and local authorities (see e.g. Inspectie Werk en Inkomen (2004) and CBS (2012)). Taking part in the activation program may be too time-consuming for this group, inducing them to stop their welfare benefit and, as a result of the income loss, search for additional employment opportunities, including formal employment. Such 'threat' and 'screening effects' of activation programs for the unemployed have been previously studied by, among others, Besley and Coate (1992); Black et al. (2003); Geerdsen and Holm (2007); Rosholm and Svarer (2008); Røed and Westlie (2012); see Røed (2012) for a survey. However, these studies almost exclusively focus on people who have been unemployed for a relatively short period (up to 5 years). It is not evident that activation programs have a similar impact on long-term welfare recipients that we study in this paper.

Mental health effects of the program can go either way. On the one hand, the activation program may help prevent or reduce mental health problems because it potentially expands one's social interactions and social network, creates a daily or weekly structure or routine, and may give rise to feelings of self-efficacy and a sense of purpose. Positive mental health effects of activation are consistent with studies that find positive effects of getting a job and negative effects of job loss on mental health (Ivanov et al., 2020; Nichols et al., 2013; Pohlan, 2019). There is also evidence that volunteering increases life satisfaction, feelings of worthwhileness, social connectedness, and belonging to a local community (Dolan et al., 2021), although the literature is not conclusive (Jenkinson et al., 2013; Bickerdike et al., 2017). On the other hand, some critics have argued that the activation program may be experienced as humiliating, particularly because of the non-voluntary character of it (e.g. Kampen, 2014).[3] The activities may also be experienced as stressful, in particular for those who already struggle with mental health problems.

In our analysis, we will separately consider those who at baseline already use mental health medication and those who do not, because we expect different treatment effects depending on whether people suffer from mental health problems already or not.[4] Regarding labor market effects, we expect smaller effects (if any) for welfare recipients who already use mental health medication at baseline, because it is likely more difficult for them to find a job than it is for welfare recipients who do not suffer from mental health problems at baseline. Conversely, regarding mental health effects, we may see more sizeable effects for those who already suffer from mental

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[3]Some people have even called the program a modern form of slavery. The national client council (that consists of representatives of welfare recipients) argued that the program may be at odds with article 4 of the European Convention on Human Rights which prohibits slavery and forced labour and a member of the Dutch national parliament has asked questions about this to the responsible minister (Aanhangsel Handelingen II, 2013).

[4]We take mental health medication use as a proxy for serious mental health problems. Clearly, this is far from perfect. It is likely that some welfare recipients who do not use mental medication do struggle with serious mental health problems. Conversely, some welfare recipients who use mental medication may only have mild problems. Yet, it seems reasonable to assume that there is a strong positive correlation between mental health medication use and mental health problems (as shown in e.g. Takala et al., 1993), particularly in the context of the Dutch health care system which has relatively low entry barriers to access care for patients and relatively high quality care.

health problems at baseline, both when effects of the program are harmful and when they are favorable. As discussed above, harmful effects may stem from increased stress, which may be larger for those who already have mental health problems at baseline. Favorable effects may stem from better structure and more routine in daily life, more social contacts, and experiencing more meaning. These favorable effects may be larger for those who have mental health problems at baseline, because those without mental health problems may be more likely to experience these favorable circumstances already.

Our findings show that, even up to four years after treatment, there is no effect on employment, neither for those with nor for those without mental health medication at baseline. We do find a positive effect on self-employment, which is statistically significant for those without mental health problems at baseline. However, the effect is very small: less than half a percentage point. These results are consistent with Rosholm and Svarer (2008), who find substantial 'threat effects' of an activation program in Denmark for short-term unemployed, but no 'threat effect' at all for those unemployed five years or longer.

Regarding mental health problems, we find no significant change in the use of mental health medication for individuals without pre-existing mental health medication. However, for those who make use of mental health medication at baseline, we find a negative effect that grows in size over time and becomes particularly large in the third and fourth year after the activation program starts (amounting to a reduction of about 13 percentage points in the fourth year). The effect is particularly pronounced and statistically significant for men. The gender difference in the effect of the activation program is consistent with earlier evidence for Germany finding that, in terms of mental health, men suffer more severely than women from long spells of inactivity (Hetschko et al., 2014).

In addition to studying the effects on the welfare recipients, we also study how the children of welfare recipients are affected by the activation program. A large body of evidence shows that childhood circumstances matter for children's outcomes (Almond et al. (2018)). Moreover, parental welfare dependency and participation in activation programs may impact children's outcomes through being a role model or through changes in the time and financial investments made in the children (Doepke and Zilibotti (2017); Cobb-Clark et al. (2019)). In our setting, children may be affected by the activation program because their parent(s) are less often at home or because of a change in the mental health condition of their parent(s). Time investments by parents are known to positively impact educational performance of their children (Gould et al. (2020)). Poor parental mental health can reduce the quality and amount of such time investments, leading to adverse effects on children's health and educational attainment (Currie (2009)). We find suggestive evidence for improved education outcomes and reduced mental health medication of children, especially among the group of welfare recipients who do not make use of mental health medication at baseline. Of the two proposed mechanisms, the increased absence from home seems to be responsible for these effects, because we do not find any mental health effects of the activation program for parents of young children.

Our paper contributes to the literature on active labor market policies and in

particular to the branch that studies activation programs. We offer two main contributions. First, we evaluate a wider range of outcomes, including not only labor market outcomes but also mental health of the participants as well as spillover effects on their children. This contrasts the existing literature which mostly restricts attention to labor market outcomes (e.g. Moffitt, 2007; Card et al., 2010, 2018; Dahlberg et al., 2009; Borland and Tseng, 2011; Persson and Vikman, 2014; Markussen and Røed, 2016; Mörk et al., 2022). Exceptions are Vinokur et al. (2000) and Caliendo et al. (2022) who find positive mental health effects of participation in a job search training program for recently unemployed job seekers. In addition, Dahmann et al. (2020) find that children of young unemployed fathers who had to perform activities are less likely to receive benefits in their adult life.[5] Second, we focus on a population with much less attachment to the labor market than those typically studied. Earlier studies have mainly focused on recent benefit recipients (e.g. Vinokur et al., 2000; Card et al., 2010, 2018; Caliendo et al., 2022) whose labor market prospects are likely much better. Little is known about the effects of activation on the long-term inactive with little perspective to find re-employment. Closest to our study is Breunig et al. (2003).[6] They run a field experiment to examine the effects of having an intensive interview with long-term unemployed in Australia. Like us, they consider people who have been on income support for at least 5 years. They find a negative effect on self-reported work hours, a positive effect on training, and also positive effects on social activities (friends, clubs). They find no effect on voluntary work. In contrast to our study, they have neither data on mental health, nor on children's outcomes.

The outline of the paper is as follows. Section 2 describes the institutional design. Section 3 contains a description of the data. Section 4 describes the empirical strategy and we present the results in section 5. Section 6 concludes.

2 Institutional background

The activation program that we study is targeted to individuals on welfare support (in Dutch: 'bijstand'). In this section, we first describe the welfare support system in the Netherlands. Next, we describe the activation program that was implemented within this system in Rotterdam.

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[5]Other studies of active labor market policies that consider a broader set of outcomes include Hernæs et al. (2017) and Bratsberg et al. (2019) who study the impact of active labor market policies on participants' high-school completion and crime, respectively.

[6]Bus et al. (2017) evaluate the same activation program that we study, finding sizeable favorable effects on, among others, feeling happy, feeling nervous, and feeling down and sad. In contrast to our study, they use questionnaire data and propensity score matching to create a control group. A challenge to their identification strategy is that they exclude a large group of people from the treatment group – among others those whose activation involves working on their personal problems – that are hard to identify and exclude from the control group. There are also several other small-scale field experiments evaluating activation programs in other Dutch cities, but these focus exclusively on labor-market outcomes (Fenger and Strüwer, 2016; Fenger and van der Valk, 2019). Like us, these studies find very limited effects on employment.

2.1 Welfare support in the Netherlands

In the Netherlands, welfare benefits are provided by municipalities as a safety net to those unemployed individuals who are not (or no longer) eligible for unemployment benefits or any other type of social insurance. Welfare benefits are means-tested and assets-tested at the household level and vary with household composition. In 2012, the year prior to the introduction of the activation program, welfare benefits ranged from 668 euro per month for singles aged 21-65 years to 1,340 euros per month for couples aged 21-65 with children (SZW, 2012). For comparison, the median monthly personal income of Dutch workers in 2012 is 2,750 euro (CBS, n.d.).

The city of Rotterdam distinguishes between welfare recipients who should be likely to find employment in the next 24 months and those who are not. Welfare recipients in the former group are obliged to apply for jobs and are offered re-integration support. The activation program that we study in this paper focuses exclusively on the latter group. This group mainly consists of individuals who have been receiving welfare benefits for a long time and have little or no recent labor market experience. They do not face job search obligations and do not receive any re-integration support. For them, welfare is no longer a temporary safety net, but rather a permanent means of income support. Awareness has grown over time that the long-term inactive may benefit from an activation program, even if this would not increase chances of finding a job.

2.2 Activation program in Rotterdam

Since 2013, the city of Rotterdam has implemented an activation program called 'De Tegenprestatie' ('quid-pro-quo').[7] The program requires that welfare recipients who are unlikely to find employment in the next 24 months perform a socially beneficial activity in return for their welfare benefits. The municipality's aim of this policy is twofold: on the one hand, welfare recipients are required to do something for society in return for their benefit; on the other hand, activation may benefit the recipients by enriching their social network, providing a daily structure, and giving a sense of purpose (Gemeente Rotterdam, n.d.). Reintegration in the labor market is not an explicit goal of this program, but may be a beneficial side effect.

The activity (or set of activities) must be performed for 20 hours per week. A reduced number of hours applies to those not capable of doing the full hours. Participants can choose the activity they do themselves, but this does need to be approved by the caseworker. The activity should be beneficial to society. Moreover, it cannot be paid work or crowd out paid work. Suitable activities are, for example, community service or care-giving. Participants who are not able to do this may follow an activity that will help them with their personal problems and might make it possible for them to provide community service in the future. For instance, some participants followed a physical activity course or a Dutch language course.[8] People

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[7]See Fenger et al. (2022) for a comprehensive historical account of the activation program.

[8]Many participants do more than one activity. Registered activities include: community service (47%), working on personal problems (39%), Dutch language course (19%), care-giving (16%),

could be (temporarily) exempted from performing an activity.[9]

The implementation of the program was as follows. During the period 2013-2018 the program was implemented in a staggered way across 74 neighborhoods in Rotterdam.[10] In each of these neighborhoods, the following two-step procedure was followed. First, caseworkers determine which welfare recipients in the neighborhood belong to the target group based on the criterion of whether the recipient is expected to be able to find a job within 24 months. If not, the recipient is included in the program. Second, the selected benefit recipients receive an invitation letter for a one-on-one meeting with a caseworker. During this meeting the activity that will be performed is discussed and subsequently registered. If someone already performs a suitable activity, then this will be registered. Proof must be provided of this by the welfare recipient. It is made explicit to the welfare recipient that the activities are compulsory. Not doing them implies they risk losing part of their welfare benefit. In practice, however, monitoring of activities was minimal.

3 Data and descriptive statistics

3.1 Administrative data

Our analysis uses several administrative data sources that can be linked through a unique identifier assigned to all registered individuals in the Netherlands. We combine municipal registry information about welfare recipients in Rotterdam with administrative data from Statistics Netherlands on the universe of welfare recipients and their children for 2010-2018 in the Netherlands.[11]

The municipality records contain all individuals who were contacted by a caseworker to set up a one-on-one meeting about the activation program between 2013 and 2018. Each record includes information on the start and end date of each trajectory, the type of activity (or activities) performed, and whether an exemption was granted.

We link the municipal records to various administrative data sources on social security benefits and labor market earnings from Statistics Netherlands available for the period 1999 to 2018. The data on social security benefits include the universe of registries on welfare benefits, unemployment insurance, disability insurance, and other benefits.[12] The registries on labor market earnings are available for the period

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physical activity course (12%) and other (23%).

[9]About 35% of our sample had an exemption at some point in time, often for medical reasons or because they were already following Dutch language courses as part of the welfare program ('taaleis'). However, as exemptions were temporary 67% of people with an exemption still perform some type of activity over the course of the period studied.

[10]More detailed information about the staggered implementation across neighborhoods is presented in section 4.1.

[11]Data from Statistics Netherlands can be accessed via a remote access facility after a confidentiality agreement has been signed. The municipal registry data have been obtained by filing a request at the city of Rotterdam. The authors do not have permission to share the data.

[12]Other benefits includes all benefits that are not part of the aforementioned programs or pensions, for example payments to non-employed individuals who become sick.

1999 to 2018, and allow us to identify individuals in paid employment and self-employment in a given year. Based on these registries, we define dummy variables for someone's labor market status, i.e. employed, welfare receipt, and other benefit receipt. Note that the dummy variables for each of these states are not mutually exclusive as individuals may switch programs or employment status within a year. Moreover, some benefit programs and/or (part-time) employment may be combined. Individuals may also end up in a situation where they neither receive social security benefits nor receive any earnings from paid employed or self-employed.

We further use data on mental health medication which is available for the period 2006 to 2018. Drug prescriptions are observed for all individuals covered by compulsory basic health insurance, except for any medication paid for out-of-pocket or drugs provided to people while in hospital or a nursing home.[13] Information includes whether someone has been prescribed a drug, and the type of drug (ATC-4 level) that has been prescribed. We use this to determine whether any medication for mental health problems were prescribed.[14] Note that we only observe whether someone has been prescribed a drug; information on whether people actually used (all of) the drug and dosage is absent.

Finally, we merge data from the municipal population data set, which includes information on the municipality and neighborhood an individual resides in, the year of birth, and whether a person is deceased in a given year.

We restrict our sample to people who are eligible for the activation program at the start of the implementation on January 1st, 2013. Our empirical strategy is to compare people who are eligible at the start of the program, but are treated at different times due to the staggered implementation across neighborhoods from 2013 to 2018. As the municipality records only include individuals who are actually invited to the program, some eligible individuals (e.g. those not treated due to attrition) are not included in the municipality data. Therefore, we cannot rely on the municipal data to define our sample of analysis. Instead, we define a 'target sample' using the administrative data from Statistics Netherlands. Recall that the program was targeted at welfare recipients in Rotterdam who are unlikely to find employment in the next 24 months. Based on the criteria used by the municipality, we define this group by selecting people residing in Rotterdam by January 1st, 2013 who have claimed welfare benefits for at least 5 years preceding the start of the program (so who have been enrolled in the program since January 1st, 2008). We further limit our sample to individuals aged between 35 and 60 on January 1st, 2013 to avoid that older individuals reach the retirement age before their neighbourhood is being treated. Individuals younger than 35 years old are typically sent to special programs aimed at education or labor market reintegration, and hence are excluded here. Deceased individuals are excluded from the analysis from the year in which they died onwards.

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[13]The coverage of the basic statutory health insurance is determined by the Dutch government and thus the same across insurance companies. The coverage may change per calendar year.

[14]Mental health medication includes ATC-codes N05A (antipsychotics), N05B (anxiolytics), N05C (hypnotics and sedatives), N06A (antidepressants), and N06B (psychostimulants, agents used for ADHD, and nootropics).

Our final sample contains 11,314 individuals of which 8,348 have been exposed to the activation program according to the municipal records. Hence, the overall compliance rate is 74%.[15] Of this sample, about a third had used mental health medication in the year prior to the program.

We also study the impact of the program on education and mental health outcomes of the children in these households who are between 7 and 18 years old on January 1st, 2013. We exclude children under 7 years old, because for these children data on educational outcomes is not yet available by the end of the time period. We link individuals in our 'target sample' to their children living in the same household on January 1st, 2013. Any children whose parents live in different neighborhood and so potentially have different treatment years are dropped, as we cannot assign a treatment year to these children.[16] For this 'children sample', we study the impact of the program on educational attainment and mental health medication. Educational attainment is defined as follows: if a child is currently enrolled in education, we obtain the education level of the current enrollment; if a child is not currently enrolled in education, we obtain the highest obtained educational degree. Our variables of interest include 'total years of education' as well as dummy variables for achieving at least a given educational track. In the Dutch school system, students are tracked when they start high school at age 12. Subsequently, they can follow different post-high school education depending on the level of their high school diploma. We consider dummy variables for 'upper vocational track', for 'academic track', and one for having a 'start qualification', which refers to the minimum education level that is required for 16 and 17 year olds to be allowed to quit school before the age of 18.[17]

3.2 Descriptive statistics

Table 1 presents descriptive statistics for the adult target sample, both for the full sample and split by prior mental health medication use. Two-thirds of the sample is female. A vast majority of the sample has a non-western migration background. On average, people have been on general assistance for 12 out of the last 14 years. They have very limited employment history, on average 2 years over the past 14 years. In panel B the labor market and benefit receipt variables in 2012 are shown. In the

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[15]We have tried to further increase the compliance rate by applying additional selection criteria to the sample such as having no labor earnings in 2008-2012 or increasing the welfare benefits duration prior to 2012. However, the compliance rate only increases marginally and the sample size decreases substantially.

[16]We conservatively drop all children whose parents live in neighborhoods in Rotterdam with a different treatment year, regardless of whether both parents are part of our sample. The reason is that we cannot rule out that people outside of our sample are treated by the program, for example if they have received welfare benefits for less than 5 years in 2013 but are assessed to be unlikely to find employment within 24 months.

[17]'Upper vocational track' corresponds to 'vmbo theoretische leerweg', 'academic track' to 'havo' or 'vwo'.

year prior to the implementation of the program, 6.7% of the sample is employed.[18] Among those with mental health medication use, this is only 4%. Panel B also shows that 31% of the sample is prescribed mental health medication in 2012. Two-thirds of those with mental health medication are prescribed antidepressants. Antipsychotics and anxiolytics are each prescribed to a third. Hypnotics and sedatives are prescribed to 20%. Pyschostimulants are rarely prescribed.

Table 2 presents descriptive statistics for the sample of children, split by parental mental health medication use at baseline and children's age in 2012. Education outcomes are similar for children whose parents have prior mental health medication and for those who do not. For the full sample, the number of years of education is rather low, around 5, but many of these children are still enrolled in school. For the older children, aged 15-18, the average number of years is 9. 44% is enrolled or has obtained at least the upper vocational track in high school, 46% are enrolled in a program that would result in a 'start qualification'[19] upon obtainment or have obtained the 'start qualification', and 13-16% are enrolled in or finalized at least the academic track. Children whose parents use mental health medication at baseline are more likely to be prescribed mental health drugs themselves.

4 Identification strategy and empirical model

4.1 Identification strategy

The staggered implementation of the program at the neighborhood level creates exogenous variation in the timing of the treatment. To isolate the effect of the program, we compare individuals who live in neighborhoods that are already treated with those who live in neighborhoods that are not yet treated. We assign treatment year based on the neighborhood in which someone lived in 2013 prior to the program, to exclude any endogeneity in treatment timing by moving to another neighborhood. We estimate an intention to treat effect, to exclude endogeneity in who is treated.[20]

The municipality made a plan for the staggered implementation of the program (Gemeente Rotterdam, n.d.). However, actual implementation differed substantially from planned implementation. Some neighborhoods were treated earlier or later than planned (see Figure 1). Moreover, some neighborhoods are not treated in a concentrated time period, but throughout the entire six year window. The municipality has informed us that there are various reasons why individuals could start their activation strategy earlier than planned.[21] To recover the staggered implementation at the

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[18]Although we lack data on work hours, we can infer from the earnings data that those who are employed tend to work few hours: they earn on average less than 500 euro per month, which is about a third of the minimum wage in the Netherlands in 2012.

[19]The 'start qualification' is a minimum level of educational achievement required to be able to quit education before age 18.

[20]Therefore, our estimates may be an underestimation of the true treatment effect as the compliance rate is 74%.

[21]Welfare benefits recipients could contact the municipality themselves. Moreover, if there was any communication between the municipality and welfare benefits recipients, the municipality might

neighborhood level, we use *observed* treatment year of neighborhoods rather than *planned* treatment year. For each neighborhood, we assess a 24 consecutive months in which most activation strategies were started and call this the concentrated period.[22] We assign as the observed treatment year the year in which the median activation strategy in the concentrated period falls. Furthermore, we exclude neighborhoods with low concentration of implementation from our analysis. We calculate the fraction of activation strategies started in the concentrated period out of all activation strategies started in the neighborhood, and we exclude neighborhoods for which this is below 60%.[23] We are left with 54 out of 74 neighborhoods, and 11,314 individuals out of the original 14,278. Figure 2 displays the actual implementation of the program by observed treatment year for neighborhoods with a concentration index of at least 60%. As can be seen, these treatment years capture the observed implementation of the program much better.

4.2 Empirical specification

As the implementation of the program is staggered and treatment effects may be heterogeneous over the treatment duration and timing, two-way fixed effects models may be biased in this setting (see e.g. de Chaisemartin and d'Haultfoeuille, 2020; Goodman-Bacon, 2021). Moreover, Sun and Abraham (2021) show that an event study may also be biased in this setting. Therefore we use an alternative method proposed by Callaway and Sant'Anna (2021).[24]

The intuition behind the Callaway and Sant'Anna (2021) method is to only compare treated groups to not yet treated groups. As a first step, for each post-treatment year, average treatment effects are estimated for each group consisting of all neighborhoods treated in the same year. This is done by comparing the differences in the outcome variable for a treated group in calendar year t and the year before the treatment started with the difference between the same calendar years for all groups that are not yet treated by calendar year t. For the pre-treatment average treatment effects, we do something similar, but we compare the difference between calendar

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also inform them about the program and encourage them to start even though their neighborhood was not yet treated. Moreover, on top of the neighborhood-level implementation, letters were sent out to a part of the target population with an invitation to start the program earlier. We have been unable to recover who received such a letter.

[22]The municipality data show that the majority of the neighborhoods are treated in a 24 month time frame. As a robustness check we also run our main analysis with a 12 month time frame to determine treatment year. This does not affect the results.

[23]As a robustness check we used several other criteria. Using a 70% concentration index does not affect our results. Raising the concentration index even more leads to power issues due to a too small sample. Using a concentration index of 40% or 50% weakens our results substantially, as may be expected.

[24]We choose the method proposed by Callaway and Sant'Anna (2021) as it allows us to estimate dynamic treatment effects rather than a single treatment effect and their method is able to handle not-yet-treated groups as controls. An alternative method is proposed by Sun and Abraham (2021), but this method requires never treated neighborhoods as control group. De Chaisemartin and d'Haultfoeuille (2020) propose a method to estimate a single treatment effect instead of dynamic effects.

year t and calendar year t-1. The average treatment effects are estimated via the doubly-robust method as recommended by Callaway and Sant'Anna (2021). In a second step, the average treatment effects for each combination of treatment year and outcome year are combined into event-style average treatment effects to estimate how treatment effects evolve over treatment duration. The event-style average treatment effect for t years after treatment is the weighted average of all group-time average treatment effects for event-time t, weighted by the size of the groups. Finally, a multiplier bootstrap procedure is used to obtain confidence intervals. These confidence intervals do not suffer from multiple hypothesis testing issues related to estimating multiple event-time treatment effects for one outcome variable.

We estimate event-style treatment effects separately for those with and without mental health medication use at baseline. Timing of treatment is determined at the neighborhood level and applied to the sample of welfare recipients living in the neighborhood in 2013. Hence we estimate intention-to-treat estimates. As all neighborhoods are treated by 2018, 2017 is the last calendar year for which we have a not-yet-treated group and, hence, the last year for which we can estimate effects. Therefore, we can estimate the treatment effect up to four years after treatment. The estimates for the effect in the first year of treatment combine the treatment years 2013 through 2017. Later event time estimates rely upon fewer treatment years. We cannot estimate effects for the fifth years after the program was introduced and beyond as we lack not-yet-treated neighborhoods to use as control group. The composition of our treatment and control groups thus differ over time and this may result in different treatment effect estimates over treatment time if treatment effects differ by year of intervention. However, the alternative is to only compare neighborhoods treated in 2013 and 2018, which would result in a substantial loss of sample size, power and information.

4.3   Threats to identification

In our analysis we compare individuals who are treated at different points in time because of the staggered implementation across neighborhoods. A serious challenge for identification would be if the timing of the treatment depends on individual characteristics that may be relevant for our key outcome variables. Therefore, in Table 3, we compare sample characteristics by implementation year. None of the characteristics show statistically significant differences by implementation year, except for an economically small difference in the welfare benefit history.

As a next step, we plot the trends in the main outcome variables by implementation year prior to treatment to test the common trend assumption more directly (Figure 3). Overall, we find that neighborhoods that are treated in different years follow the same pre-trends across the full range of outcomes. We observe a slightly diverging pre-trend in labor market outcomes for neighborhoods that are treated in 2017 and 2018. However, relatively few people were treated in these years (amounting to only 3% of our sample), which may explain the noisy pattern.

Finally, we check whether there are any anticipation effects of treatment. The program was covered in the press from time to time, hence welfare benefit recipients

may have known about the program. However, the order in which the neighborhoods would be treated was not common knowledge.[25] The pre-treatment trends in Figures 3 do not show clear evidence for anticipation effects. In our analysis, we estimate pre-treatment effects in years prior to treatment and do not find any effect.

5 Results

5.1 Main results

In this section, we describe the effect of the program on the welfare benefit recipients. Figure 4 displays the results for our four key outcome variables, where we split the sample by mental health medication use at baseline (see Table A.1 for the estimation results). For all four outcomes, the point estimates for the years prior to treatment are very close to zero, supporting our identification strategy. The effect on welfare benefit receipt in the first two years of treatment is close to zero. The point estimates in later years are positive and increase in size, but are quite imprecise. The pattern is similar for those with and without mental health medication at baseline. The effects on employment are very close to zero, both in the short run and in the longer run.[26] For 'neither (self-)employment nor benefits', the point estimates are negative and increase in size over time, but remain insignificant. The reduction in this variable mirrors the increase in welfare benefits. Figure A.1 in the Appendix shows that the effects on other social assistance receipt are close to zero. The absence of effects on labor market outcomes is in line with our predictions.

Next, we consider the effect on mental health medication use. For the sample without mental health medication use at baseline, we find no effect. Hence, the activation program seems neither to harm the mental health of this group nor to prevent mental health problems. In contrast, we find negative point estimates which increase over treatment duration for those with mental health medication use at baseline. Hence, for this group, the activation program seems to induce a sizable reduction in mental health problems. In the fourth year after the program is introduced, we find a decrease in mental drug prescriptions of 13 percentage points. However, these estimates are not statistically significant at the 5% level, and they may well be an underestimation of the true effect given the fact that compliance rates in our sample are only 74 percent.

How do these results differ by gender?[27] Earlier studies have shown that men suffer more severely from inactivity than women (e.g. Hetschko et al., 2014); consequently, treatment effects – in particular those for mental medication use – may be larger for men than for women. Our results depicted in Figure 5 point in this

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[25]Moreover, as Figure 1 shows the planned order was also not always followed.

[26]Figure A.1 in the Appendix looks at paid employment and self-employment separately. For most of the post-treatment years, we find a positive effect on self-employment, but the estimated effect is small and not always statistically significant.

[27]In addition, we have also looked at heterogeneous effects by migration background and welfare benefit duration prior to the program. We find no differences in treatment effects between these groups, see Figures A.3 and A.4.

direction. Whereas we find similar effects on benefit receipt and employment for men and women, the effect on mental health medication is much stronger for men than for women. For men with mental health medication at baseline we find a 28 percentage point reduction in mental health medication use in the fourth year. The estimates for three and four years after treatment are significant for men at the 5% significance level. For women, we only find a substantial negative point estimate in the fourth year after treatment, both for women who did and did not use mental health medication at baseline. However, these effects are not statistically significant.

To gain more insight into the effects on mental health medication use, we also explore the effects for different categories of mental health medication. Our data distinguish five categories: antipsychotics, anxiolytics, hypnotics and sedatives, antidepressants, and psychostimulants. The second part of Panel B in Table 4 displays mental health medication use prior to the program by gender for each of these categories. Women and men are as likely to use mental health medication in 2012. The type of mental health medication they use does differ: women are more likely to be on antidepressants, whereas men are more likely to be prescribed antipsychotics. This difference in mental health medication, and underlying mental health issues, may cause the gender difference in treatment effect we identified above. In Figure 6, we shed more light on this. It shows estimated treatment effects for specific categories, where we split the sample by gender and whether someone used the specific category in 2012. Again, we find limited effects for women, implying that the gender differences in treatment effects we identified above are not due to gender differences in type of mental health medication. For men, we find substantial and statistically significant effects on both antipsychotics and antidepressants. For antipsychotics, we only see a negative effect for men who already used antipsychotics. There is no effect on use of antipsychotics for men who did not yet use it. For antidepressants, we find a negative effect both for men who already used antidepressants and for men who did not.[28]

As discussed earlier in footnote 4, we should be careful in interpreting the reductions in mental health medication as an improvement in mental health. We recognize that this may not always be the case. Some people may not use mental health medication, for example due to stigma or waiting lists, although this would be beneficial. However, since our main effects concern individuals who have used mental health medication in the past, we expect stigma and waiting lists to be a small concern. Another concern could be that some people may stop taking their mental health medication although their mental health has not improved, perhaps even deteriorated. While we cannot completely rule this out, we would expect that if this was driving our results, that this deterioration of mental health would lead to increases in mental health medication in later years or increases in other types of health care use, which we do not find, see Figure A.2 in the Appendix. Furthermore, if mental health of welfare recipients would deteriorate, we would expect this to have an adverse impact

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[28]We find a positive point estimates for psychostimulants for both men and women who use psychostimulants in 2012. However, as the confidence intervals are large and the group of people who use psychostimulants in 2012 is small (30 women and 16 men), we do not interpret these estimates.

on their childrens' outcomes, which is not the case as we will show in section 5.3.

5.2 Robustness

In this section, we check whether our results are robust to changes in the methodology. We first change the assignment of 'treatment year', from the median spell in the 24-month period that is most concentrated to the median spell in the 12-month period that is most concentrated. Four neighborhoods change treatment year as a result of this. Our results remain robust (see Appendix Figure A.5).

Next, we vary the treatment concentration threshold from 40% to 70% in 10 percentage point increments. Appendix Figure A.6 displays the estimates for mental health medication under these different sample restrictions. Our results are robust to increasing the minimum concentration from 60% to 70%.[29] If we relax the minimum concentration constraint to 40% or 50%, the point estimates are close to zero, which we attribute to increased 'measurement error' in the treatment year.

Furthermore, we re-run our main analysis but exclude neighborhoods that were treated in 2013. We do this for two reasons. First, as 2013 is the first year of implementation of the program, the contents and execution of the program may be slightly different than in later years. If this results in different treatment effects, we may want to exclude these neighborhoods. The second reason to drop 2013 is that these neighborhoods differ slightly in terms of neighborhood characteristics (see Table A.10 in Appendix). On average, these neighborhoods have slightly worse neighborhood characteristics. One may worry that these neighborhoods were selected based on these characteristics. Moreover, the estimates of longer-run effects increasingly rely upon the neighborhoods treated in 2013. Hence, we want to check that the pattern we find is not driven by these neighborhoods. However, our results remain the same if we exclude neighborhoods treated in 2013 (see Appendix Figure A.7).

5.3 Spillovers on children

In this section, we study spillover effects of the program on the children of those targeted by the program. Children may be affected by the program in two ways. First, children may be affected through the effect on the mental health of the parents. Second, the program can affect the time parents spend at home and/or with the child. Hence, absent any effect on the outcomes of parents, the children may still be affected due to the fact that the activities may absorb time that would otherwise be invested in the children.

We estimate the effect on children who are aged 7-18 and still living at home at the start of the program. As a first step, we replicate the baseline analysis on the subsample of the parents of these children. Surprisingly, we do not observe the reduction in mental health medication for these parents (Figure A.8). One explanation for this is that a larger proportion of the parents is female (76% of parents is female as

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[29]If we further increase the threshold to 80%, we only keep 19% of the main sample. Our results do not remain robust and are very imprecise.

compared to 66% in the full sample) and the reduction in mental health medication use we observed for the main sample was concentrated among men. For fathers who use mental health medication at baseline, we find negative point estimates of similar magnitude as the estimates in the main sample (see Appendix Figure A.9).[30] The absence of a treatment effect on mental health of parents suggests that any effect we may find on children does not seem to be the result of improved mental health of parents.

Next, we look at the effect on the children of those targeted by the program. We focus on children who are aged between 7 and 18 on January 1st, 2013. As in the main analysis, we split the sample by whether parents were prescribed mental health medication at baseline.

Figure 7 displays the results for children. We do not find an effect on years of education, a measure of overall educational attainment. For the dummy variable of being enrolled in the upper vocational track, the estimates for children whose parents did not have mental health medication at baseline are positive and increase over time. These estimates are not statistically significant. We do not find this for children of parents with mental health medication at baseline. We also do not find an effect on being in the academic track, nor on having a start qualification. This suggests that children switch from lower vocational tracks to higher vocational tracks, but not into academic tracks. Finally, we look at the effect on mental health medication. For the children whose parents did not have mental health medication at baseline, the estimates are negative and increase in size over duration of treatment, although they are not statistically significant. Again, we do not find an effect for the other group.

The spillover effects may differ by age at which the children are exposed to treatment, either because of sensitive ages or because of the education system.[31] Therefore, we split the sample at age 14, the median age in 2012, and perform the analyses for both groups separately. Figure 8 shows that for children aged 14 or younger in 2012/2013, there is no effect on years of education. We do find positive effects on enrolment in upper vocational and academic track for children. We find no effect on mental health medication. For older children, the point estimates of years of education are negative for children of parents with mental health medication at baseline. But we do find positive point estimates for this group on enrolment in or completion of academic track. We find no effect on educational outcomes for the other group. For all older children, we find negative point estimates on mental health medication,

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[30]Furthermore, we hypothesized that it could also be that we do not find an effect on the parents of the children sample, because these parents benefit less from activation as taking care of their children already gives the benefits of activation (e.g. daily structure, social network). If this is the case, we would expect that this 'activation' is stronger for parents of younger children as they require more supervision from parents. Hence, if this was driving the results, we may not find an effect for parents of younger children, but would find an effect of parents of older children. In Table A.15 we split parents by age of youngest child. We make the split at age 12, when children enter secondary school. However, we find the opposite of what we hypothesized. For the parents of younger children, we do find the reduction in mental health medication. But for parents of older children we do not.

[31]It may be easier to switch education levels pre-tracking rather than post-tracking, which happens at age 12.

mostly on antipsychotics and sedatives (see Appendix Table A.18). For the group with parents without mental health medication at baseline, these effects are larger, but again not significant. Summarizing, we find some suggestive evidence for favorable effects of the activation program on educational attainment and mental health medication of children. However, the estimates are note very precise and vary by group.

6 Conclusion

We have studied the effects of an activation program for long-term inactive in the Dutch city of Rotterdam. Using the staggered introduction, we estimate the intention-to-treat effects of this program on labor market and mental health medication outcomes. In line with our predictions, we find very limited effects on employment and welfare receipt. There is a slight reduction in the share of people who are neither employed nor receive a benefit, but this effect is not statistically significant. For mental health medication, we find that the program leads to a substantial reduction, which increases in size over time, amounting to a more than 10 percentage points reduction in the fourth year after treatment for people who used mental health medication at baseline. The effects are most pronounced for men who already used mental medication at baseline. For this group we find a 28 percentage points reduction in the fourth year after treatment, which is highly statistically significant. These results are consistent with the idea that an activation program may help long-term inactive to expand their social network, to create a daily structure, and to make life more meaningful. The fact that we find much larger effects for men than for women is in line with earlier studies showing that men tend to suffer more severely from being long-term inactive than women. However, lacking further data on the mental health condition of the people in our sample, we need to be cautious in drawing firm conclusions about whether the effects we find are favorable or unfavorable, because stopping mental medication is not always a sign of better mental health. However, the relatively low barriers to entry for patients in the Dutch health care system and the result that we do not see any increase in other health care use (neither in the short run nor in the long run) suggests that most of the effects on mental health are likely favorable.

This conclusion is further strengthened by our intergenerational spillover effects of the activation program showing no deterioration of the childrens' outcomes. In fact, we find suggestive evidence that there are positive spillovers on the children of parents who did not use mental health medication at baseline. Younger children are enrolled in more advanced education tracks and older children are less likely to use mental health medication. However, these effects are not statistically significant.

A primary motivation for our study was to explore whether governments can do more than just paying out welfare benefits and providing (mental) health care to help the sizeable group of people who live on welfare benefits for a long time. We believe the answer is affirmative. Even though the activation program that we study had no effect on employment outcomes, we do find sizeable reductions in mental health

medication use, particularly for men. These are intention-to-treat effects, and so the true effects are even larger. Overall, this shows that activation programs have the potential to improve the lives of long-term welfare recipients.

In future work, it would be a major step forward to supplement the administrative data with survey data on subjective well-being and mental health. Moreover, adopting a field-experimental design rather than making use of the staggered implementation of a program may result in more power and precision.

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Figures and Tables
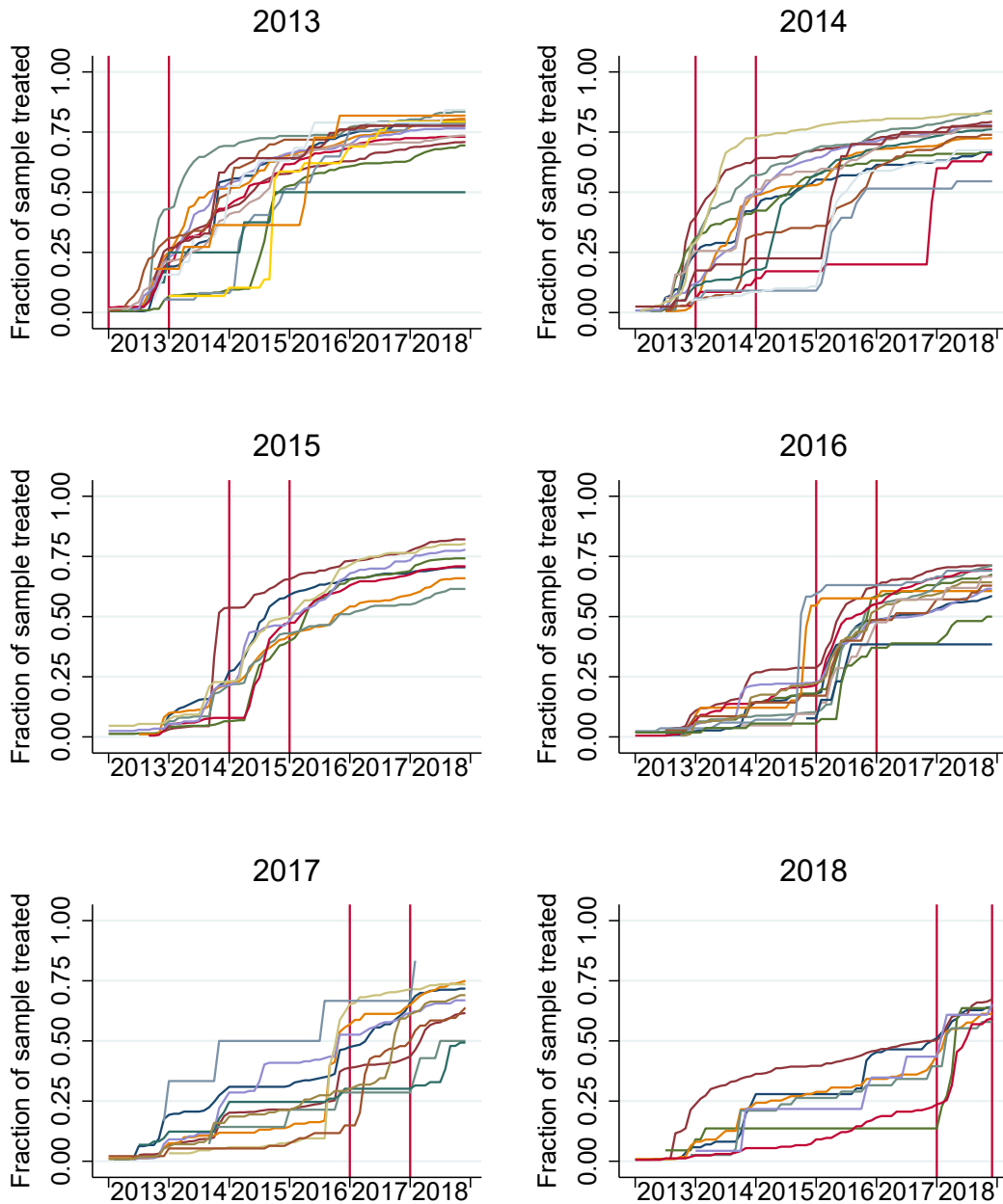
Figure 1: Treatment rate over time for neighborhoods by planned treatment year

Notes: Figure 1 displays the monthly cumulative fraction of the sample in a neighborhood treated over time by planned treatment year. Each line represents a neighborhood. Planned treatment year is the year in which the municipality planned to treat the neighborhood. Due to Statistics Netherlands privacy constraints, neighborhoods with fewer than 5 individuals in the sample are omitted in the figure and lines vanish when treatment rate is 0 or 1. A legend is omitted as there are too many neighborhoods.
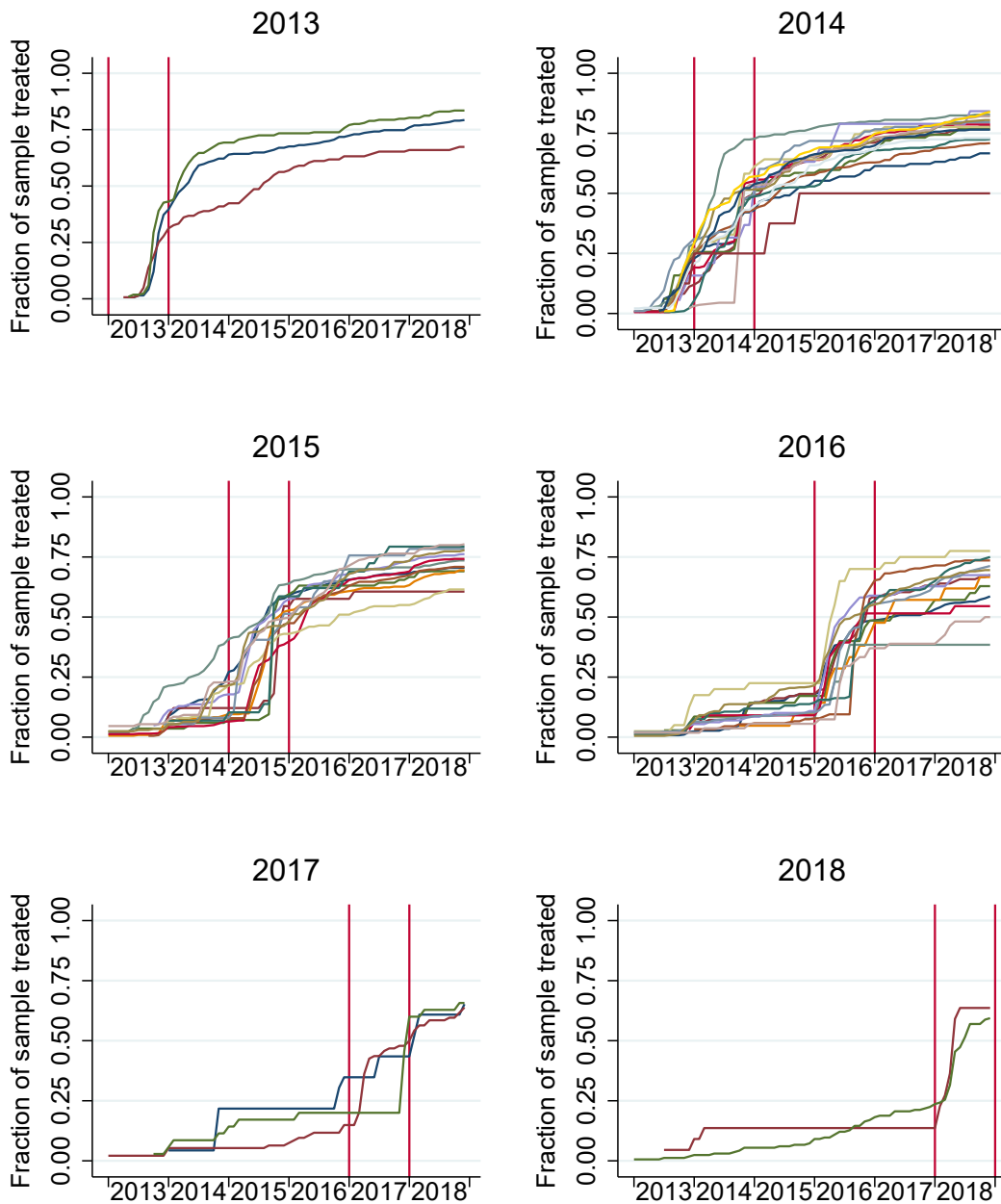
Figure 2: Treatment rate over time for neighborhoods with a concentration index of $\geq 60\%$ by observed treatment year

Notes: Figure 2 displays the monthly cumulative fraction of the sample in a neighborhood treated over time by observed treatment year. Each line represents a neighborhood. The observed treatment year is based on the data. It is the calendar year in which the median spell of the 24-month period with the highest fraction of spells falls. Due to Statistics Netherlands privacy constraints, neighborhoods with fewer than 5 individuals in the sample are omitted in the figure and lines vanish when treatment rate is 0 or 1. A legend is omitted as there are too many neighborhoods.

Welfare benefit receipt

Employment

Neither (self-)employment nor benefits

Mental health medication
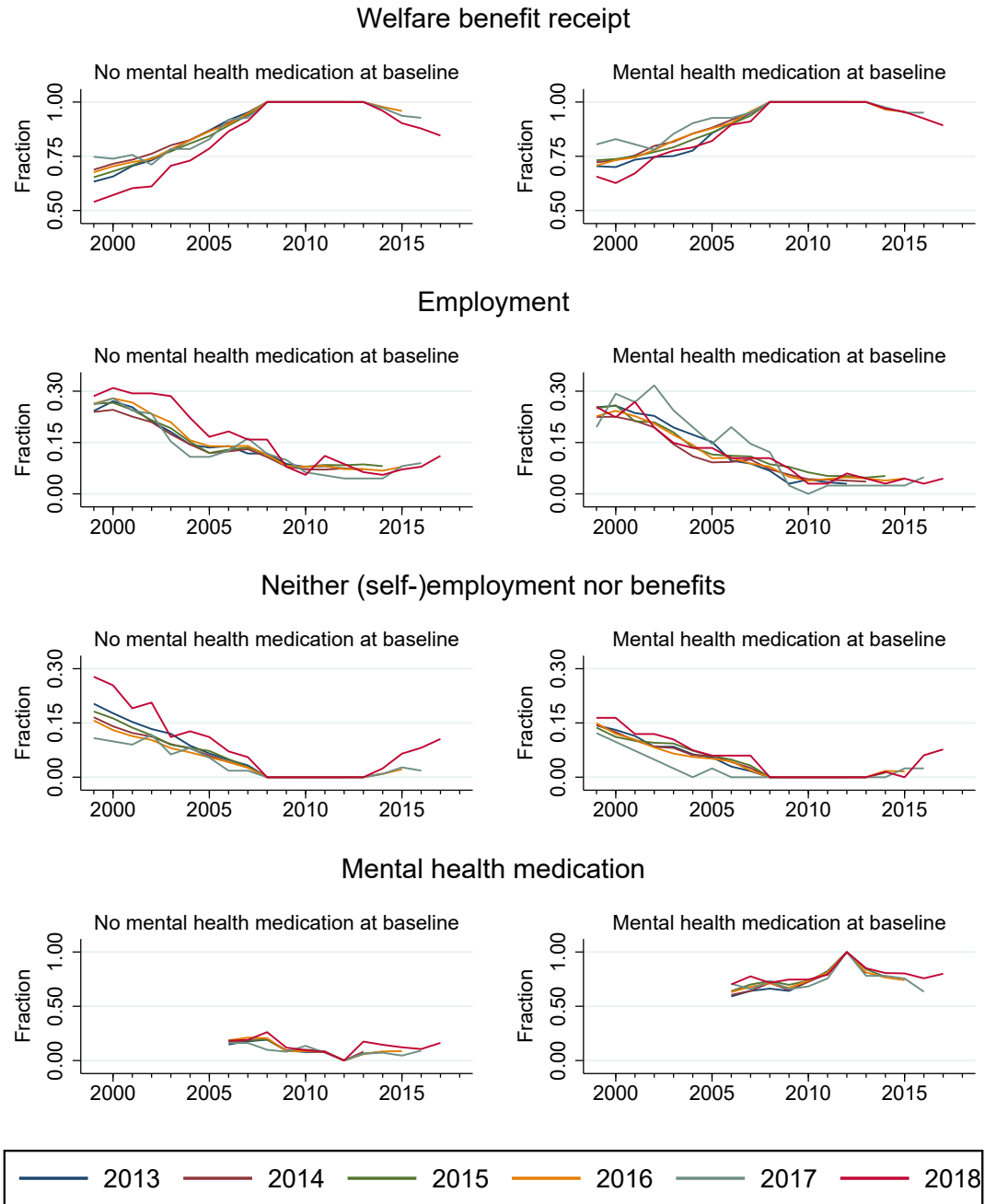
Figure 3: Trends in labor market and mental health outcomes prior to treatment by implementation year

Notes: Figure 3 displays the yearly average of labor market and mental health outcomes by implementation year over time. Lines stop once a treatment year has started. The sample is split by mental health medication use in 2012. Welfare benefit receipt measures whether someone claimed welfare benefits. Employment measures whether someone had an employment contract or was self-employed. Neither (self-)employment nor benefits is a dummy which is one if someone does not claim welfare benefits and other social assistance and is not employed. Mental health medication measures whether someone was prescribed mental health medication.
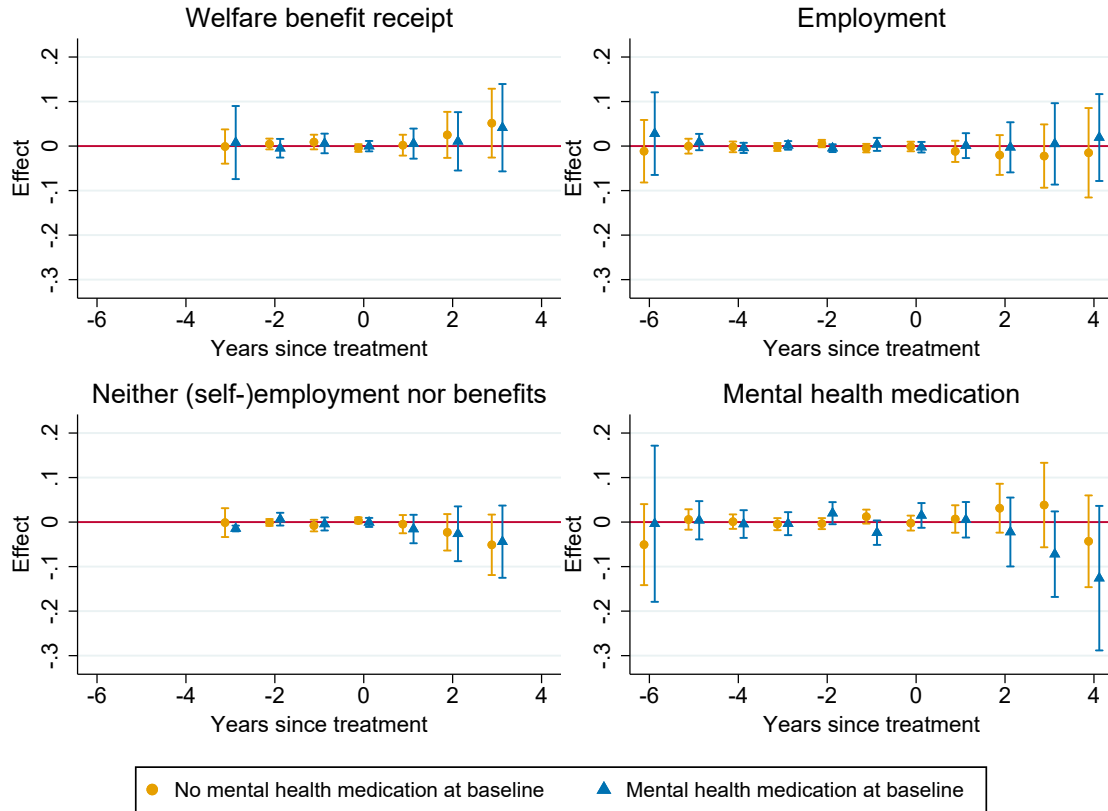
Figure 4: Effect of the activation program on labor market and mental health outcomes

Notes: The sample consists of welfare recipients who live in Rotterdam, have claimed welfare benefits for ≥ 5 years and are aged 35-60 on January 1st, 2013. Mental health medication measures whether someone was prescribed mental health medication, baseline is 2012. Welfare benefit receipt measures whether someone claimed welfare benefits. Employment measures whether someone had an employment contract or was self-employed. Neither (self-)employment nor benefits is a dummy which is one if someone does not claim welfare benefits and other social assistance and is not employed. Employment and mental health medication are measured 2010-2017. Welfare benefit and neither (self-)employment nor benefits are measured 2013-2017 and only neighborhoods treated after 2013 are included, due to sample criteria these variables do not vary prior to 2013. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.1 is the corresponding table.

Welfare benefit receipt

Female · Male

Employment

Female · Male

Neither (self-)employment nor benefits

Female · Male

Mental health medication

Female · Male

● No mental health medication at baseline ▲ Mental health medication at baseline
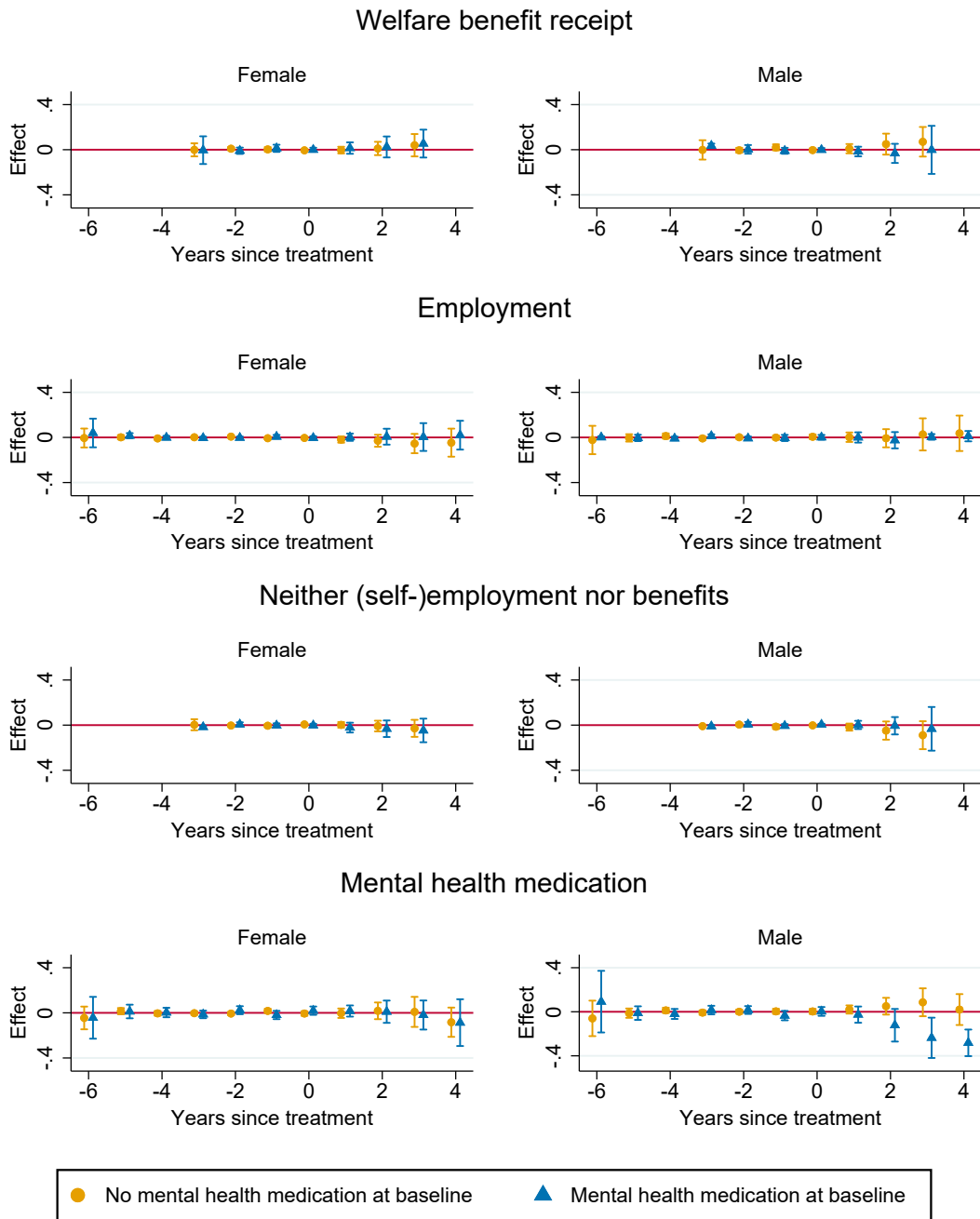
Figure 5: Effect of activation program on labor market and mental health outcomes by gender

Notes: See notes to Figure 4. The model is estimated separately for women and men. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.3 is the corresponding table.
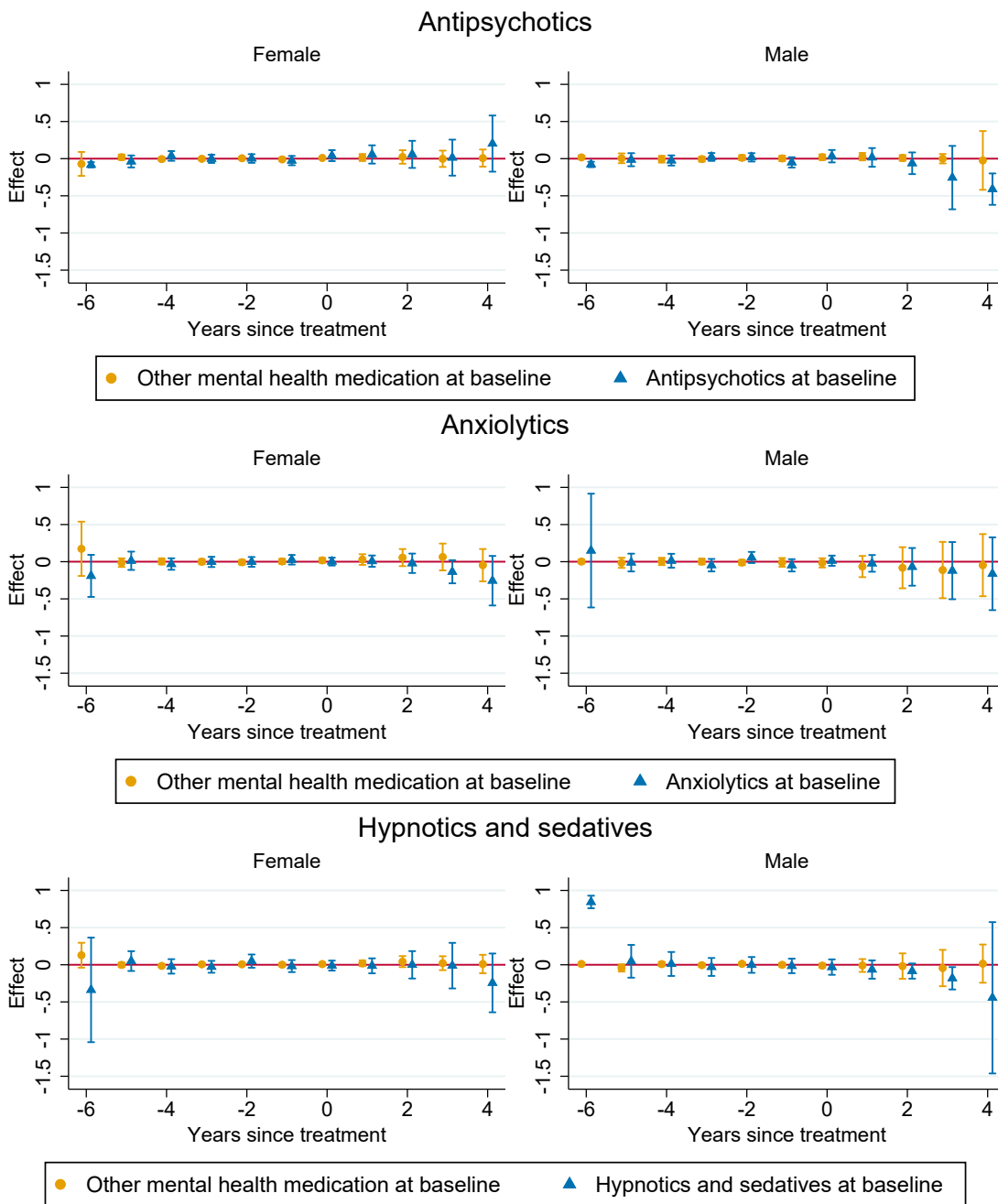
Antipsychotics

Figure 6: Effect of the activation program on mental health medication type for those with mental health medication at baseline by gender

Notes: Please turn over.
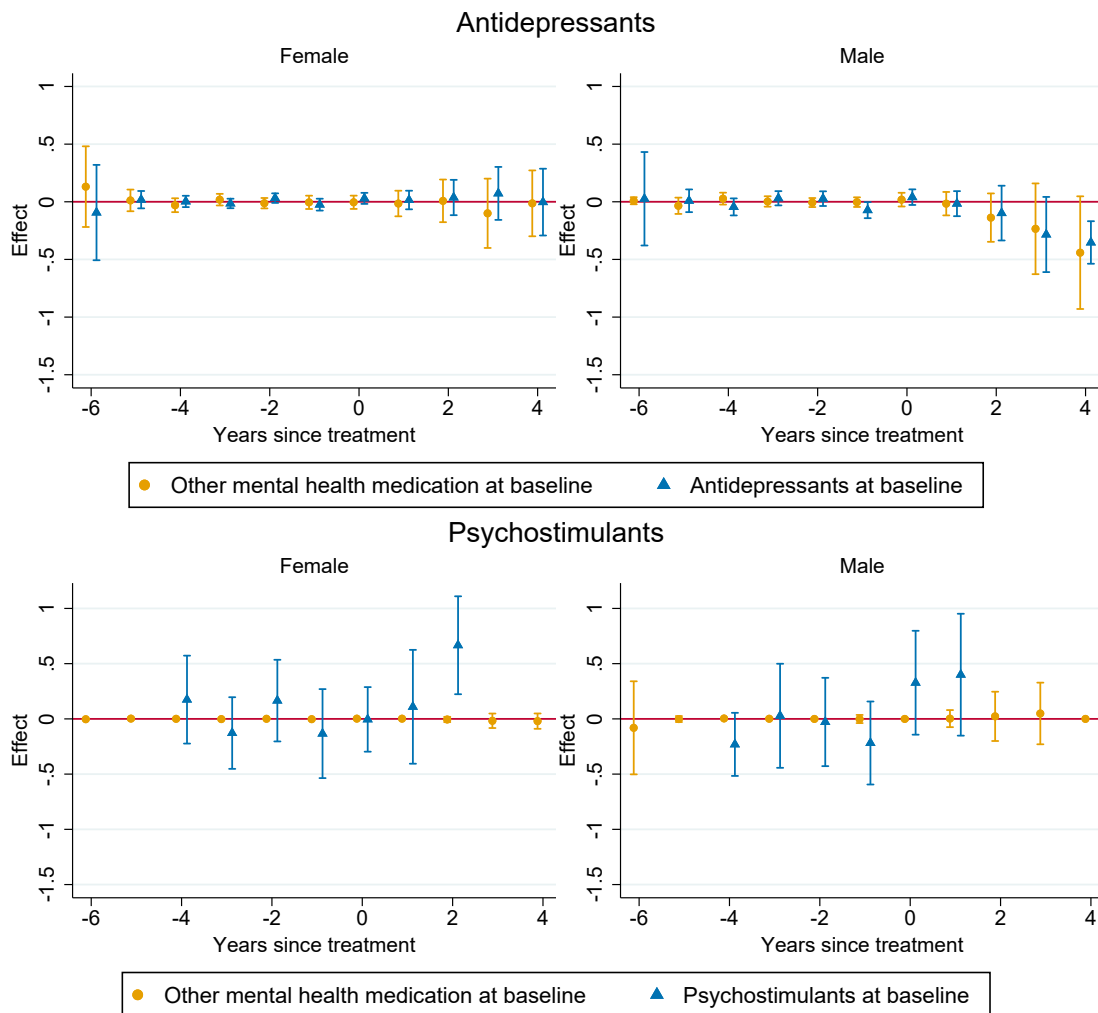
Figure 6: Effect of the activation program on mental health medication type for those with mental health medication at baseline by gender (continued)

Notes: See notes to Figure 4. Only welfare recipients with mental health medication use in 2012 are included. For each mental health medication type, we estimate the model for those who used this type in 2012 and those who did not, but used another type. The model is estimated separately for women and men. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.4 is the corresponding table.
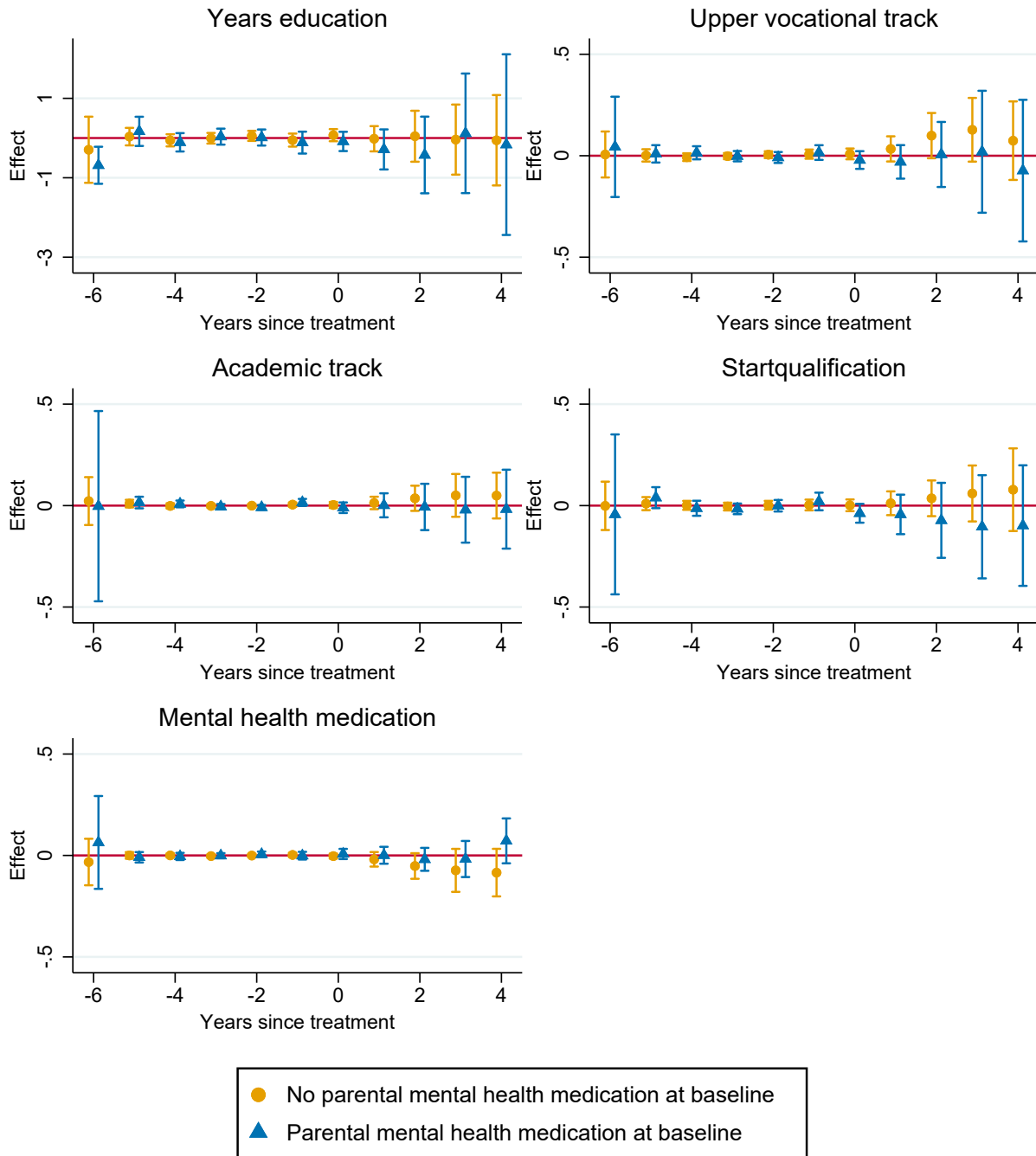
Figure 7: Effect of the activation program on educational attainment and mental health for children

Notes: See notes to Figure 4. The sample consists of children in households in the main sample aged between 7 and 18 years old on January 1st, 2013. Years of education is the years of education corresponding to the current enrolment or the highest obtained education level. Upper vocational and academic track are dummies for obtaining or being enrolled in at least this educational track. Start qualification is a dummy for obtaining or being enrolled in at least the minimum education level that is required for 16 and 17 year olds to be allowed to quit school before age 18. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown.

Years of education

Upper vocational track

Academic track

● No parental mental health medication at baseline
▲ Parental mental health medication at baseline

Figure 8: Effect of the activation program on educational attainment and mental health for children by age

Notes: Please turn over.
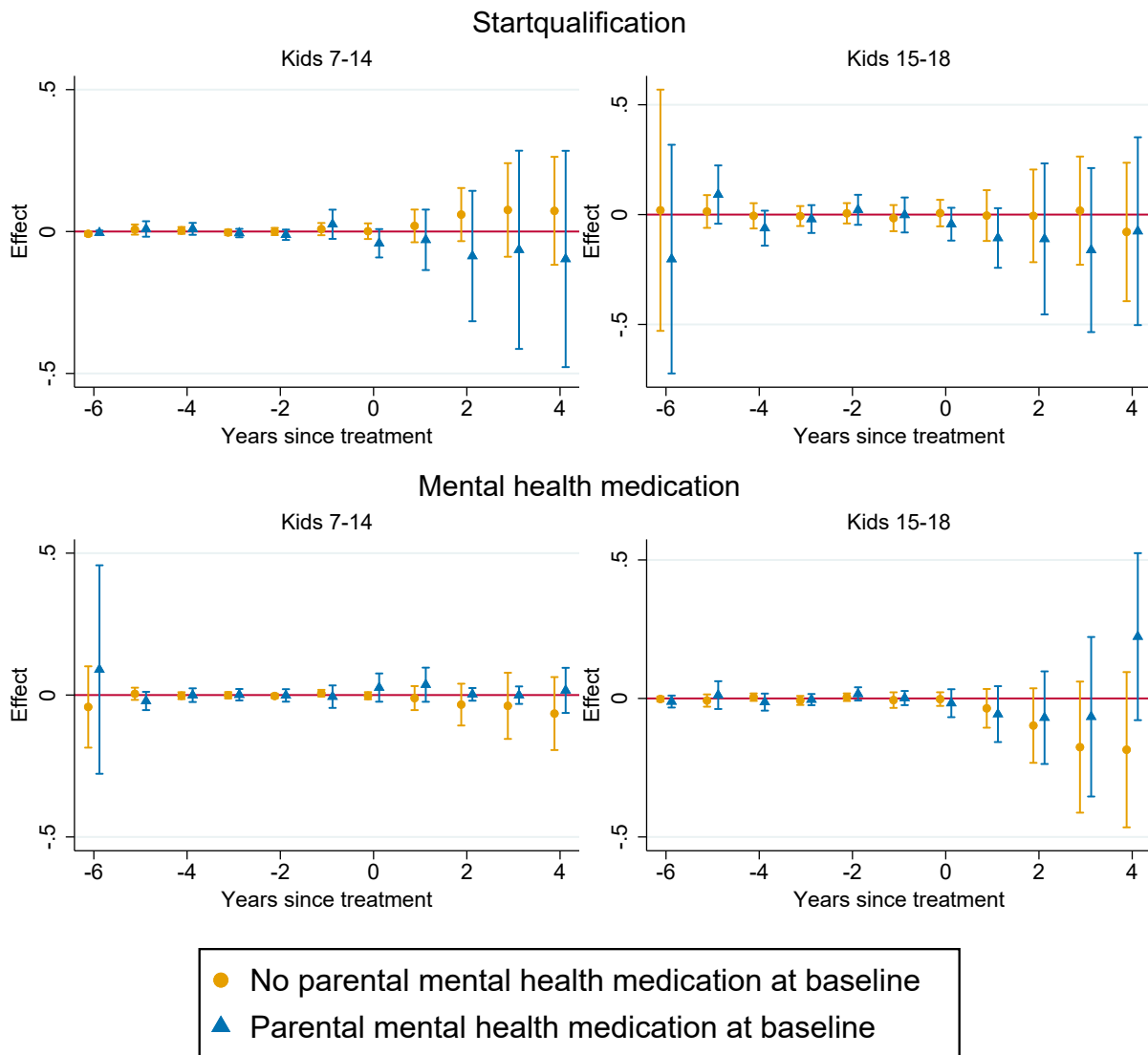
Figure 8: Effect of the activation program on educational attainment and mental health for children by age (continued)

Notes: See notes to Figure 4 and 7. The model is estimates separately for children aged 7-14 and 15-18 on January 1st, 2013. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.17 is the corresponding table.

Table 1: Descriptive statistics of sample

	Full sample	Mental health medication at baseline	
		No	Yes
Panel A. Background characteristics			
Age	47.9	48.0	47.7
Female	65.5%	66.0%	64.3%
Non-western migrant	67.1%	70.2%	60.3%
Western migrant	7.2%	6.6%	8.6%
Parent of child in the household (2012)	41.6%	44.5%	35.3%
Parent of child under 12 in the household (2012)	24.2%	26.4%	19.3%
Spell length welfare receipt (years)	11.1	11.0	11.2
Total welfare receipt duration (years, 1999-2012)	12.0	11.9	12.2
Employment history (years, 1999-2012)	1.92	2.02	1.69
No employment history (1999-2012)	52.6%	51.3%	55.6%
Panel B. Outcome variables in 2012			
Welfare benefit receipt	100%	100%	100%
Employment	6.7%	7.7%	4.4%
Paid employment	6.4%	7.4%	4.2%
Self-employment	0.3%	0.3%	0.2%
Other social assistance	2.5%	2.3%	3.2%
Neither (self-)employment nor benefits	0.0%	0.0%	0.0%
Earnings (1000 euros)	0.36	0.43	0.21
Gross income (1000 euros)	14.70	14.75	14.58
Mental health medication	30.8%	0.0%	100.0%
Antipsychotics (N05A)	10.2%	0.0%	33.2%
Anxiolytics (N05B)	10.7%	0.0%	34.8%
Hypnotics and sedatives (N05C)	5.7%	0.0%	18.5%
Antidepressants (N06A)	20.2%	0.0%	65.5%
Psychostimulants (N06B)	0.4%	0.0%	1.3%
Observations	11,314	7,829	3,485

Notes: Table 1 displays descriptive statistics for the full sample and split by mental health medication use in 2012. The full sample consists of welfare recipients who live in Rotterdam, have claimed welfare benefits for at least five years and are aged between 35 and 60 on January 1st, 2013. Parent of child in the household and parent of child under 12 in the household are determined on December 31st, 2012. Spell length welfare receipt is the length in years of the welfare benefit spell on January 1st, 2013, measured up to 1999. Total welfare receipt duration is the total number of years in which someone received welfare benefits between 1999 and 2012. Employment history is the number of years in which someone had an employment contract between 1999 and 2012. No employment history is a dummy for having no employment contract between 1999 and 2012.

Table 2: Descriptive statistics children

| | Children aged 7-18 | | Children aged 7-14 | | Children aged 15-18 | |
| | Parental mental health medication at baseline | | Parental mental health medication at baseline | | Parental mental health medication at baseline | |
	No	Yes	No	Yes	No	Yes
A. Background characteristics						
Age (2012)	12.9	13.1	10.9	11.0	16.5	16.4
Age when treated	15.6	15.8	13.6	13.7	19.1	19.1
Father in household (%)	30	47	32	51	26	41
Single parent household (%)	75	57	75	55	76	61
Non-western migrant parent (%)	86	84	87	87	87	82
Western migrant parent (%)	4	5	4	5	5	5
B. Outcome variables (2012)						
Years of education	5.0	5.2	2.7	2.8	9.1	9.0
Upper vocational track (%)	23	23	10	11	44	44
Academic track (%)	8	7	3	3	16	13
Start-qualification (%)	19	20	3	3	46	46
Mental health medication (%)	3	4	3	4	2	4
Observations	3,709	1,560	2,348	954	1,361	606

Notes: Table 2 displays descriptive statistics for the children sample. The children sample consists of the children of the people in the main sample who live at home and are aged between 7 and 18 on January 1st, 2013. Parental mental health medication use is measured in 2012. Age when treated is the age in the year the parent's neighborhood is treated. Father in the household and single parent household are measured on December 31st. Non-western and western migration parent is one if at least one of the parents in the household has a (non-)western migration background. Years of education measures the years corresponding to the current enrollment in education or if no longer enrolled, the highest obtained educational degree. Upper vocational track, academic track and start-qualification are one if the child is currently enrolled in this education level or higher, or has obtained at least this education level.

Table 3: Balancing table of sample characteristics by implementation year

	2013	2014	2015	2016	2017	2018	Full sample	F-stat	Prob>F	
Female (%)	65	58	67	66	72	58	63	0.99	0.43	
Age (years, 2012)	48	50	49	50	51	50	49	0.94	0.46	
Total welfare receipt duration (years, 1999-2012)	12	12	12	12	13	11	12	2.84	0.03	**
Employment history (years, 1999-2012)	2	2	2	2	2	2	2	0.21	0.96	
Any medication (%, 2012)	91	90	90	86	83	72	87	1.73	0.15	
Mental medication (%, 2012)	34	37	35	30	28	39	34	0.43	0.82	
Fraction of neighborhood in sample	3	3	3	2	2	1	2	2.10	0.08	
Average sample size per neighborhood	232	278	261	165	51	39	210	2.15	0.08	*
Number of individuals	695	4,732	3,394	2,148	152	193	1,1314			
Number of neighborhoods	3	17	13	13	3	5	54			

Notes: Table 3 is a balancing table that displays the sample characteristics averaged by neighborhood per implementation year, not weighted by neighborhood size. Total welfare receipt duration is the total number of years in which someone received welfare benefits between 1999 and 2012. Employment history is the number of years in which someone had an employment contract between 1999 and 2012. No employment history is a dummy for having no employment contract between 1999 and 2012. Fraction of neighborhood in sample is the fraction of the inhabitants in a neighborhood which are included in our sample. Number of individuals and number of neighborhoods are the total number of individuals in the sample and neighborhoods that have the corresponding implementation year. F-stat is the F-statistic of a F-test of whether the averages of the different implementation years are all equal. Prob>F is the p-values and in the next column stars to denote significance are included.

$* < 0.10, ** < 0.05, *** < 0.01$

Table 4: Descriptive statistics of sample by gender

	Female		Male	
	Mental health medication at baseline			
	No	Yes	No	Yes
Panel A. Background characteristics				
Age	47.6	47.8	48.8	47.6
Non-western migrant	72.7%	60.6%	65.4%	59.6%
Western migrant	6.6%	9.2%	6.7%	7.5%
Parent of child in the household (2012)				
Parent of child under 12 in the household (2012)				
Spell length welfare receipt (years)	11.4	11.5	10.3	10.7
Total welfare receipt duration (years, 1999-2012)	12.2	12.3	11.5	11.9
Employment history (years, 1999-2012)	1.70	1.54	2.65	1.96
No employment history (1999-2012)	0.57	0.59	0.40	0.49
Panel B. Outcome variables in 2012				
Welfare benefit receipt	100%	100%	100%	100%
Employment	7.4%	5.0%	8.2%	3.3%
Paid employment	7.3%	5.0%	7.6%	2.8%
Self-employment	0.2%	0.1%	0.6%	0.5%
Other social assistance	2.3%	3.5%	2.1%	2.5%
Neither (self-)employment nor benefits	0.0%	0.0%	0.0%	0.0%
Earnings (1000 euros)	0.46	0.26	0.38	0.12
Gross income (1000 euros)	15.35	15.33	13.57	13.21
Mental medication	0%	100%	0%	100%
Type of mental medication				
Antipsychotics (N05A)	0%	25.7%	0%	46.6%
Anxiolytics (N05B)	0%	35.1%	0%	34.1%
Hypnotics and sedativs (N05C)	0%	19.0%	0%	17.7%
Antidepressants (N06A)	0%	71.0%	0%	55.7%
Psychostimulants, agents used for ADHD and nootropics (N06B)	0%	1.3%	0%	1.3%
Observations	5,164	2,242	2,665	1,243

Notes: Table 4 displays descriptive statistics for men and women split by mental health medication use in 2012. Parent of child in the household and parent of child under 12 in the household are determined on December 31st, 2012. Spell length welfare receipt is the length in years of the welfare benefit spell on January 1st, 2013, measured up to 1999. Total welfare receipt duration is the total number of years in which someone received welfare benefits between 1999 and 2012. Employment history is the number of years in which someone had an employment contract between 1999 and 2012. No employment history is a dummy for having no employment contract between 1999 and 2012.

Appendix
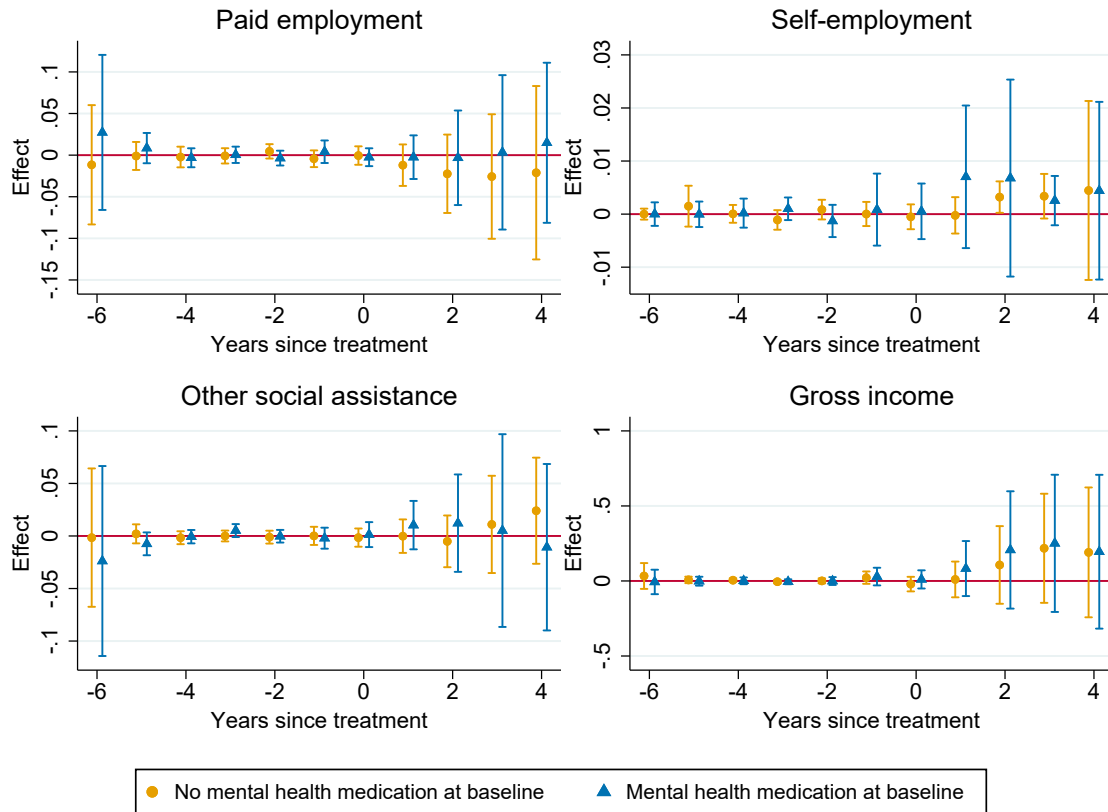
Figure A.1: Effect of the activation program on additional labor market outcomes

Notes: See notes to Figure 4. Paid employment measures whether someone has an employment contract. Self-employment measures whether someone is self-employed. Other social assistance measures whether someone claims social assistance that is not welfare benefits. Gross income is the inverse hyperbolic sine transformation of the gross income in 2015 euros. All variables are measured 2010-2017. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.2 is the corresponding table.
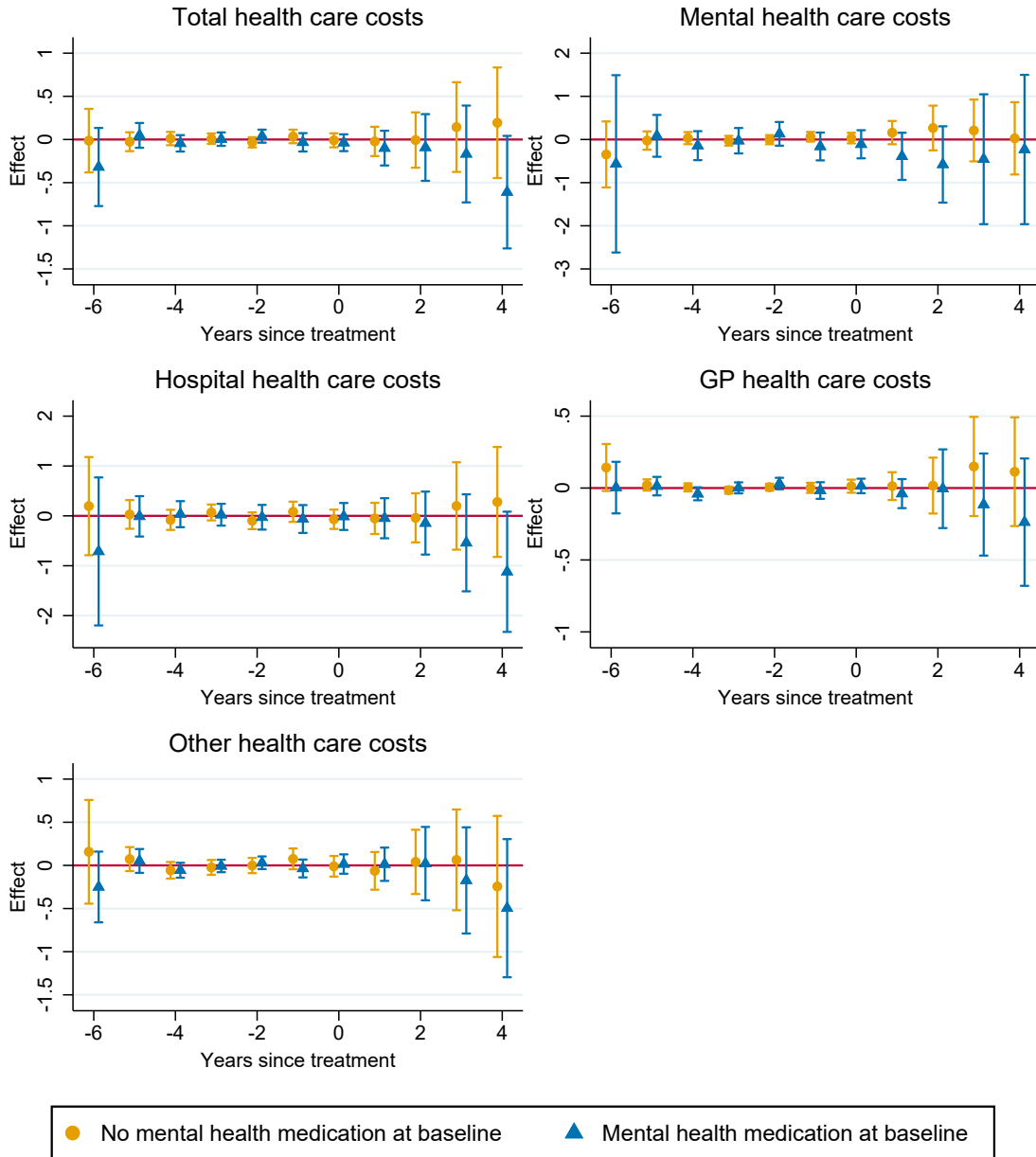
Figure A.2: Effect of the activation strategy on health care costs

Notes: See notes to Figure 4. Dependent variables are total health care costs, and health care costs split into four categories: mental, hospital, general practitioner (GP) and other. Health care costs are measured in 2015 euros and transformed with the inverse hyperbolic sine. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.5 is the corresponding table.

Welfare benefit receipt

Non-western migration background	Native & western migration background

Employment

Non-western migration background	Native & western migration background

Neither (self-)employment nor benefits

Non-western migration background	Native & western migration background

Mental health medication

Non-western migration background	Native & western migration background

● No mental health medication at baseline   ▲ Mental health medication at baseline

Figure A.3: Effect of activation strategy on labor market and mental health outcomes by migration background

Notes: See notes to Figure 4. The model is estimated separately for non-western migration background, and natives and non-western migrants. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.6 is the corresponding table.
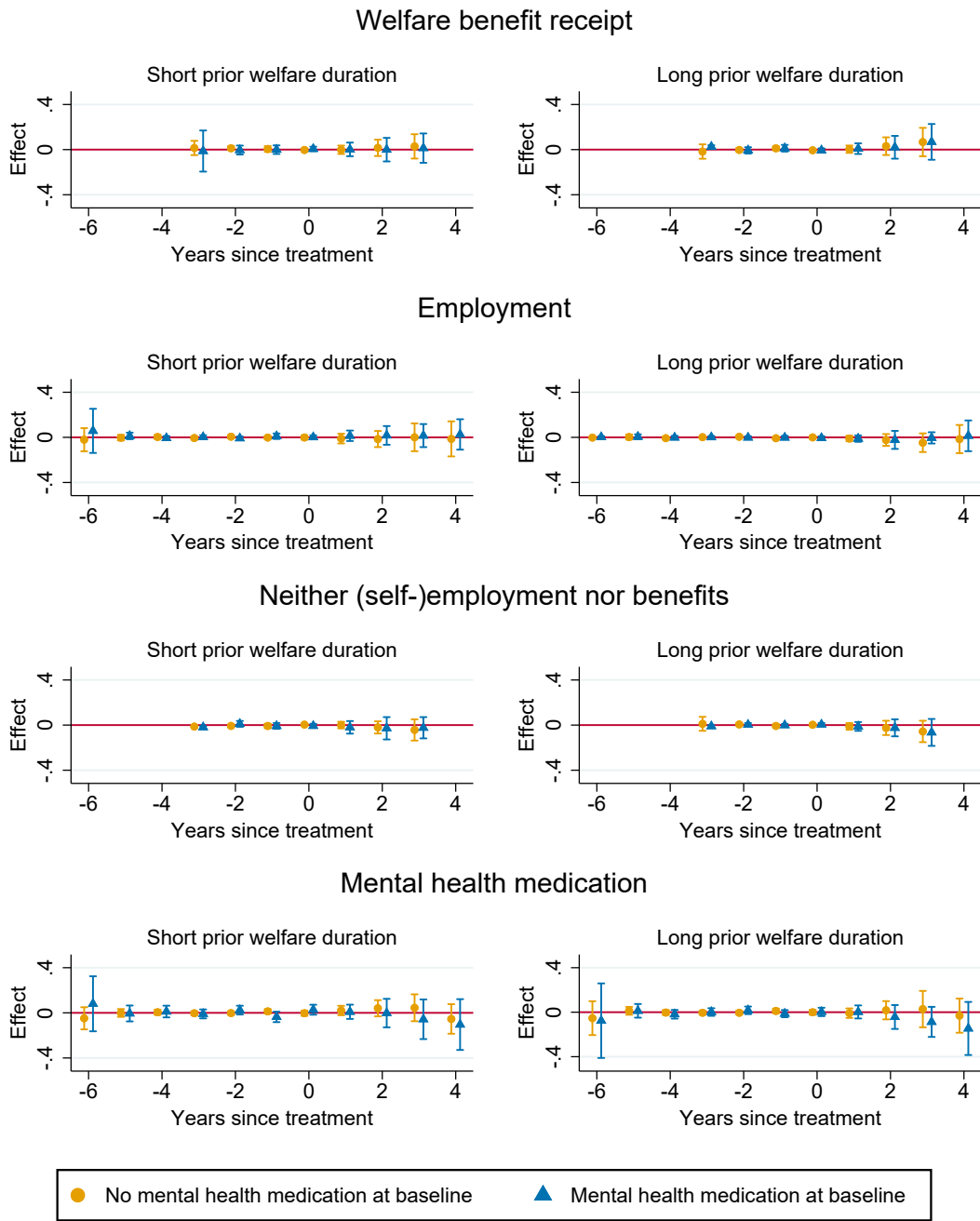
Figure A.4: Effect of activation strategy on labor market and mental health outcomes by prior duration of welfare benefits

Notes: See notes to Figure 4. The model is estimated separately by prior duration of welfare benefits. Long duration of welfare benefits is if someone has claimed welfare benefits from 1999 to 2012, otherwise it is short. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.7 is the corresponding table.
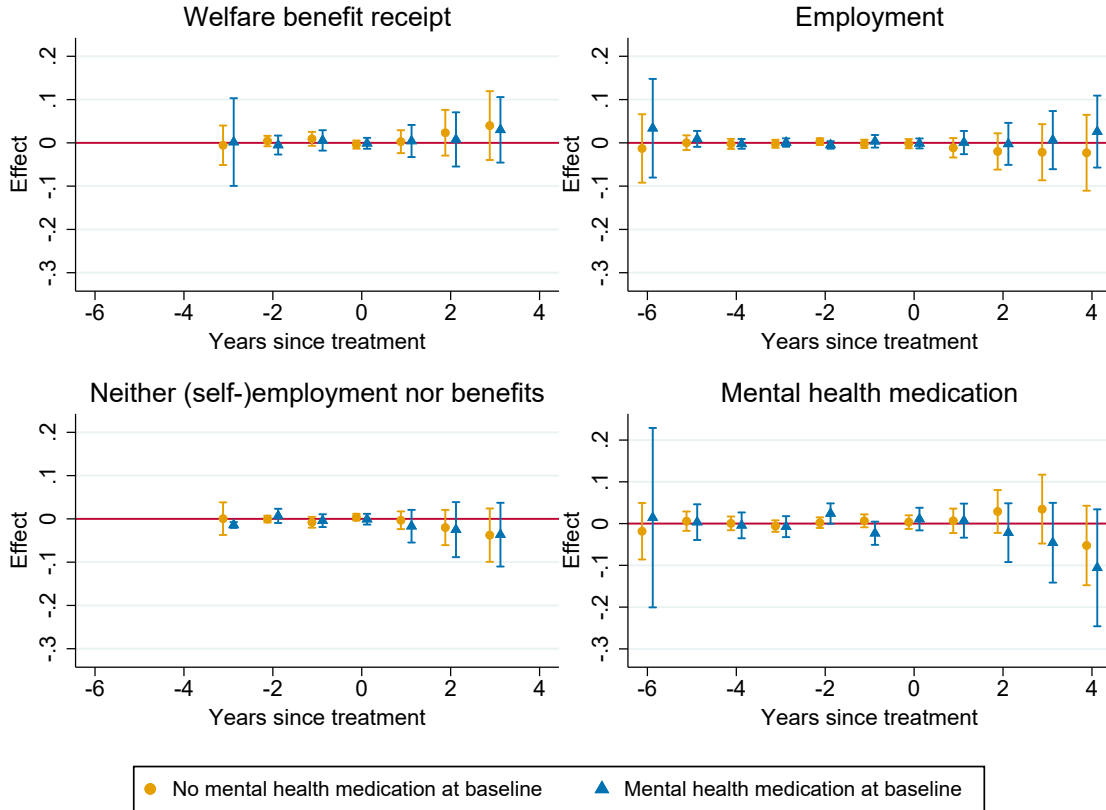
Figure A.5: Robustness check using alternative treatment year definition: Effect of the activation program on labor market and mental health outcomes

Notes: See notes to Figure 4. The treatment year is the year in which the median spell of the 'concentrated period' falls, the twelve consecutive months in which most activation strategies in a neighborhood were started. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.8 is the corresponding table.
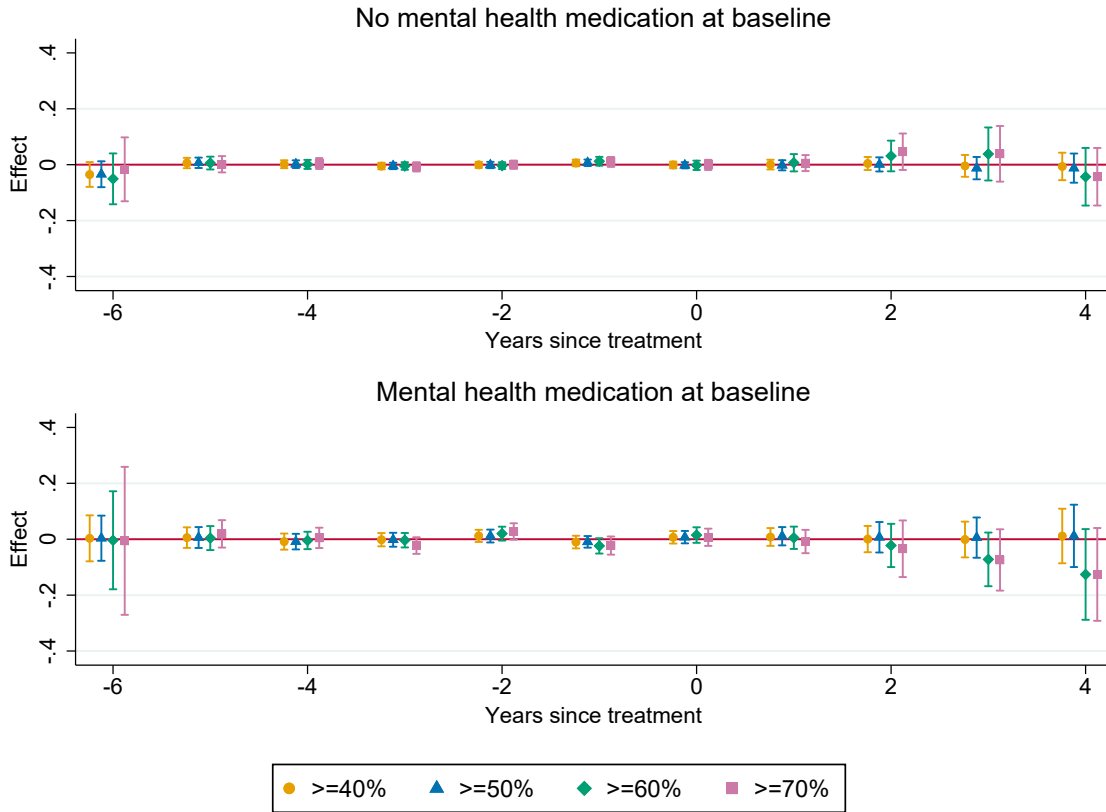
Figure A.6: Robustness check varying concentration threshold: Effect of the activation program on mental health medication

Notes: See notes to Figure 4. The concentration index of a neighborhood is the fraction of activation strategies started in the concentrated period out of all activation strategies started in the neighborhood. Only neighborhoods with a concentration index above the threshold are included in the analysis. The treshold is varied from 40% to 70%. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.9 is the corresponding table.
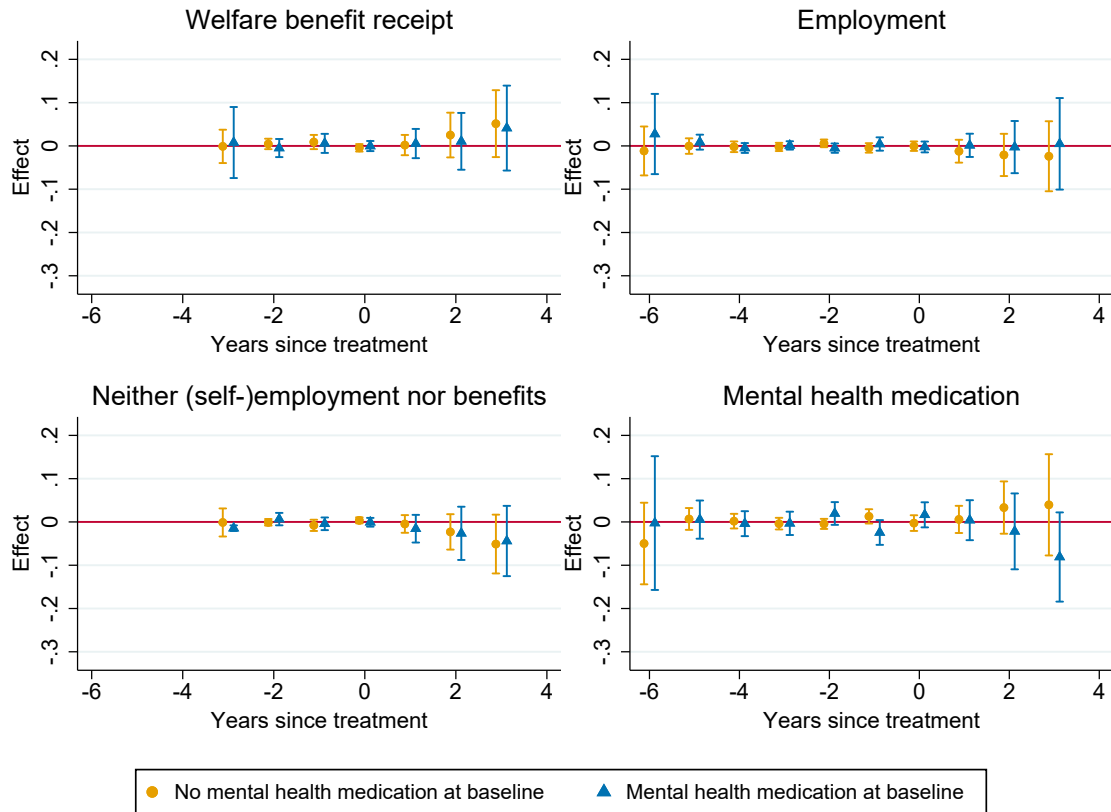
Figure A.7: Robustness check without neighborhoods treated in 2013: Effect of the activation program on labor market and mental health outcomes

Notes: See notes to Figure 4. Welfare recipients who live in neighborhoods that are treated in 2013 are omitted from the analysis. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.11 is the corresponding table.
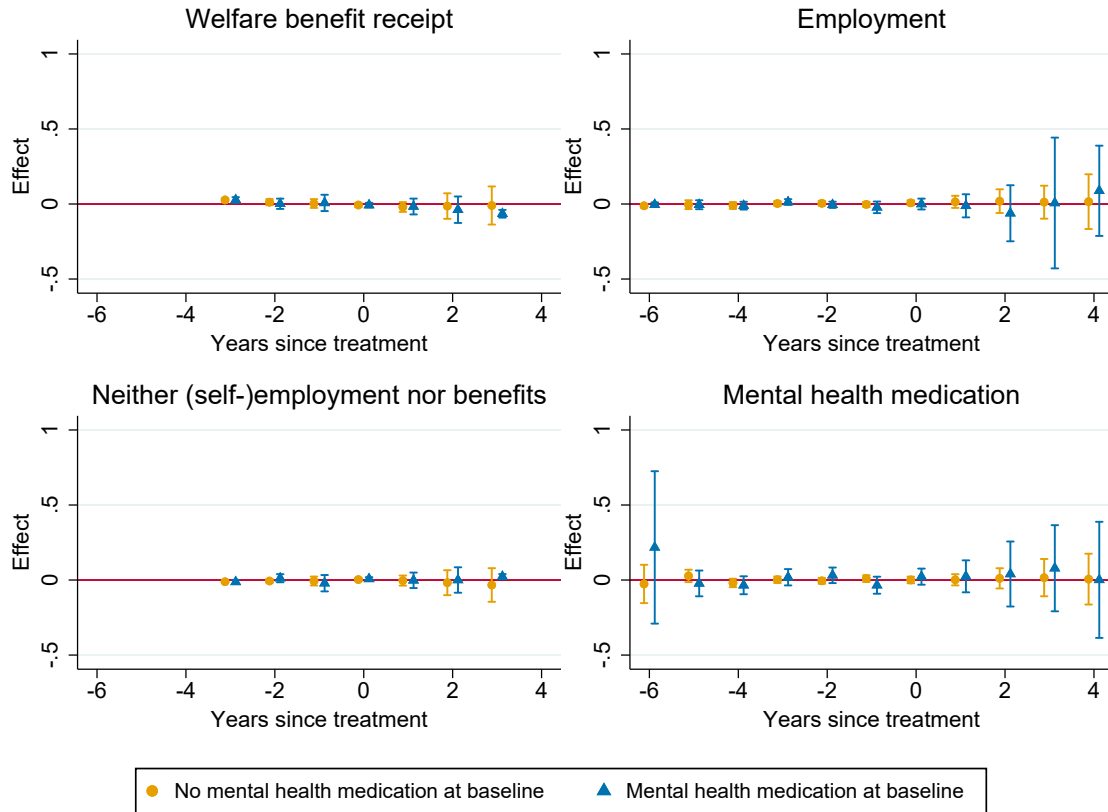
Figure A.8: Effect of the activation program on labor market and mental health outcomes of parents of the child sample

Notes: See notes to Figure 4. The sample consists of parents in the main sample with a child included in the children sample (see notes to Table 2) who lives in their household on January 1st, 2013. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.13 is the corresponding table.
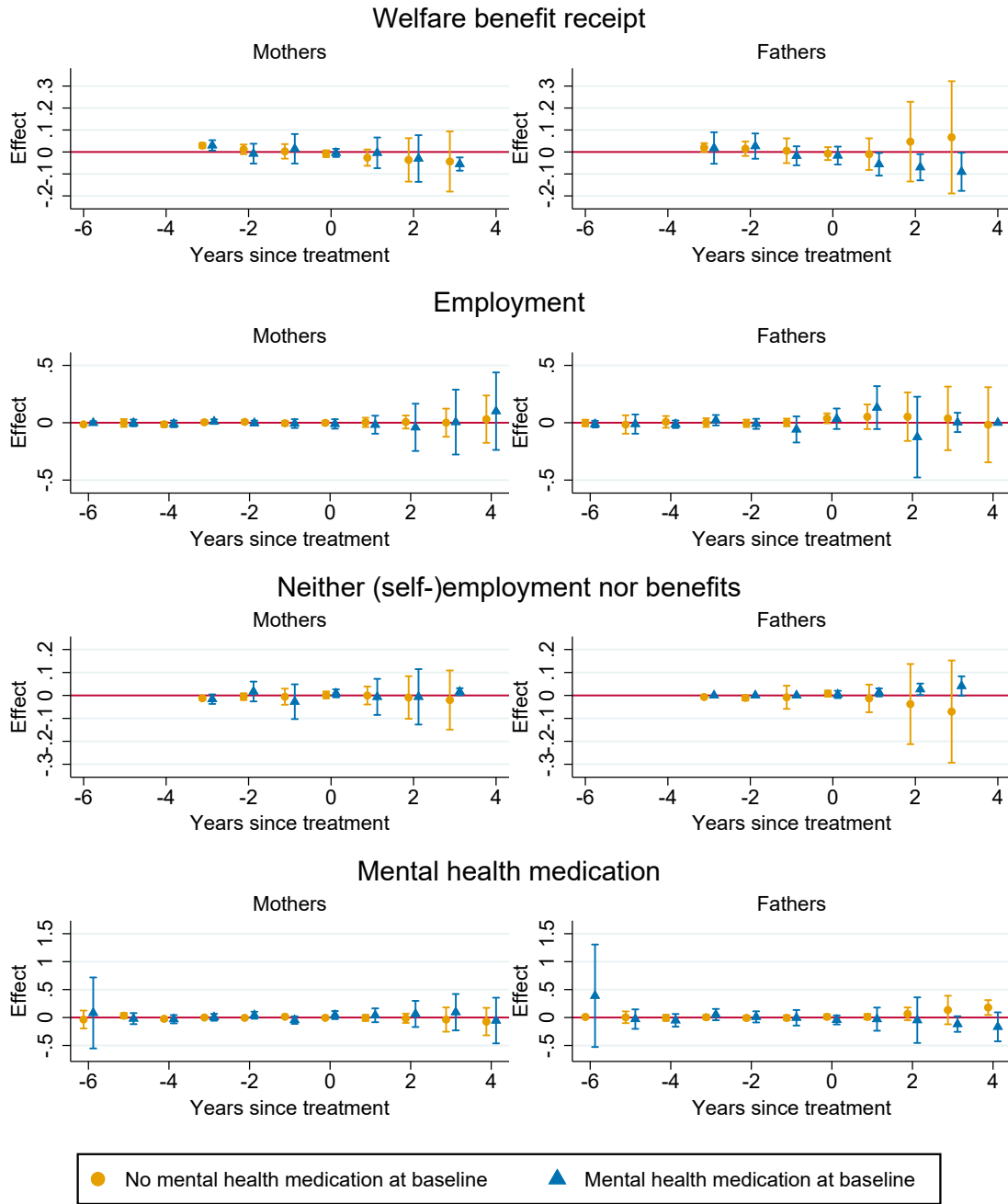
Figure A.9: Effect of the activation program on labor market and mental health outcomes for mothers and fathers

Notes: See notes to Figure 4 and Figure A.8. The model is estimated separately for mothers and fathers. No coefficient for employment is reported for fathers with mental health medication at baseline at event time 4 as there is no variation in employment to estimate standard errors. Coefficients are plotted from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. 95% simultaneous confidence intervals are shown. Table A.14 is the corresponding table.

Table A.1: Effect of the activation program on labor market and mental health outcomes

Event time	No mental health medication at baseline				Mental health medication at baseline			
	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.012 (0.025) [-0.082,0.059]		-0.051 (0.033) [-0.142,0.040]		0.028 (0.035) [-0.065,0.121]		-0.004 (0.066) [-0.179,0.172]
-5		0.000 (0.006) [-0.017,0.016]		0.006 (0.008) [-0.017,0.029]		0.009 (0.007) [-0.009,0.027]		0.004 (0.016) [-0.039,0.047]
-4		-0.002 (0.004) [-0.014,0.010]		0.001 (0.006) [-0.015,0.017]		-0.004 (0.004) [-0.016,0.007]		-0.004 (0.012) [-0.036,0.027]
-3	-0.001 (0.015) [-0.040,0.037]	-0.002 (0.003) [-0.011,0.007]	-0.001 (0.013) [-0.034,0.031]	-0.005 (0.005) [-0.018,0.009]	0.008 (0.035) [-0.074,0.090]	0.002 (0.004) [-0.008,0.011]	-0.014 (0.003) [-0.021,-0.008]	-0.004 (0.010) [-0.029,0.022]
-2	0.005 (0.005) [-0.007,0.017]	0.006 (0.003) [-0.003,0.014]	-0.001 (0.003) [-0.008,0.007]	-0.003 (0.004) [-0.016,0.009]	-0.005 (0.009) [-0.026,0.016]	-0.005 (0.003) [-0.014,0.004]	0.007 (0.006) [-0.008,0.021]	0.020 (0.009) [-0.005,0.045]
-1	0.009 (0.007) [-0.007,0.025]	-0.005 (0.003) [-0.014,0.005]	-0.008 (0.005) [-0.021,0.005]	0.012 (0.006) [-0.003,0.028]	0.006 (0.009) [-0.016,0.028]	0.004 (0.005) [-0.011,0.018]	-0.004 (0.006) [-0.019,0.010]	-0.024 (0.010) [-0.051,0.004]
0	-0.004 (0.003) [-0.013,0.004]	-0.001 (0.004) [-0.012,0.010]	0.004 (0.003) [-0.003,0.011]	-0.002 (0.006) [-0.019,0.014]	0.000 (0.005) [-0.012,0.011]	-0.003 (0.004) [-0.014,0.009]	-0.001 (0.004) [-0.011,0.009]	0.015 (0.010) [-0.013,0.043]
1	0.002 (0.009) [-0.021,0.025]	-0.012 (0.009) [-0.036,0.012]	-0.005 (0.008) [-0.025,0.016]	0.007 (0.011) [-0.024,0.038]	0.005 (0.015) [-0.028,0.039]	0.001 (0.010) [-0.027,0.029]	-0.016 (0.013) [-0.048,0.016]	0.005 (0.015) [-0.035,0.045]
2	0.025 (0.021) [-0.027,0.077]	-0.020 (0.016) [-0.065,0.025]	-0.023 (0.017) [-0.064,0.018]	0.031 (0.020) [-0.024,0.086]	0.011 (0.028) [-0.055,0.076]	-0.003 (0.021) [-0.059,0.053]	-0.026 (0.025) [-0.088,0.035]	-0.022 (0.029) [-0.100,0.055]
3	0.051 (0.031) [-0.026,0.129]	-0.022 (0.026) [-0.094,0.049]	-0.051 (0.028) [-0.119,0.017]	0.038 (0.034) [-0.057,0.133]	0.041 (0.042) [-0.057,0.139]	0.005 (0.034) [-0.087,0.096]	-0.044 (0.033) [-0.125,0.037]	-0.072 (0.036) [-0.168,0.024]
4		-0.015 (0.036) [-0.116,0.085]		-0.043 (0.037) [-0.146,0.060]		0.019 (0.037) [-0.078,0.117]		-0.126 (0.061) [-0.288,0.036]
Mean	0.949	0.081	0.025	0.080	0.958	0.044	0.019	0.785
N	7,342	7,829	7,342	7,829	3,212	3,485	3,212	3,485

Notes: The sample consists of welfare recipients who live in Rotterdam, have claimed welfare benefits for ≥ 5 years and are aged 35-60 on January 1st, 2013. Mental health medication measures whether someone was prescribed mental health medication, baseline is 2012. Welfare benefit receipt measures whether someone claimed welfare benefits. Employment measures whether someone had an employment contract or was self-employed. Neither (self-)employment nor benefits is a dummy which is one if someone does not claim welfare benefits and other social assistance and is not employed. Employment and mental health medication are measured 2010-2017. Welfare benefit and neither (self-)employment nor benefits are measured 2013-2017 and only neighborhoods treated after 2013 are included, due to sample criteria these variables do not vary prior to 2013. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

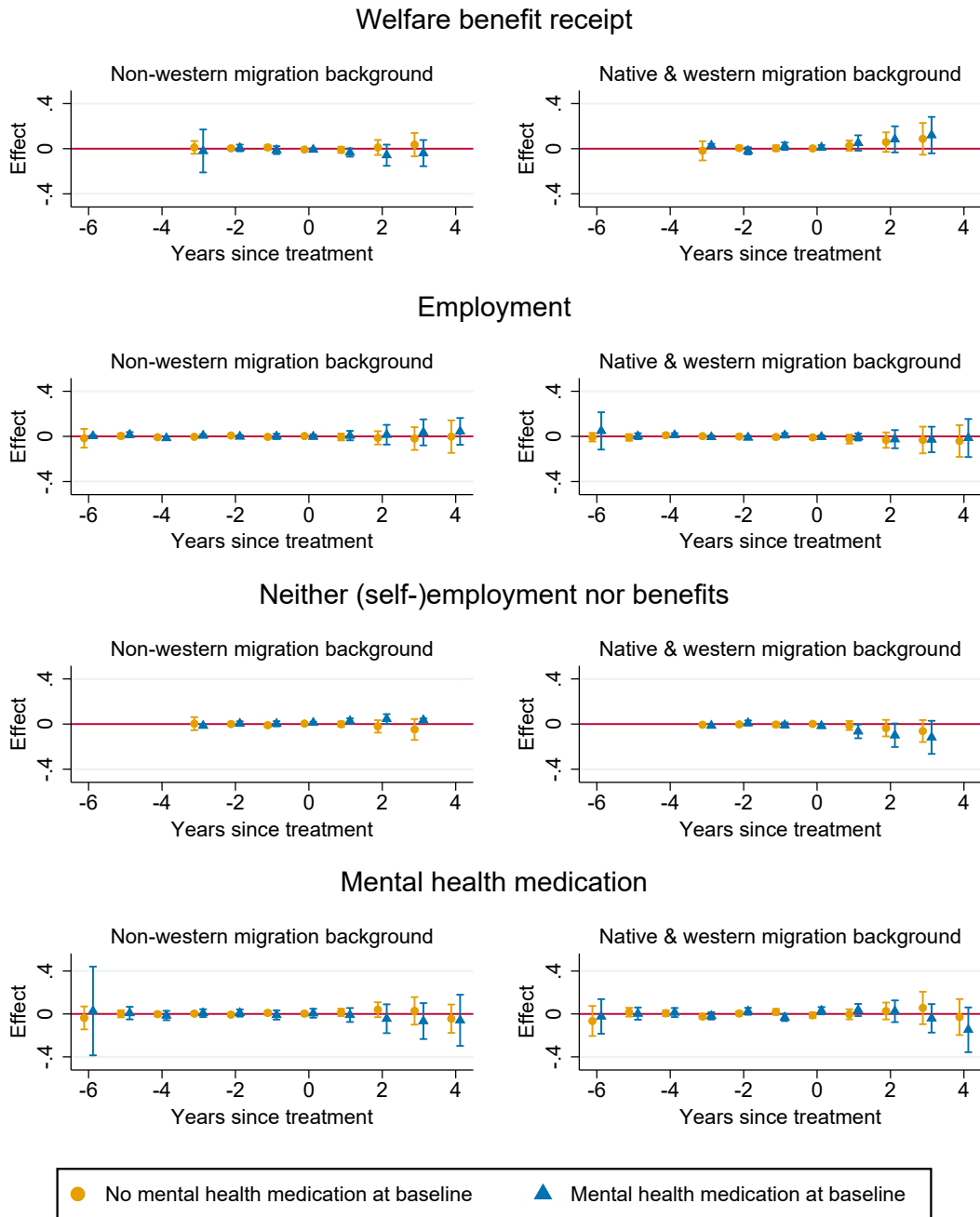Table A.2: Effect of the activation program on additional labor market outcomes

Event time	No mental health medication at baseline				Mental health medication at baseline			
	Paid employment	Self employment	Other social assistance	Gross income	Paid employment	Self employment	Other social assistance	Gross income
-6	-0.012	0.000	-0.002	0.033	0.027	0.000	-0.024	-0.007
	(0.025)	(0.000)	(0.025)	(0.033)	(0.035)	(0.001)	(0.036)	(0.032)
	[-0.083,0.060]	[-0.001,0.001]	[-0.067,0.064]	[-0.053,0.119]	[-0.066,0.120]	[-0.002,0.002]	[-0.114,0.067]	[-0.088,0.075]
-5	-0.001	0.001	0.002	0.007	0.008	0.000	-0.007	-0.001
	(0.006)	(0.001)	(0.003)	(0.008)	(0.007)	(0.001)	(0.004)	(0.012)
	[-0.018,0.016]	[-0.002,0.005]	[-0.007,0.011]	[-0.014,0.029]	[-0.010,0.027]	[-0.002,0.002]	[-0.018,0.003]	[-0.031,0.028]
-4	-0.002	0.000	-0.002	0.005	-0.003	0.000	-0.001	0.001
	(0.004)	(0.001)	(0.002)	(0.005)	(0.004)	(0.001)	(0.003)	(0.009)
	[-0.015,0.010]	[-0.002,0.002]	[-0.008,0.005]	[-0.007,0.018]	[-0.015,0.008]	[-0.003,0.003]	[-0.007,0.006]	[-0.021,0.024]
-3	-0.001	-0.001	0.000	-0.005	0.000	0.001	0.005	-0.005
	(0.003)	(0.001)	(0.002)	(0.005)	(0.004)	(0.001)	(0.002)	(0.007)
	[-0.010,0.008]	[-0.003,0.001]	[-0.005,0.005]	[-0.017,0.007]	[-0.009,0.010]	[-0.001,0.003]	[-0.001,0.011]	[-0.022,0.011]
-2	0.005	0.001	-0.001	0.001	-0.004	-0.001	0.000	0.000
	(0.003)	(0.001)	(0.002)	(0.006)	(0.003)	(0.001)	(0.002)	(0.010)
	[-0.004,0.013]	[-0.001,0.003]	[-0.007,0.005]	[-0.016,0.018]	[-0.012,0.005]	[-0.004,0.002]	[-0.006,0.006]	[-0.027,0.026]
-1	-0.004	0.000	0.000	0.022	0.004	0.001	-0.002	0.029
	(0.004)	(0.001)	(0.003)	(0.016)	(0.005)	(0.003)	(0.004)	(0.023)
	[-0.014,0.006]	[-0.002,0.002]	[-0.009,0.009]	[-0.019,0.063]	[-0.009,0.018]	[-0.006,0.008]	[-0.012,0.008]	[-0.029,0.088]
0	-0.001	-0.001	-0.002	-0.021	-0.002	0.001	0.001	0.010
	(0.004)	(0.001)	(0.003)	(0.018)	(0.004)	(0.002)	(0.005)	(0.024)
	[-0.012,0.011]	[-0.003,0.002]	[-0.010,0.007]	[-0.069,0.028]	[-0.013,0.008]	[-0.005,0.006]	[-0.011,0.013]	[-0.050,0.071]
1	-0.012	0.000	0.000	0.010	-0.002	0.007	0.010	0.083
	(0.009)	(0.001)	(0.006)	(0.045)	(0.010)	(0.005)	(0.009)	(0.073)
	[-0.037,0.013]	[-0.004,0.003]	[-0.016,0.016]	[-0.109,0.129]	[-0.029,0.024]	[-0.006,0.020]	[-0.013,0.033]	[-0.101,0.266]
2	-0.022	0.003	-0.005	0.107	-0.003	0.007	0.012	0.207
	(0.016)	(0.001)	(0.009)	(0.098)	(0.021)	(0.007)	(0.018)	(0.155)
	[-0.070,0.025]	[0.000,0.006]	[-0.030,0.020]	[-0.152,0.365]	[-0.060,0.054]	[-0.012,0.025]	[-0.034,0.059]	[-0.184,0.598]
3	-0.026	0.003	0.011	0.218	0.003	0.003	0.005	0.251
	(0.026)	(0.002)	(0.018)	(0.138)	(0.035)	(0.002)	(0.036)	(0.181)
	[-0.101,0.049]	[-0.001,0.008]	[-0.035,0.057]	[-0.146,0.581]	[-0.089,0.096]	[-0.002,0.007]	[-0.087,0.097]	[-0.207,0.708]
4	-0.021	0.004	0.024	0.190	0.015	0.004	-0.011	0.195
	(0.036)	(0.006)	(0.019)	(0.164)	(0.036)	(0.007)	(0.031)	(0.203)
	[-0.125,0.083]	[-0.012,0.021]	[-0.026,0.075]	[-0.242,0.623]	[-0.081,0.111]	[-0.012,0.021]	[-0.090,0.069]	[-0.318,0.707]
Mean	0.077	0.005	0.031	5.485	0.041	0.004	0.041	5.494
N	7,829	7,829	7,829	7,829	3,485	3,485	3,485	3,485

Notes: See notes to Table A.1. Paid employment measures whether someone has an employment contract. Self-employment measures whether someone is self-employed. Other social assistance measures whether someone claims social assistance that is not welfare benefits. Gross income is the inverse hyperbolic sine transformation of the gross income in 2015 euros. All variables are measured 2010-2017. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.3: Effect of the activation program on labor market and mental health outcomes by gender

Panel A. Female

Event time	No mental health medication at baseline				Mental health medication at baseline			
	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.005		-0.045		0.039		-0.044
		(0.032)		(0.038)		(0.049)		(0.066)
		[-0.089,0.079]		[-0.146,0.056]		[-0.088,0.166]		[-0.229,0.142]
-5		0.001		0.015		0.016		0.012
		(0.007)		(0.011)		(0.009)		(0.021)
		[-0.018,0.021]		[-0.013,0.043]		[-0.006,0.038]		[-0.048,0.072]
-4		-0.009		-0.005		-0.002		0.003
		(0.005)		(0.008)		(0.006)		(0.015)
		[-0.021,0.004]		[-0.025,0.016]		[-0.017,0.014]		[-0.039,0.045]
-3	-0.001	0.002	0.003	-0.003	-0.004	-0.005	-0.017	-0.014
	(0.023)	(0.004)	(0.021)	(0.006)	(0.049)	(0.004)	(0.004)	(0.012)
	[-0.059,0.057]	[-0.008,0.012]	[-0.046,0.052]	[-0.019,0.013]	[-0.127,0.119]	[-0.016,0.007]	[-0.026,-0.007]	[-0.047,0.020]
-2	0.009	0.008	-0.003	-0.006	-0.009	-0.003	0.006	0.024
	(0.006)	(0.004)	(0.004)	(0.006)	(0.011)	(0.004)	(0.008)	(0.013)
	[-0.005,0.024]	[-0.002,0.017]	[-0.012,0.005]	[-0.021,0.008]	[-0.037,0.019]	[-0.014,0.008]	[-0.012,0.025]	[-0.012,0.059]
-1	0.003	-0.007	-0.005	0.017	0.013	0.007	-0.003	-0.019
	(0.008)	(0.004)	(0.007)	(0.007)	(0.013)	(0.006)	(0.008)	(0.013)
	[-0.017,0.023]	[-0.018,0.005]	[-0.020,0.010]	[-0.002,0.036]	[-0.019,0.044]	[-0.009,0.022]	[-0.022,0.016]	[-0.056,0.018]
0	-0.005	-0.004	0.007	-0.006	0.000	-0.004	-0.002	0.019
	(0.004)	(0.005)	(0.004)	(0.008)	(0.007)	(0.006)	(0.006)	(0.013)
	[-0.016,0.005]	[-0.016,0.008]	[-0.003,0.017]	[-0.027,0.015]	[-0.018,0.018]	[-0.018,0.010]	[-0.017,0.012]	[-0.018,0.056]
1	-0.003	-0.019	0.002	-0.003	0.014	0.002	-0.022	0.016
	(0.012)	(0.011)	(0.011)	(0.016)	(0.020)	(0.012)	(0.019)	(0.018)
	[-0.033,0.026]	[-0.047,0.009]	[-0.023,0.027]	[-0.045,0.039]	[-0.036,0.065]	[-0.030,0.034]	[-0.065,0.022]	[-0.033,0.066]
2	0.011	-0.030	-0.008	0.018	0.025	0.007	-0.032	0.010
	(0.024)	(0.020)	(0.020)	(0.028)	(0.037)	(0.027)	(0.031)	(0.035)
	[-0.048,0.070]	[-0.083,0.024]	[-0.056,0.039]	[-0.056,0.092]	[-0.068,0.117]	[-0.064,0.077]	[-0.105,0.041]	[-0.089,0.109]
3	0.040	-0.054	-0.028	0.009	0.054	0.004	-0.047	-0.019
	(0.040)	(0.033)	(0.032)	(0.050)	(0.049)	(0.047)	(0.045)	(0.046)
	[-0.059,0.139]	[-0.140,0.032]	[-0.104,0.047]	[-0.125,0.142]	[-0.069,0.178]	[-0.120,0.127]	[-0.152,0.058]	[-0.148,0.110]
4		-0.046		-0.083		0.020		-0.087
		(0.047)		(0.049)		(0.049)		(0.074)
		[-0.171,0.078]		[-0.213,0.047]		[-0.108,0.148]		[-0.294,0.120]
Mean	0.947	0.077	0.029	0.084	0.958	0.047	0.023	0.762
N	4,858	5,164	4,858	5,164	2,076	2,242	2,076	2,242

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Table A.3: Effect of the activation program on labor market and mental health outcomes by gender (continued)

Panel B. Male

Event time	No mental health medication at baseline				Mental health medication at baseline			
	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.023 (0.045) [-0.148,0.103]		-0.060 (0.059) [-0.221,0.101]		0.001 (0.004) [-0.009,0.010]		0.092 (0.110) [-0.188,0.372]
-5		-0.004 (0.012) [-0.037,0.029]		-0.013 (0.015) [-0.055,0.030]		-0.004 (0.011) [-0.032,0.024]		-0.012 (0.024) [-0.074,0.050]
-4		0.012 (0.008) [-0.012,0.036]		0.013 (0.009) [-0.012,0.037]		-0.009 (0.006) [-0.025,0.007]		-0.020 (0.018) [-0.065,0.026]
-3	-0.002 (0.036) [-0.088,0.084]	-0.009 (0.006) [-0.025,0.008]	-0.009 (0.003) [-0.016,-0.001]	-0.007 (0.008) [-0.028,0.013]	0.036 (0.008) [0.017,0.054]	0.013 (0.006) [-0.002,0.028]	-0.010 (0.005) [-0.021,0.001]	0.015 (0.015) [-0.024,0.054]
-2	-0.005 (0.009) [-0.027,0.017]	0.002 (0.006) [-0.014,0.018]	0.005 (0.006) [-0.009,0.018]	0.001 (0.007) [-0.019,0.020]	0.003 (0.015) [-0.035,0.042]	-0.008 (0.006) [-0.024,0.008]	0.007 (0.010) [-0.015,0.028]	0.016 (0.014) [-0.019,0.052]
-1	0.021 (0.011) [-0.006,0.048]	-0.001 (0.007) [-0.019,0.017]	-0.014 (0.009) [-0.034,0.007]	0.004 (0.008) [-0.020,0.027]	-0.010 (0.011) [-0.036,0.017]	-0.005 (0.010) [-0.032,0.023]	-0.006 (0.007) [-0.021,0.009]	-0.035 (0.017) [-0.078,0.008]
0	-0.003 (0.007) [-0.019,0.012]	0.006 (0.007) [-0.015,0.026]	-0.002 (0.004) [-0.011,0.007]	0.003 (0.009) [-0.020,0.027]	-0.001 (0.007) [-0.017,0.015]	0.001 (0.008) [-0.020,0.022]	0.005 (0.003) [-0.003,0.012]	0.003 (0.016) [-0.037,0.043]
1	0.009 (0.017) [-0.032,0.050]	0.002 (0.015) [-0.040,0.044]	-0.017 (0.013) [-0.049,0.014]	0.021 (0.014) [-0.017,0.058]	-0.016 (0.017) [-0.058,0.027]	0.000 (0.017) [-0.046,0.045]	0.002 (0.016) [-0.035,0.038]	-0.026 (0.029) [-0.099,0.048]
2	0.050 (0.039) [-0.043,0.143]	-0.007 (0.029) [-0.088,0.073]	-0.048 (0.034) [-0.129,0.033]	0.051 (0.028) [-0.026,0.127]	-0.032 (0.034) [-0.117,0.052]	-0.025 (0.028) [-0.097,0.047]	-0.005 (0.035) [-0.082,0.071]	-0.122 (0.058) [-0.271,0.026]
3	0.070 (0.055) [-0.061,0.202]	0.027 (0.051) [-0.116,0.169]	-0.089 (0.053) [-0.213,0.035]	0.086 (0.046) [-0.041,0.213]	-0.001 (0.086) [-0.214,0.212]	0.005 (0.010) [-0.021,0.030]	-0.033 (0.087) [-0.226,0.161]	-0.237 (0.072) [-0.420,-0.053]
4		0.037 (0.056) [-0.121,0.194]		0.020 (0.051) [-0.120,0.160]		0.011 (0.017) [-0.034,0.057]		-0.282 (0.047) [-0.403,-0.162]
Mean	0.952	0.089	0.018	0.073	0.958	0.039	0.013	0.825
N	2,484	2,665	2,484	2,665	1,136	1,243	1,136	1,243

Notes: See notes to Table A.1. The model is estimated separately for women and men. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.4: Effect of the activation program on mental health medication type for those with mental health medication at baseline by gender

Event time	*Panel A. Female* Antipsychotics in 2012 No Antipsychotics	Yes	Anxiolytics in 2012 No Anxiolytics	Yes	Hypnotics and sedatives in 2012 No Hypnotics and sedatives	Yes	Antidepressants in 2012 No Antidepressants	Yes	Psychostimulants in 2012 No Psychostimulants	Yes
-6	-0.071	-0.082	0.174	-0.190	0.128	-0.338	0.131	-0.094	-0.003	0.000
	(0.060)	(0.014)	(0.136)	(0.104)	(0.066)	(0.266)	(0.134)	(0.145)	(0.001)	(0.000)
	[-0.232,0.090]	[-0.118,-0.046]	[-0.192,0.539]	[-0.474,0.093]	[-0.039,0.296]	[-1.041,0.366]	[-0.219,0.481]	[-0.507,0.320]	[-0.006,0.000]	[0.000,0.000]
-5	0.019	-0.038	-0.013	0.013	-0.001	0.049	0.012	0.018	0.003	0.000
	(0.014)	(0.031)	(0.022)	(0.045)	(0.012)	(0.050)	(0.036)	(0.026)	(0.004)	(0.000)
	[-0.017,0.055]	[-0.118,0.043]	[-0.071,0.045]	[-0.110,0.136]	[-0.032,0.030]	[-0.084,0.182]	[-0.082,0.106]	[-0.057,0.094]	[-0.007,0.012]	[0.000,0.000]
-4	-0.006	0.037	0.005	-0.031	-0.015	-0.022	-0.030	0.003	0.001	0.175
	(0.010)	(0.025)	(0.015)	(0.028)	(0.008)	(0.037)	(0.023)	(0.017)	(0.003)	(0.148)
	[-0.032,0.020]	[-0.029,0.102]	[-0.037,0.046]	[-0.108,0.046]	[-0.036,0.006]	[-0.120,0.075]	[-0.090,0.030]	[-0.046,0.052]	[-0.007,0.008]	[-0.223,0.573]
-3	-0.002	-0.002	0.000	-0.003	0.006	-0.027	0.018	-0.015	-0.002	-0.128
	(0.008)	(0.021)	(0.013)	(0.025)	(0.007)	(0.030)	(0.019)	(0.014)	(0.002)	(0.121)
	[-0.023,0.020]	[-0.057,0.053]	[-0.034,0.035]	[-0.072,0.066]	[-0.012,0.023]	[-0.107,0.053]	[-0.032,0.069]	[-0.056,0.027]	[-0.006,0.003]	[-0.452,0.196]
-2	0.006	0.002	-0.007	-0.003	0.006	0.049	-0.012	0.032	0.001	0.166
	(0.007)	(0.022)	(0.012)	(0.024)	(0.007)	(0.034)	(0.017)	(0.015)	(0.002)	(0.137)
	[-0.013,0.025]	[-0.056,0.060]	[-0.039,0.025]	[-0.068,0.063]	[-0.011,0.024]	[-0.040,0.138]	[-0.057,0.033]	[-0.009,0.073]	[-0.003,0.005]	[-0.204,0.535]
-1	-0.010	-0.026	0.004	0.026	0.001	-0.018	-0.005	-0.025	-0.002	-0.133
	(0.009)	(0.024)	(0.013)	(0.024)	(0.010)	(0.031)	(0.022)	(0.018)	(0.002)	(0.150)
	[-0.034,0.014]	[-0.088,0.037]	[-0.031,0.040]	[-0.038,0.091]	[-0.024,0.025]	[-0.099,0.063]	[-0.062,0.053]	[-0.076,0.027]	[-0.007,0.002]	[-0.536,0.270]
0	0.010	0.041	0.019	0.002	0.009	-0.011	-0.004	0.030	0.002	-0.005
	(0.007)	(0.028)	(0.012)	(0.020)	(0.009)	(0.025)	(0.022)	(0.017)	(0.002)	(0.109)
	[-0.010,0.030]	[-0.033,0.115]	[-0.015,0.052]	[-0.051,0.055]	[-0.015,0.033]	[-0.077,0.056]	[-0.062,0.053]	[-0.018,0.077]	[-0.002,0.007]	[-0.297,0.288]
1	0.016	0.057	0.029	0.007	0.020	-0.014	-0.015	0.015	0.002	0.109
	(0.018)	(0.047)	(0.027)	(0.028)	(0.016)	(0.038)	(0.043)	(0.028)	(0.002)	(0.192)
	[-0.031,0.063]	[-0.066,0.180]	[-0.042,0.101]	[-0.069,0.083]	[-0.020,0.059]	[-0.115,0.086]	[-0.126,0.096]	[-0.065,0.096]	[-0.003,0.007]	[-0.406,0.625]
2	0.023	0.058	0.055	-0.021	0.043	-0.001	0.008	0.037	-0.005	0.667
	(0.034)	(0.070)	(0.043)	(0.048)	(0.029)	(0.070)	(0.071)	(0.054)	(0.010)	(0.165)
	[-0.068,0.113]	[-0.124,0.240]	[-0.060,0.170]	[-0.152,0.110]	[-0.032,0.117]	[-0.185,0.184]	[-0.177,0.193]	[-0.116,0.190]	[-0.029,0.019]	[0.223,1.110]
3	-0.002	0.014	0.064	-0.135	0.021	-0.012	-0.100	0.073	-0.017	
	(0.041)	(0.093)	(0.067)	(0.057)	(0.037)	(0.116)	(0.115)	(0.081)	(0.028)	
	[-0.112,0.108]	[-0.228,0.256]	[-0.117,0.244]	[-0.291,0.020]	[-0.073,0.115]	[-0.318,0.295]	[-0.401,0.201]	[-0.157,0.302]	[-0.083,0.048]	
4	0.008	0.203	-0.047	-0.256	0.010	-0.244	-0.014	-0.003	-0.020	
	(0.043)	(0.145)	(0.081)	(0.123)	(0.049)	(0.149)	(0.109)	(0.102)	(0.030)	
	[-0.108,0.123]	[-0.175,0.581]	[-0.264,0.171]	[-0.589,0.078]	[-0.114,0.134]	[-0.639,0.151]	[-0.299,0.272]	[-0.292,0.287]	[-0.090,0.049]	
Mean	0.043	0.774	0.109	0.606	0.043	0.635	0.109	0.723	0.003	0.558
N	1,665	577	1,454	788	1,817	425	651	1,591	2,212	30

Table A.4: Effect of the activation program on mental health medication type for those with mental health medication at baseline by gender (continued)

Panel B. Male

Event time	Antipsychotics in 2012		Anxiolytics in 2012		Hypnotics and sedatives in 2012		Antidepressants in 2012		Psychostimulants in 2012	
	No Antipsychotics	Yes Antipsychotics	No Anxiolytics	Yes Anxiolytics	No Hypnotics and sedatives	Yes Hypnotics and sedatives	No Antidepressants	Yes Antidepressants	No Psychostimulants	Yes Psychostimulants
-6	0.017 (0.009) [-0.007,0.041]	-0.078 (0.014) [-0.114,-0.042]	0.002 (0.011) [-0.025,0.030]	0.150 (0.294) [-0.616,0.916]	0.011 (0.007) [-0.008,0.029]	0.845 (0.030) [0.760,0.929]	0.009 (0.012) [-0.022,0.040]	0.026 (0.150) [-0.379,0.431]	-0.081 (0.107) [-0.502,0.341]	0.000 (0.000) [0.000,0.000]
-5	0.005 (0.025) [-0.061,0.071]	-0.014 (0.034) [-0.102,0.074]	-0.015 (0.027) [-0.082,0.053]	-0.011 (0.046) [-0.131,0.109]	-0.043 (0.020) [-0.092,0.005]	0.047 (0.079) [-0.174,0.267]	-0.035 (0.026) [-0.105,0.036]	0.009 (0.037) [-0.090,0.107]	-0.002 (0.007) [-0.028,0.025]	0.000 (0.000) [0.000,0.000]
-4	-0.007 (0.017) [-0.053,0.038]	-0.024 (0.026) [-0.092,0.044]	0.003 (0.019) [-0.046,0.053]	0.013 (0.036) [-0.080,0.106]	0.009 (0.012) [-0.020,0.039]	0.011 (0.058) [-0.150,0.172]	0.027 (0.019) [-0.024,0.079]	-0.044 (0.027) [-0.118,0.029]	0.004 (0.002) [-0.002,0.010]	-0.231 (0.123) [-0.516,0.055]
-3	-0.006 (0.013) [-0.040,0.028]	0.023 (0.020) [-0.030,0.076]	0.003 (0.015) [-0.036,0.042]	-0.047 (0.032) [-0.131,0.037]	-0.005 (0.010) [-0.030,0.019]	-0.029 (0.043) [-0.150,0.091]	0.003 (0.017) [-0.043,0.048]	0.031 (0.023) [-0.031,0.092]	0.001 (0.002) [-0.005,0.008]	0.028 (0.203) [-0.443,0.499]
-2	0.013 (0.013) [-0.022,0.047]	0.018 (0.021) [-0.038,0.074]	-0.010 (0.014) [-0.047,0.026]	0.057 (0.029) [-0.018,0.132]	0.013 (0.008) [-0.007,0.033]	-0.002 (0.038) [-0.108,0.104]	-0.007 (0.015) [-0.046,0.032]	0.027 (0.024) [-0.037,0.091]	0.000 (0.002) [-0.009,0.008]	-0.028 (0.172) [-0.428,0.372]
-1	0.003 (0.014) [-0.033,0.040]	-0.050 (0.027) [-0.120,0.019]	-0.009 (0.023) [-0.068,0.049]	-0.048 (0.032) [-0.131,0.034]	-0.001 (0.011) [-0.028,0.026]	-0.015 (0.035) [-0.113,0.082]	-0.003 (0.016) [-0.045,0.039]	-0.073 (0.026) [-0.142,-0.003]	-0.001 (0.009) [-0.038,0.036]	-0.218 (0.161) [-0.594,0.157]
0	0.019 (0.015) [-0.019,0.058]	0.033 (0.032) [-0.051,0.117]	-0.016 (0.024) [-0.078,0.047]	0.013 (0.026) [-0.055,0.082]	-0.011 (0.011) [-0.040,0.017]	-0.031 (0.037) [-0.135,0.073]	0.018 (0.022) [-0.041,0.078]	0.040 (0.025) [-0.028,0.108]	0.000 (0.003) [-0.011,0.011]	0.327 (0.202) [-0.143,0.798]
1	0.027 (0.019) [-0.023,0.077]	0.017 (0.048) [-0.109,0.142]	-0.065 (0.056) [-0.208,0.078]	-0.022 (0.043) [-0.135,0.090]	-0.010 (0.035) [-0.096,0.077]	-0.064 (0.044) [-0.188,0.059]	-0.016 (0.038) [-0.118,0.085]	-0.016 (0.040) [-0.125,0.092]	0.003 (0.020) [-0.075,0.080]	0.400 (0.237) [-0.152,0.952]
2	0.010 (0.015) [-0.030,0.049]	-0.062 (0.056) [-0.208,0.084]	-0.081 (0.108) [-0.357,0.195]	-0.069 (0.097) [-0.323,0.184]	-0.018 (0.069) [-0.189,0.153]	-0.085 (0.037) [-0.187,0.017]	-0.137 (0.078) [-0.347,0.072]	-0.098 (0.088) [-0.335,0.139]	0.023 (0.056) [-0.200,0.246]	
3	-0.001 (0.024) [-0.064,0.063]	-0.255 (0.163) [-0.681,0.171]	-0.112 (0.148) [-0.490,0.267]	-0.120 (0.148) [-0.505,0.264]	-0.044 (0.099) [-0.289,0.201]	-0.182 (0.054) [-0.332,-0.032]	-0.234 (0.147) [-0.628,0.159]	-0.284 (0.121) [-0.610,0.042]	0.049 (0.071) [-0.230,0.328]	
4	-0.024 (0.151) [-0.419,0.371]	-0.410 (0.081) [-0.622,-0.199]	-0.047 (0.163) [-0.465,0.372]	-0.162 (0.188) [-0.652,0.328]	0.015 (0.104) [-0.242,0.272]	-0.444 (0.366) [-1.462,0.573]	-0.441 (0.183) [-0.930,0.047]	-0.353 (0.068) [-0.537,-0.169]		
Mean	0.061	0.826	0.076	0.719	0.035	0.680	0.062	0.735	0.005	0.656
N	664	579	819	424	1,023	220	551	692	1,227	16

Notes: See notes to Table A.1. Only welfare recipients with mental health medication use in 2012 are included. For each mental health medication type, we estimate the model for those who used this type in 2012 and those who did not, but used another type. The model is estimated separately for women and men. Coefficients for psychostimulants are not reported for females and males with psychostimulants at baseline for event time 2-4 and 3-4 respectively and males without psychostimulants at baseline for event time 4, as there is no variation to estimate standard errors. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.5: Effect of the activation program on health care costs

Event	No mental health medication at baseline					Mental health medication at baseline				
	Total	Mental	Hospital	GP	Other	Total	Mental	Hospital	GP	Other
-6	-0.013	-0.347	0.196	0.143	0.157	-0.319	-0.565	-0.713	0.003	-0.250
	(0.133)	(0.286)	(0.347)	(0.061)	(0.218)	(0.173)	(0.741)	(0.553)	(0.068)	(0.152)
	[-0.381,0.355]	[-1.112,0.419]	[-0.788,1.180]	[-0.020,0.306]	[-0.444,0.759]	[-0.772,0.133]	[-2.619,1.490]	[-2.197,0.771]	[-0.176,0.182]	[-0.660,0.160]
-5	-0.026	-0.025	0.029	0.021	0.073	0.048	0.084	-0.009	0.013	0.051
	(0.040)	(0.079)	(0.101)	(0.015)	(0.050)	(0.055)	(0.175)	(0.151)	(0.024)	(0.051)
	[-0.135,0.084]	[-0.238,0.188]	[-0.259,0.317]	[-0.018,0.060]	[-0.065,0.212]	[-0.096,0.191]	[-0.401,0.569]	[-0.414,0.396]	[-0.051,0.078]	[-0.087,0.190]
-4	0.010	0.032	-0.080	0.005	-0.057	-0.044	-0.143	0.034	-0.040	-0.056
	(0.028)	(0.052)	(0.071)	(0.011)	(0.035)	(0.036)	(0.121)	(0.097)	(0.017)	(0.032)
	[-0.067,0.088]	[-0.109,0.172]	[-0.282,0.122]	[-0.023,0.033]	[-0.153,0.040]	[-0.139,0.050]	[-0.479,0.192]	[-0.227,0.295]	[-0.085,0.005]	[-0.143,0.030]
-3	0.010	-0.029	0.069	-0.015	-0.023	0.004	-0.029	0.023	0.001	-0.007
	(0.022)	(0.042)	(0.056)	(0.009)	(0.031)	(0.030)	(0.106)	(0.081)	(0.015)	(0.027)
	[-0.051,0.070]	[-0.142,0.085]	[-0.091,0.228]	[-0.039,0.009]	[-0.109,0.062]	[-0.074,0.082]	[-0.323,0.266]	[-0.196,0.241]	[-0.037,0.040]	[-0.079,0.066]
-2	-0.033	-0.004	-0.098	0.006	-0.001	0.038	0.131	-0.028	0.031	0.030
	(0.022)	(0.039)	(0.059)	(0.009)	(0.032)	(0.029)	(0.099)	(0.092)	(0.015)	(0.027)
	[-0.093,0.027]	[-0.110,0.101]	[-0.266,0.070]	[-0.018,0.030]	[-0.090,0.087]	[-0.037,0.114]	[-0.144,0.405]	[-0.275,0.220]	[-0.009,0.071]	[-0.043,0.104]
-1	0.035	0.063	0.082	0.001	0.075	-0.033	-0.162	-0.063	-0.017	-0.036
	(0.028)	(0.042)	(0.072)	(0.013)	(0.044)	(0.041)	(0.116)	(0.104)	(0.022)	(0.038)
	[-0.043,0.114]	[-0.049,0.175]	[-0.121,0.285]	[-0.034,0.037]	[-0.045,0.196]	[-0.139,0.074]	[-0.485,0.160]	[-0.342,0.216]	[-0.075,0.041]	[-0.139,0.068]
0	-0.010	0.033	-0.068	0.013	-0.010	-0.038	-0.111	-0.012	0.015	0.016
	(0.029)	(0.046)	(0.068)	(0.017)	(0.043)	(0.037)	(0.117)	(0.101)	(0.019)	(0.042)
	[-0.091,0.072]	[-0.090,0.155]	[-0.262,0.126]	[-0.032,0.059]	[-0.130,0.109]	[-0.135,0.060]	[-0.437,0.215]	[-0.283,0.258]	[-0.035,0.065]	[-0.096,0.128]
1	-0.022	0.159	-0.051	0.013	-0.063	-0.100	-0.390	-0.048	-0.039	0.013
	(0.061)	(0.100)	(0.110)	(0.036)	(0.079)	(0.077)	(0.197)	(0.150)	(0.038)	(0.071)
	[-0.192,0.147]	[-0.110,0.428]	[-0.365,0.262]	[-0.083,0.110]	[-0.282,0.155]	[-0.301,0.101]	[-0.937,0.156]	[-0.449,0.354]	[-0.140,0.062]	[-0.179,0.206]
2	-0.006	0.266	-0.040	0.017	0.041	-0.093	-0.579	-0.145	-0.005	0.021
	(0.116)	(0.193)	(0.173)	(0.073)	(0.135)	(0.148)	(0.319)	(0.235)	(0.104)	(0.158)
	[-0.327,0.314]	[-0.253,0.784]	[-0.532,0.453]	[-0.177,0.212]	[-0.332,0.413]	[-0.479,0.293]	[-1.463,0.305]	[-0.775,0.486]	[-0.278,0.269]	[-0.404,0.446]
3	0.144	0.209	0.199	0.150	0.064	-0.168	-0.458	-0.540	-0.115	-0.174
	(0.188)	(0.267)	(0.308)	(0.129)	(0.212)	(0.214)	(0.543)	(0.363)	(0.135)	(0.228)
	[-0.376,0.663]	[-0.507,0.924]	[-0.677,1.074]	[-0.195,0.495]	[-0.520,0.648]	[-0.729,0.393]	[-1.963,1.047]	[-1.513,0.433]	[-0.469,0.240]	[-0.789,0.441]
4	0.194	0.026	0.279	0.114	-0.244	-0.610	-0.232	-1.121	-0.237	-0.496
	(0.232)	(0.313)	(0.388)	(0.142)	(0.296)	(0.249)	(0.624)	(0.450)	(0.168)	(0.297)
	[-0.447,0.835]	[-0.812,0.864]	[-0.823,1.381]	[-0.264,0.492]	[-1.062,0.574]	[-1.262,0.042]	[-1.962,1.498]	[-2.326,0.085]	[-0.680,0.206]	[-1.296,0.305]
Mean	7.447	0.696	4.979	5.611	5.594	8.498	3.232	5.715	5.830	7.060
N	7,829	7,829	7,829	7,829	7,829	3,485	3,485	3,485	3,485	3,485

Notes: See notes to Table A.1. Dependent variables are total health care costs, and health care costs split into four categories: mental, hospital, general practitioner (GP) and other. Health care costs are measured in 2015 euros and transformed with the inverse hyperbolic sine. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.6: Effect of the activation program on labor market and mental health outcomes by migration background

Panel A. Non-western migration background

	No mental health medication at baseline				Mental health medication at baseline			
Event time	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.017 (0.029) [-0.100,0.066]		-0.037 (0.038) [-0.144,0.069]		0.002 (0.004) [-0.007,0.012]		0.028 (0.156) [-0.386,0.441]
-5		0.004 (0.008) [-0.018,0.026]		0.001 (0.012) [-0.032,0.034]		0.015 (0.009) [-0.008,0.038]		0.008 (0.022) [-0.051,0.067]
-4		-0.008 (0.005) [-0.023,0.008]		-0.002 (0.008) [-0.023,0.019]		-0.015 (0.006) [-0.032,0.001]		-0.015 (0.016) [-0.058,0.029]
-3	0.012 (0.023) [-0.045,0.068]	-0.003 (0.004) [-0.015,0.009]	0.003 (0.023) [-0.054,0.061]	0.003 (0.006) [-0.013,0.020]	-0.020 (0.077) [-0.211,0.170]	0.007 (0.004) [-0.004,0.019]	-0.015 (0.004) [-0.024,-0.005]	0.007 (0.014) [-0.029,0.044]
-2	0.004 (0.006) [-0.011,0.019]	0.008 (0.004) [-0.002,0.019]	0.000 (0.005) [-0.011,0.012]	-0.007 (0.006) [-0.023,0.009]	0.007 (0.012) [-0.023,0.036]	-0.001 (0.005) [-0.014,0.012]	0.004 (0.008) [-0.016,0.024]	0.009 (0.013) [-0.025,0.042]
-1	0.012 (0.009) [-0.009,0.033]	-0.004 (0.004) [-0.017,0.009]	-0.010 (0.007) [-0.027,0.007]	0.010 (0.007) [-0.011,0.030]	-0.013 (0.014) [-0.047,0.022]	0.000 (0.009) [-0.023,0.023]	0.003 (0.009) [-0.020,0.026]	-0.010 (0.016) [-0.053,0.033]
0	-0.007 (0.004) [-0.017,0.002]	0.003 (0.005) [-0.010,0.016]	0.004 (0.003) [-0.004,0.012]	0.003 (0.007) [-0.017,0.023]	-0.008 (0.005) [-0.021,0.004]	-0.002 (0.007) [-0.021,0.017]	0.012 (0.004) [0.003,0.020]	0.007 (0.016) [-0.035,0.048]
1	-0.010 (0.011) [-0.037,0.017]	-0.006 (0.011) [-0.036,0.025]	-0.001 (0.010) [-0.025,0.023]	0.015 (0.013) [-0.020,0.049]	-0.034 (0.015) [-0.070,0.002]	0.007 (0.016) [-0.035,0.049]	0.027 (0.010) [0.004,0.051]	-0.010 (0.025) [-0.075,0.055]
2	0.011 (0.027) [-0.055,0.078]	-0.013 (0.021) [-0.072,0.046]	-0.021 (0.022) [-0.076,0.034]	0.039 (0.025) [-0.030,0.109]	-0.058 (0.038) [-0.151,0.036]	0.015 (0.034) [-0.073,0.102]	0.045 (0.017) [0.002,0.088]	-0.045 (0.051) [-0.179,0.090]
3	0.036 (0.042) [-0.067,0.139]	-0.019 (0.035) [-0.120,0.082]	-0.048 (0.037) [-0.141,0.045]	0.028 (0.046) [-0.100,0.157]	-0.039 (0.047) [-0.155,0.077]	0.035 (0.044) [-0.080,0.151]	0.035 (0.006) [0.020,0.050]	-0.067 (0.063) [-0.234,0.101]
		0		0		0		0
4		-0.002 (0.050) [-0.146,0.142]		-0.044 (0.048) [-0.177,0.088]		0.044 (0.045) [-0.074,0.163]		-0.059 (0.090) [-0.298,0.179]
Mean	0.945	0.081	0.028	0.079	0.953	0.043	0.021	0.741
N	5,110	5,497	5,110	5,497	1,920	2,100	1,920	2,100

Table A.6: Effect of the activation program on labor market and mental health outcomes by migration background (continued)

Panel B. Native & western-migration background

Event time	No mental health medication at baseline				Mental health medication at baseline			
	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.007		-0.066		0.049		-0.023
		(0.014)		(0.053)		(0.062)		(0.062)
		[-0.045,0.031]		[-0.206,0.074]		[-0.117,0.214]		[-0.185,0.138]
-5		-0.009		0.016		0.002		0.003
		(0.011)		(0.016)		(0.010)		(0.022)
		[-0.039,0.020]		[-0.025,0.057]		[-0.024,0.028]		[-0.054,0.060]
-4		0.010		0.007		0.011		0.013
		(0.007)		(0.010)		(0.007)		(0.016)
		[-0.009,0.029]		[-0.021,0.034]		[-0.007,0.028]		[-0.029,0.055]
-3	-0.019	0.002	-0.006	-0.025	0.028	-0.007	-0.014	-0.018
	(0.035)	(0.005)	(0.002)	(0.007)	(0.006)	(0.006)	(0.005)	(0.013)
	[-0.104,0.067]	[-0.013,0.017]	[-0.011,-0.001]	[-0.044,-0.005]	[0.014,0.042]	[-0.021,0.008]	[-0.026,-0.003]	[-0.052,0.015]
-2	0.006	-0.001	-0.003	0.004	-0.019	-0.010	0.010	0.025
	(0.008)	(0.005)	(0.004)	(0.008)	(0.013)	(0.006)	(0.010)	(0.012)
	[-0.013,0.025]	[-0.015,0.013]	[-0.013,0.007]	[-0.017,0.026]	[-0.050,0.013]	[-0.026,0.005]	[-0.013,0.032]	[-0.007,0.057]
-1	0.005	-0.006	-0.005	0.019	0.022	0.009	-0.010	-0.032
	(0.010)	(0.007)	(0.008)	(0.010)	(0.014)	(0.007)	(0.010)	(0.013)
	[-0.021,0.030]	[-0.024,0.012]	[-0.025,0.016]	[-0.009,0.047]	[-0.011,0.055]	[-0.010,0.029]	[-0.032,0.013]	[-0.066,0.001]
0	0.003	-0.009	0.002	-0.012	0.011	-0.004	-0.016	0.030
	(0.007)	(0.007)	(0.005)	(0.010)	(0.008)	(0.005)	(0.008)	(0.013)
	[-0.015,0.020]	[-0.028,0.010]	[-0.011,0.015]	[-0.038,0.014]	[-0.009,0.031]	[-0.017,0.009]	[-0.034,0.003]	[-0.004,0.064]
1	0.028	-0.024	-0.013	-0.004	0.051	-0.005	-0.065	0.037
	(0.019)	(0.015)	(0.017)	(0.018)	(0.028)	(0.012)	(0.027)	(0.022)
	[-0.018,0.073]	[-0.064,0.016]	[-0.053,0.027]	[-0.051,0.044]	[-0.017,0.119]	[-0.037,0.026]	[-0.126,-0.003]	[-0.020,0.093]
2	0.059	-0.033	-0.036	0.027	0.083	-0.025	-0.099	0.025
	(0.036)	(0.026)	(0.031)	(0.030)	(0.048)	(0.030)	(0.045)	(0.039)
	[-0.028,0.145]	[-0.101,0.035]	[-0.109,0.037]	[-0.051,0.106]	[-0.033,0.199]	[-0.105,0.056]	[-0.204,0.005]	[-0.077,0.126]
3	0.087	-0.032	-0.062	0.056	0.120	-0.028	-0.118	-0.041
	(0.058)	(0.044)	(0.041)	(0.057)	(0.068)	(0.042)	(0.064)	(0.051)
	[-0.053,0.228]	[-0.150,0.086]	[-0.159,0.035]	[-0.095,0.207]	[-0.041,0.282]	[-0.141,0.086]	[-0.264,0.029]	[-0.174,0.092]
4		-0.041		-0.029		-0.014		-0.148
		(0.053)		(0.063)		(0.063)		(0.080)
		[-0.181,0.100]		[-0.196,0.138]		[-0.183,0.154]		[-0.356,0.060]
Mean	0.957	0.081	0.020	0.083	0.965	0.046	0.010	0.016
N	2,232	2,332	2,232	2,332	1,292	1,385	1,292	1,385

Notes: See notes to Table A.1. The model is estimated separately for non-western migration background, and natives and non-western migrants. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.7: Effect of the activation program on labor market and mental health outcomes by prior duration of welfare benefits

| | *Panel A. Short duration welfare benefits* | | | | | | | |
| | No mental health medication at baseline | | | | Mental health medication at baseline | | | |
Event time	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.021		-0.048		0.058		0.080
		(0.036)		(0.036)		(0.074)		(0.086)
		[-0.123,0.082]		[-0.147,0.050]		[-0.138,0.253]		[-0.164,0.324]
-5		-0.003		-0.001		0.013		-0.005
		(0.009)		(0.013)		(0.011)		(0.025)
		[-0.028,0.022]		[-0.036,0.034]		[-0.016,0.042]		[-0.076,0.065]
-4		0.003		0.005		-0.007		0.012
		(0.007)		(0.008)		(0.007)		(0.018)
		[-0.016,0.023]		[-0.018,0.028]		[-0.025,0.011]		[-0.040,0.063]
-3	0.015	-0.006	-0.013	-0.004	-0.013	0.002	-0.019	-0.010
	(0.025)	(0.006)	(0.003)	(0.007)	(0.074)	(0.006)	(0.005)	(0.014)
	[-0.049,0.078]	[-0.022,0.010]	[-0.020,-0.006]	[-0.022,0.014]	[-0.195,0.169]	[-0.014,0.018]	[-0.030,-0.008]	[-0.049,0.030]
-2	0.012	0.006	-0.007	-0.002	-0.004	-0.008	0.011	0.024
	(0.007)	(0.005)	(0.005)	(0.006)	(0.016)	(0.006)	(0.011)	(0.014)
	[-0.006,0.030]	[-0.008,0.020]	[-0.019,0.004]	[-0.019,0.015]	[-0.043,0.036]	[-0.023,0.007]	[-0.015,0.037]	[-0.015,0.063]
-1	0.006	-0.002	-0.007	0.013	0.000	0.010	-0.008	-0.036
	(0.010)	(0.005)	(0.008)	(0.007)	(0.015)	(0.009)	(0.011)	(0.016)
	[-0.020,0.031]	[-0.017,0.013]	[-0.027,0.012]	[-0.008,0.033]	[-0.038,0.038]	[-0.014,0.034]	[-0.033,0.018]	[-0.082,0.010]
0	-0.003	-0.001	0.004	-0.003	0.006	0.001	-0.007	0.027
	(0.006)	(0.007)	(0.004)	(0.008)	(0.008)	(0.007)	(0.007)	(0.016)
	[-0.017,0.011]	[-0.020,0.018]	[-0.005,0.013]	[-0.027,0.020]	[-0.013,0.026]	[-0.016,0.018]	[-0.025,0.011]	[-0.017,0.072]
1	-0.001	-0.011	0.000	0.021	0.002	0.014	-0.020	0.009
	(0.015)	(0.015)	(0.012)	(0.015)	(0.025)	(0.018)	(0.023)	(0.022)
	[-0.038,0.036]	[-0.054,0.032]	[-0.029,0.029]	[-0.021,0.062]	[-0.059,0.062]	[-0.032,0.061]	[-0.076,0.036]	[-0.054,0.072]
2	0.016	-0.015	-0.020	0.041	-0.001	0.017	-0.028	-0.002
	(0.029)	(0.025)	(0.022)	(0.026)	(0.042)	(0.032)	(0.041)	(0.045)
	[-0.057,0.088]	[-0.087,0.057]	[-0.074,0.034]	[-0.031,0.112]	[-0.105,0.104]	[-0.066,0.100]	[-0.127,0.071]	[-0.128,0.124]
3	0.029	0.001	-0.043	0.045	0.013	0.016	-0.023	-0.057
	(0.043)	(0.043)	(0.039)	(0.043)	(0.053)	(0.039)	(0.039)	(0.062)
	[-0.079,0.136]	[-0.123,0.124]	[-0.137,0.051]	[-0.074,0.164]	[-0.117,0.143]	[-0.087,0.118]	[-0.117,0.071]	[-0.233,0.119]
4		-0.014		-0.054		0.026		-0.104
		(0.054)		(0.048)		(0.051)		(0.080)
		[-0.169,0.142]		[-0.185,0.077]		[-0.109,0.161]		[-0.329,0.121]
Mean	0.937	0.100	0.029	0.079	0.950	0.051	0.022	0.773
N	3,634	3,879	3,634	3,879	1,513	1,642	1,513	1,642

Table A.7: Effect of the activation program on labour market and mental health outcomes by prior welfare benefit duration (continued)

Panel B. Long prior welfare benefit duration

	No mental health medication at baseline				Mental health medication at baseline			
Event time	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.002 (0.003) [-0.011,0.007]		-0.054 (0.055) [-0.206,0.099]		0.002 (0.003) [-0.006,0.011]		-0.076 (0.126) [-0.411,0.259]
-5		0.003 (0.008) [-0.020,0.025]		0.012 (0.013) [-0.023,0.048]		0.006 (0.008) [-0.016,0.027]		0.012 (0.023) [-0.049,0.074]
-4		-0.007 (0.005) [-0.020,0.006]		-0.003 (0.008) [-0.026,0.020]		-0.002 (0.006) [-0.017,0.013]		-0.019 (0.015) [-0.058,0.020]
-3	-0.017 (0.026) [-0.081,0.047]	0.002 (0.004) [-0.008,0.011]	0.011 (0.027) [-0.051,0.073]	-0.005 (0.007) [-0.023,0.013]	0.025 (0.005) [0.012,0.039]	0.001 (0.004) [-0.010,0.012]	-0.010 (0.004) [-0.019,-0.001]	0.002 (0.013) [-0.033,0.036]
-2	-0.003 (0.006) [-0.018,0.012]	0.005 (0.004) [-0.005,0.015]	0.006 (0.004) [-0.004,0.016]	-0.005 (0.006) [-0.023,0.013]	-0.006 (0.011) [-0.034,0.022]	-0.002 (0.005) [-0.014,0.010]	0.003 (0.006) [-0.011,0.018]	0.017 (0.013) [-0.017,0.051]
-1	0.012 (0.008) [-0.007,0.030]	-0.007 (0.004) [-0.020,0.005]	-0.007 (0.007) [-0.023,0.008]	0.011 (0.008) [-0.010,0.032]	0.012 (0.012) [-0.017,0.042]	-0.002 (0.006) [-0.018,0.014]	-0.001 (0.005) [-0.013,0.010]	-0.013 (0.012) [-0.045,0.019]
0	-0.006 (0.004) [-0.017,0.005]	0.000 (0.005) [-0.013,0.013]	0.003 (0.005) [-0.008,0.014]	-0.001 (0.008) [-0.023,0.022]	-0.007 (0.007) [-0.024,0.011]	-0.006 (0.006) [-0.021,0.009]	0.005 (0.006) [-0.008,0.018]	0.003 (0.014) [-0.035,0.040]
1	0.004 (0.013) [-0.029,0.036]	-0.010 (0.009) [-0.035,0.015]	-0.011 (0.013) [-0.041,0.018]	-0.009 (0.016) [-0.051,0.034]	0.008 (0.019) [-0.039,0.056]	-0.011 (0.011) [-0.039,0.018]	-0.012 (0.017) [-0.051,0.027]	0.002 (0.022) [-0.056,0.061]
2	0.031 (0.032) [-0.048,0.109]	-0.023 (0.019) [-0.075,0.029]	-0.025 (0.028) [-0.088,0.038]	0.018 (0.030) [-0.064,0.100]	0.021 (0.041) [-0.080,0.122]	-0.022 (0.030) [-0.102,0.058]	-0.024 (0.034) [-0.099,0.051]	-0.043 (0.040) [-0.151,0.064]
3	0.067 (0.052) [-0.059,0.193]	-0.047 (0.029) [-0.130,0.035]	-0.056 (0.041) [-0.151,0.038]	0.028 (0.059) [-0.136,0.192]	0.068 (0.064) [-0.090,0.227]	-0.004 (0.019) [-0.054,0.045]	-0.065 (0.053) [-0.184,0.054]	-0.087 (0.051) [-0.222,0.048]
4		-0.015 (0.045) [-0.140,0.110]		-0.031 (0.056) [-0.185,0.122]		0.014 (0.052) [-0.122,0.150]		-0.146 (0.090) [-0.385,0.092]
Mean	0.960	0.063	0.021	0.082	0.965	0.038	0.017	0.795
N	3,708	3,950	3,708	3,950	1,699	1,843	1,699	1,843

Notes: See notes to Table A.1. The model is estimated separately by prior duration of welfare benefits. Long duration of welfare benefits is if someone has claimed welfare benefits from 1999 to 2012, otherwise it is short. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.8: Robustness check using alternative treatment year definition: Effect of the activation program on labor market and mental health outcomes

Event time	No mental health medication at baseline				Mental health medication at baseline			
	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.013 (0.029) [-0.092,0.066]		-0.018 (0.024) [-0.086,0.049]		0.034 (0.043) [-0.080,0.148]		0.014 (0.081) [-0.201,0.229]
-5		0.000 (0.006) [-0.017,0.017]		0.006 (0.008) [-0.017,0.029]		0.009 (0.007) [-0.009,0.028]		0.003 (0.016) [-0.039,0.046]
-4		-0.003 (0.004) [-0.014,0.009]		0.001 (0.006) [-0.016,0.017]		-0.002 (0.004) [-0.014,0.009]		-0.004 (0.012) [-0.035,0.027]
-3	-0.006 (0.017) [-0.051,0.040]	-0.002 (0.003) [-0.011,0.007]	0.000 (0.015) [-0.037,0.038]	-0.006 (0.005) [-0.020,0.008]	0.002 (0.043) [-0.099,0.103]	0.001 (0.004) [-0.009,0.010]	-0.014 (0.003) [-0.021,-0.007]	-0.007 (0.009) [-0.032,0.018]
-2	0.004 (0.005) [-0.008,0.016]	0.003 (0.003) [-0.005,0.011]	0.000 (0.003) [-0.008,0.007]	0.002 (0.005) [-0.011,0.015]	-0.005 (0.009) [-0.027,0.017]	-0.005 (0.003) [-0.013,0.004]	0.007 (0.006) [-0.009,0.023]	0.024 (0.009) [0.000,0.048]
-1	0.009 (0.006) [-0.007,0.025]	-0.002 (0.003) [-0.012,0.007]	-0.008 (0.005) [-0.020,0.005]	0.007 (0.006) [-0.009,0.022]	0.006 (0.010) [-0.018,0.029]	0.004 (0.006) [-0.011,0.018]	-0.004 (0.006) [-0.019,0.011]	-0.023 (0.010) [-0.051,0.005]
0	-0.004 (0.004) [-0.013,0.005]	-0.002 (0.004) [-0.012,0.009]	0.004 (0.003) [-0.004,0.012]	0.004 (0.006) [-0.013,0.020]	-0.001 (0.005) [-0.014,0.012]	-0.001 (0.004) [-0.013,0.010]	-0.001 (0.005) [-0.013,0.012]	0.011 (0.010) [-0.016,0.038]
1	0.003 (0.010) [-0.024,0.029]	-0.011 (0.008) [-0.034,0.011]	-0.003 (0.008) [-0.024,0.017]	0.007 (0.010) [-0.023,0.036]	0.004 (0.016) [-0.033,0.041]	0.001 (0.010) [-0.026,0.027]	-0.017 (0.015) [-0.055,0.021]	0.007 (0.015) [-0.034,0.048]
2	0.023 (0.020) [-0.029,0.076]	-0.020 (0.015) [-0.062,0.022]	-0.020 (0.017) [-0.061,0.021]	0.029 (0.018) [-0.022,0.080]	0.008 (0.027) [-0.055,0.071]	-0.002 (0.018) [-0.051,0.046]	-0.025 (0.025) [-0.088,0.039]	-0.022 (0.026) [-0.092,0.049]
3	0.040 (0.030) [-0.040,0.119]	-0.022 (0.024) [-0.086,0.043]	-0.038 (0.025) [-0.099,0.024]	0.035 (0.030) [-0.048,0.117]	0.030 (0.032) [-0.046,0.106]	0.006 (0.026) [-0.061,0.073]	-0.036 (0.029) [-0.110,0.037]	-0.046 (0.036) [-0.141,0.050]
4		-0.023 (0.032) [-0.111,0.065]		-0.052 (0.034) [-0.148,0.043]		0.026 (0.032) [-0.057,0.109]		-0.106 (0.053) [-0.246,0.034]
Mean	0.949	0.081	0.0257	0.080	0.958	0.044	0.019	0.785
N	6,886	7,829	6,886	7,829	2,982	3,485	2,982	3,485

Notes: See notes to Table A.1. The treatment year is the year in which the median spell of the 'concentrated period' falls, the twelve consecutive months in which most activation strategies in a neighborhood were started. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.9: Robustness check varying concentration threshold: Effect of the activation program on mental health medication

Event time	No mental health medication at baseline				Mental health medication at baseline			
	≥ 40%	≥ 50%	≥ 60%	≥ 70%	≥ 40%	≥ 50%	≥ 60%	≥ 70%
-6	-0.035	-0.034	-0.051	-0.017	0.003	0.004	-0.004	-0.006
	(0.016)	(0.017)	(0.033)	(0.041)	(0.030)	(0.029)	(0.066)	(0.099)
	[-0.079,0.009]	[-0.080,0.012]	[-0.142,0.040]	[-0.131,0.098]	[-0.079,0.085]	[-0.077,0.084]	[-0.179,0.172]	[-0.271,0.259]
-5	0.006	0.007	0.006	0.002	0.006	0.006	0.004	0.019
	(0.007)	(0.007)	(0.008)	(0.010)	(0.014)	(0.013)	(0.016)	(0.018)
	[-0.013,0.025]	[-0.012,0.025]	[-0.017,0.029]	[-0.028,0.031]	[-0.031,0.042]	[-0.031,0.043]	[-0.039,0.047]	[-0.030,0.068]
-4	0.002	0.002	0.001	0.004	-0.009	-0.009	-0.004	0.005
	(0.005)	(0.005)	(0.006)	(0.007)	(0.011)	(0.010)	(0.012)	(0.014)
	[-0.013,0.016]	[-0.012,0.016]	[-0.015,0.017]	[-0.015,0.024]	[-0.037,0.020]	[-0.036,0.019]	[-0.036,0.027]	[-0.032,0.041]
-3	-0.005	-0.004	-0.005	-0.008	-0.002	-0.002	-0.004	-0.023
	(0.004)	(0.004)	(0.005)	(0.006)	(0.009)	(0.009)	(0.010)	(0.011)
	[-0.017,0.007]	[-0.016,0.007]	[-0.018,0.009]	[-0.024,0.009]	[-0.025,0.022]	[-0.027,0.023]	[-0.029,0.022]	[-0.052,0.007]
-2	-0.001	-0.001	-0.003	0.000	0.012	0.011	0.020	0.028
	(0.004)	(0.004)	(0.004)	(0.005)	(0.008)	(0.008)	(0.009)	(0.011)
	[-0.012,0.010]	[-0.012,0.010]	[-0.016,0.009]	[-0.015,0.015]	[-0.010,0.034]	[-0.012,0.035]	[-0.005,0.045]	[-0.002,0.057]
-1	0.006	0.007	0.012	0.010	-0.010	-0.009	-0.024	-0.023
	(0.004)	(0.004)	(0.006)	(0.006)	(0.008)	(0.007)	(0.010)	(0.012)
	[-0.006,0.018]	[-0.005,0.018]	[-0.003,0.028]	[-0.008,0.028]	[-0.033,0.012]	[-0.030,0.011]	[-0.051,0.004]	[-0.055,0.010]
0	-0.001	-0.002	-0.002	-0.001	0.007	0.008	0.015	0.007
	(0.004)	(0.004)	(0.006)	(0.006)	(0.008)	(0.008)	(0.010)	(0.011)
	[-0.013,0.011]	[-0.013,0.009]	[-0.019,0.014]	[-0.019,0.017]	[-0.015,0.029]	[-0.015,0.030]	[-0.013,0.043]	[-0.024,0.038]
1	0.000	-0.002	0.007	0.006	0.008	0.011	0.005	-0.008
	(0.006)	(0.007)	(0.011)	(0.010)	(0.012)	(0.012)	(0.015)	(0.016)
	[-0.017,0.018]	[-0.020,0.016]	[-0.024,0.038]	[-0.023,0.034]	[-0.024,0.040]	[-0.022,0.043]	[-0.035,0.045]	[-0.050,0.033]
2	0.004	0.001	0.031	0.046	0.001	0.007	-0.022	-0.034
	(0.008)	(0.009)	(0.020)	(0.023)	(0.017)	(0.019)	(0.029)	(0.038)
	[-0.019,0.028]	[-0.024,0.026]	[-0.024,0.086]	[-0.019,0.112]	[-0.047,0.048]	[-0.048,0.062]	[-0.100,0.055]	[-0.135,0.067]
3	-0.004	-0.012	0.038	0.039	-0.001	0.006	-0.072	-0.074
	(0.014)	(0.015)	(0.034)	(0.035)	(0.024)	(0.026)	(0.036)	(0.041)
	[-0.043,0.035]	[-0.052,0.028]	[-0.057,0.133]	[-0.061,0.138]	[-0.065,0.063]	[-0.066,0.078]	[-0.168,0.024]	[-0.184,0.035]
4	-0.006	-0.012	-0.043	-0.043	0.011	0.012	-0.126	-0.126
	(0.017)	(0.019)	(0.037)	(0.037)	(0.036)	(0.040)	(0.061)	(0.062)
	[-0.055,0.043]	[-0.064,0.040]	[-0.146,0.060]	[-0.146,0.060]	[-0.086,0.109]	[-0.100,0.123]	[-0.288,0.036]	[-0.292,0.040]
Mean	0.080	0.080	0.080	0.080	0.780	0.780	0.785	0.785
N	9,887	9,817	7,829	6,196	4,388	4,347	3,485	2,752

Notes: See notes to Table A.1. The concentration index of a neighborhood is the fraction of activation strategies started in the concentrated period out of all activation strategies started in the neighborhood. Only neighborhoods with a concentration index above the threshold are included in the analysis. The treshold is varied from 40% to 70%. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.10: Balancing table of neighborhood characteristics by implementation year

	2013	2014	2015	2016	2017	2018	City	F-stat	Prob>F	
Female (%)	49	50	52	51	50	48	50	3.87	0.01	***
Married (%)	26	28	33	31	33	32	31	1.19	0.33	
One person household (%)	53	52	46	47	42	49	48	0.76	0.59	
Households with children (%)	30	26	31	29	33	23	29	0.62	0.68	
Birthrate (per 1000 inhabitants)	14	13	12	13	10	16	13	1.43	0.23	
Mortality (per 1000 inhabitants)	4	17	11	7	3	10	10	0.69	0.63	
Western migrants (%)	13	12	10	13	10	12	11	0.84	0.53	
Non-western migrants (%)	62	44	32	29	33	24	35	2.43	0.05	**
House worth (1000 euros)	116	156	157	205	168	147	168	1.06	0.39	
Owned houses (%)	23	29	29	41	40	43	35	1.65	0.16	
Rental houses (%)	74	69	71	57	59	56	64	1.54	0.20	
Social rent houses (%)	52	48	59	39	44	20	45	2.47	0.05	**
Empty buildings (%)	12	12	8	8	6	13	9	2.77	0.03	**
Average income (1000 euros)	15	20	20	24	21	25	21	1.69	0.16	
Low income individuals (%)	53	49	46	39	43	35	44	3.16	0.02	**
High income individuals (%)	9	15	15	25	18	20	18	1.91	0.11	
Low income households (%)	65	58	55	46	47	50	52	2.22	0.07	*
High income households (%)	7	12	12	20	15	13	15	1.45	0.23	
Welfare benefit recipients (per 1000 households)	174	146	132	91	135	46	116	2.08	0.08	*
UI recipients (per 1000 15-64 y.o.)	40	35	32	28	30	31	31	1.29	0.28	
Inhabitants per neighborhood	7885	8466	11028	8240	3273	3698	8267	1.99	0.097	*
Households per neighborhood	4005	4474	5433	4249	1672	2042	4244	1.72	0.15	
Number of individuals	35660	179725	143360	151385	33565	67775	611470			
Number of neighborhoods	3	17	13	13	3	5	54			

Notes: Table A.10 is a balancing table that displays the neighborhood characteristics of all inhabitants in the neighborhood averaged by neighborhood per implementation year, not weighted by neighborhood size. City is the average of the neighborhoods. F-stat is the F-statistic of an F-test of any difference between the neighborhoods. Prob>F is the p-values and in the next column stars to denote significance are included.
$* < 0.10, ** < 0.05, *** < 0.01$

Table A.11: Robustness check without neighborhoods treated in 2013: Effect of the activation program on labor market and mental health outcomes

Event time	No mental health medication at baseline				Mental health medication at baseline			
	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.012 (0.020) [-0.068,0.045]		-0.050 (0.034) [-0.144,0.044]		0.028 (0.035) [-0.065,0.120]		-0.003 (0.058) [-0.157,0.152]
-5		0.000 (0.006) [-0.018,0.018]		0.007 (0.009) [-0.018,0.032]		0.009 (0.007) [-0.009,0.026]		0.005 (0.017) [-0.039,0.050]
-4		-0.002 (0.004) [-0.014,0.010]		0.002 (0.006) [-0.015,0.019]		-0.005 (0.004) [-0.016,0.007]		-0.004 (0.011) [-0.033,0.025]
-3	-0.001 (0.015) [-0.040,0.037]	-0.002 (0.003) [-0.012,0.007]	-0.001 (0.013) [-0.034,0.031]	-0.004 (0.005) [-0.017,0.009]	0.008 (0.035) [-0.074,0.090]	0.001 (0.004) [-0.009,0.011]	-0.014 (0.003) [-0.021,-0.008]	-0.003 (0.010) [-0.030,0.024]
-2	0.005 (0.005) [-0.007,0.017]	0.006 (0.003) [-0.003,0.015]	-0.001 (0.003) [-0.008,0.007]	-0.005 (0.004) [-0.016,0.007]	-0.005 (0.009) [-0.026,0.016]	-0.005 (0.004) [-0.016,0.006]	0.007 (0.006) [-0.008,0.021]	0.020 (0.010) [-0.007,0.046]
-1	0.009 (0.007) [-0.007,0.025]	-0.005 (0.004) [-0.016,0.006]	-0.008 (0.005) [-0.021,0.005]	0.013 (0.006) [-0.004,0.029]	0.006 (0.009) [-0.016,0.028]	0.004 (0.006) [-0.011,0.020]	-0.004 (0.006) [-0.019,0.010]	-0.024 (0.011) [-0.053,0.004]
0	-0.004 (0.003) [-0.013,0.004]	-0.001 (0.004) [-0.012,0.010]	0.004 (0.003) [-0.003,0.011]	-0.003 (0.006) [-0.021,0.015]	0.000 (0.005) [-0.012,0.011]	-0.002 (0.005) [-0.015,0.010]	-0.001 (0.004) [-0.011,0.009]	0.016 (0.011) [-0.012,0.045]
1	0.002 (0.009) [-0.021,0.025]	-0.012 (0.009) [-0.039,0.014]	-0.005 (0.008) [-0.025,0.016]	0.006 (0.011) [-0.026,0.037]	0.005 (0.015) [-0.028,0.039]	0.001 (0.010) [-0.025,0.028]	-0.016 (0.013) [-0.048,0.016]	0.004 (0.017) [-0.042,0.050]
2	0.025 (0.021) [-0.027,0.077]	-0.021 (0.017) [-0.070,0.028]	-0.023 (0.017) [-0.064,0.018]	0.033 (0.022) [-0.027,0.094]	0.011 (0.028) [-0.055,0.076]	-0.003 (0.023) [-0.063,0.058]	-0.026 (0.025) [-0.088,0.035]	-0.022 (0.033) [-0.109,0.066]
3	0.051 (0.031) [-0.026,0.129]	-0.024 (0.029) [-0.105,0.057]	-0.051 (0.028) [-0.119,0.017]	0.040 (0.042) [-0.077,0.156]	0.041 (0.042) [-0.057,0.139]	0.005 (0.040) [-0.101,0.111]	-0.044 (0.033) [-0.125,0.037]	-0.081 (0.039) [-0.184,0.022]
Mean	0.949	0.081	0.026	0.080	09.57	0.044	0.019	0.785
N	7,342	7,371	7,342	7,371	3,212	3,248	3,212	3,248

Notes: See notes to Table A.1. Welfare recipients who live in neighborhoods that are treated in 2013 are omitted from the analysis. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.12: Descriptive statistics for parents

	Parents child sample		Parents youngest <12		Parents youngest 12-18	
	Mental medication at baseline					
	No	Yes	No	Yes	No	Yes
Panel A. Background characteristics						
Age	44.7	44.7	42.1	42.5	47.9	46.9
Female	76.7%	73.9%	75.4%	69.5%	83.4%	84.0%
Non-western migrant	85.3%	80.5%	87.0%	84.5%	80.4%	74.6%
Western migrant	4.4%	5.5%	4.1%	4.8%	5.7%	7.2%
Spell length welfare receipt (years)	11.1	11.3	10.5	10.6	11.7	11.8
Total welfare receipt duration (years, 1999-2012)	12.0	12.1	11.5	11.6	12.5	12.4
Employment history (years, 1999-2012)	2.0	1.7	2.3	2.1	1.7	1.4
No employment history (1999-2012)	50.3%	53.4%	43.7%	46.1%	56.3%	59.7%
Panel B. Outcome variables in 2012						
Welfare benefit receipt	100%	100%	100%	100%	100%	100%
Employment	10.3%	6.2%	11.1%	6.4%	9.9%	5.8%
Paid employment	10.0%	6.0%	10.7%	6.2%	9.7%	5.4%
Self-employment	0.3%	0.2%	0.4%	0.1%	0.2%	0.4%
Other social assistance	2.2%	3.5%	2.8%	3.6%	2.6%	3.6%
Neither (self-)employment nor benefits	0.0%	0.0%	0%	0%	0%	0%
Earnings (1000 euros)	0.6	0.3	0.6	0.3	0.7	0.3
Gross income (1000 euros)	14.9	14.8	15.2	14.7	15.7	16.3
Mental medication	0.0%	100%	0%	100%	0%	100%
Antipsychotics (N05A)	0%	22.1%	0%	24.5%	0%	20.1%
Anxiolytics (N05B)	0%	30.6%	0%	28.7%	0%	32.6%
Hypnotics and sedatives (N05C)	0%	13.6%	0%	14.9%	0%	14.0%
Antidepressants (N06A)	0%	77.3%	0%	74.9%	0%	79.3%
Psychostimulants, agents used for ADHD and nootropics (N06B)	0%	1.0%	0%	1.2%	0%	0.7%
Observations	2,903	984	2,067	673	1,415	556

Notes: Table A.12 displays descriptive statistics for parents. Parents child sample are the parents in the main sample with a child included in the children sample (see notes to Table 2) who lives in their household on January 1st, 2013. Parents youngest $<$ 12 and parents youngest 12-18 are parents in the main sample whose youngest child living in their household on January 1st, 2013 is aged 0-11 or 12-18 respectively. Mental medication at baseline measures whether someone was prescribed mental health medication in 2012. Parent of child in the household and parent of child under 12 in the household are determined on December 31st, 2012. Spell length welfare receipt is the length in years of the welfare benefit spell on January 1st, 2013, measured up to 1999. Total welfare receipt duration is the total number of years in which someone received welfare benefits between 1999 and 2012. Employment history is the number of years in which someone had an employment contract between 1999 and 2012. No employment history is a dummy for having no employment contract between 1999 and 2012.

Table A.13: Effect of the activation program on labor market and mental health outcomes of parents of the child sample

Event time	No mental health medication at baseline				Mental health medication at baseline			
	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.012 (0.005) [-0.025,0.001]		-0.026 (0.048) [-0.154,0.102]		-0.004 (0.006) [-0.019,0.011]		0.217 (0.191) [-0.290,0.725]
-5		-0.004 (0.011) [-0.034,0.025]		0.027 (0.015) [-0.014,0.069]		-0.005 (0.012) [-0.034,0.025]		-0.023 (0.032) [-0.108,0.063]
-4		-0.010 (0.008) [-0.033,0.013]		-0.019 (0.010) [-0.047,0.009]		-0.011 (0.010) [-0.037,0.015]		-0.035 (0.022) [-0.095,0.025]
-3	0.027 (0.005) [0.016,0.039]	0.003 (0.006) [-0.013,0.019]	-0.011 (0.003) [-0.018,-0.005]	0.002 (0.008) [-0.020,0.024]	0.027 (0.008) [0.009,0.046]	0.013 (0.008) [-0.005,0.032]	-0.013 (0.006) [-0.026,0.001]	0.019 (0.020) [-0.036,0.073]
-2	0.012 (0.008) [-0.008,0.033]	0.005 (0.006) [-0.011,0.021]	-0.006 (0.005) [-0.019,0.006]	-0.005 (0.007) [-0.025,0.014]	0.002 (0.015) [-0.033,0.036]	-0.005 (0.008) [-0.026,0.016]	0.012 (0.012) [-0.015,0.039]	0.031 (0.019) [-0.020,0.083]
-1	0.003 (0.012) [-0.026,0.032]	-0.003 (0.007) [-0.020,0.015]	-0.007 (0.012) [-0.036,0.023]	0.010 (0.008) [-0.013,0.032]	0.007 (0.023) [-0.047,0.062]	-0.022 (0.016) [-0.061,0.017]	-0.021 (0.024) [-0.076,0.033]	-0.035 (0.021) [-0.091,0.022]
0	-0.007 (0.006) [-0.021,0.008]	0.008 (0.006) [-0.009,0.025]	0.003 (0.005) [-0.008,0.015]	0.001 (0.008) [-0.022,0.023]	-0.007 (0.006) [-0.022,0.008]	0.000 (0.015) [-0.036,0.036]	0.007 (0.005) [-0.005,0.019]	0.022 (0.020) [-0.031,0.076]
1	-0.020 (0.013) [-0.052,0.013]	0.014 (0.015) [-0.026,0.055]	-0.004 (0.014) [-0.037,0.030]	0.002 (0.014) [-0.036,0.039]	-0.017 (0.022) [-0.069,0.036]	-0.012 (0.031) [-0.089,0.065]	-0.002 (0.023) [-0.054,0.050]	0.025 (0.040) [-0.082,0.131]
2	-0.014 (0.035) [-0.099,0.071]	0.019 (0.029) [-0.060,0.098]	-0.018 (0.034) [-0.101,0.066]	0.011 (0.025) [-0.056,0.079]	-0.038 (0.037) [-0.126,0.050]	-0.062 (0.075) [-0.248,0.125]	0.000 (0.037) [-0.085,0.085]	0.040 (0.081) [-0.176,0.257]
3	-0.010 (0.053) [-0.137,0.117]	0.012 (0.041) [-0.098,0.122]	-0.033 (0.045) [-0.145,0.079]	0.016 (0.047) [-0.108,0.140]	-0.065 (0.011) [-0.091,-0.039]	0.007 (0.175) [-0.429,0.443]	0.023 (0.007) [0.007,0.040]	0.079 (0.108) [-0.208,0.366]
4		0.016 (0.068) [-0.167,0.198]		0.006 (0.063) [-0.163,0.175]		0.088 (0.121) [-0.213,0.389]		0.001 (0.145) [-0.386,0.388]
Mean	0.944	0.106	0.024	0.077	0.958	0.059	0.018	0.716
N	2,709	2,903	2,709	2,903	922	984	922	984

Notes: See notes to Table A.1. The sample consists of parents in the main sample with a child included in the children sample (see notes to Table 2) who lives in their household on January 1st, 2013. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.14: Effect of the activation program on labor market and mental health outcomes for mothers and fathers

Panel A. Mothers

	No mental health medication at baseline				Mental health medication at baseline			
Event time	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.015		-0.035		-0.001		0.082
		(0.005)		(0.059)		(0.006)		(0.240)
		[-0.028,-0.001]		[-0.195,0.124]		[-0.017,0.014]		[-0.553,0.717]
-5		-0.002		0.033		-0.002		-0.019
		(0.013)		(0.018)		(0.012)		(0.037)
		[-0.036,0.032]		[-0.015,0.081]		[-0.031,0.027]		[-0.118,0.080]
-4		-0.014		-0.023		-0.010		-0.030
		(0.009)		(0.011)		(0.012)		(0.028)
		[-0.038,0.009]		[-0.053,0.007]		[-0.039,0.019]		[-0.104,0.044]
-3	0.029	0.004	-0.012	0.001	0.030	0.010	-0.016	0.005
	(0.005)	(0.007)	(0.003)	(0.009)	(0.010)	(0.008)	(0.008)	(0.023)
	[0.018,0.041]	[-0.013,0.022]	[-0.020,-0.005]	[-0.024,0.027]	[0.007,0.054]	[-0.010,0.029]	[-0.037,0.004]	[-0.057,0.067]
-2	0.012	0.007	-0.005	-0.005	-0.008	-0.003	0.017	0.041
	(0.009)	(0.006)	(0.006)	(0.008)	(0.019)	(0.009)	(0.016)	(0.023)
	[-0.010,0.034]	[-0.009,0.024]	[-0.020,0.009]	[-0.028,0.018]	[-0.053,0.037]	[-0.025,0.018]	[-0.026,0.060]	[-0.021,0.104]
-1	0.003	-0.005	-0.006	0.015	0.015	-0.008	-0.027	-0.046
	(0.014)	(0.008)	(0.015)	(0.011)	(0.028)	(0.016)	(0.029)	(0.025)
	[-0.030,0.036]	[-0.025,0.015]	[-0.041,0.029]	[-0.014,0.044]	[-0.052,0.082]	[-0.046,0.031]	[-0.103,0.048]	[-0.113,0.021]
0	-0.008	-0.001	0.002	-0.004	-0.004	-0.011	0.009	0.044
	(0.006)	(0.007)	(0.007)	(0.010)	(0.008)	(0.017)	(0.007)	(0.027)
	[-0.023,0.008]	[-0.019,0.017]	[-0.013,0.017]	[-0.033,0.024]	[-0.023,0.014]	[-0.052,0.031]	[-0.008,0.026]	[-0.028,0.116]
1	-0.026	0.003	0.000	-0.006	-0.004	-0.017	-0.006	0.040
	(0.015)	(0.016)	(0.017)	(0.020)	(0.030)	(0.032)	(0.030)	(0.047)
	[-0.063,0.011]	[-0.038,0.044]	[-0.039,0.039]	[-0.062,0.049]	[-0.074,0.066]	[-0.096,0.061]	[-0.085,0.072]	[-0.084,0.163]
2	-0.036	0.006	-0.009	-0.014	-0.030	-0.040	-0.006	0.064
	(0.041)	(0.022)	(0.040)	(0.031)	(0.045)	(0.084)	(0.046)	(0.088)
	[-0.135,0.063]	[-0.051,0.063]	[-0.102,0.084]	[-0.097,0.069]	[-0.136,0.076]	[-0.246,0.166]	[-0.127,0.115]	[-0.170,0.298]
3	-0.043	0.000	-0.020	-0.037	-0.055	0.006	0.016	0.095
	(0.057)	(0.047)	(0.055)	(0.080)	(0.013)	(0.115)	(0.006)	(0.123)
	[-0.180,0.094]	[-0.122,0.123]	[-0.149,0.109]	[-0.254,0.180]	[-0.085,-0.025]	[-0.277,0.288]	[0.001,0.031]	[-0.230,0.420]
4		0.031		-0.073		0.101		-0.054
		(0.079)		(0.091)		(0.137)		(0.154)
		[-0.175,0.237]		[-0.319,0.173]		[-0.237,0.438]		[-0.463,0.354]
Mean	0.944	0.097	0.027	0.079	0.958	0.704	0.020	0.060
N	2,091	2,228	2,091	2,228	683	727	683	727

Table A.14: Effect of the activation program on labor market and mental health outcomes for mothers and fathers (continued)

Panel B. Fathers

| Event time | No mental health medication at baseline | | | | Mental health medication at baseline | | | |
	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.003		0.010		-0.012		0.389
		(0.011)		(0.012)		(0.012)		(0.340)
		[-0.032,0.026]		[-0.020,0.041]		[-0.041,0.017]		[-0.528,1.306]
-5		-0.016		0.005		-0.012		-0.029
		(0.030)		(0.040)		(0.034)		(0.065)
		[-0.096,0.065]		[-0.100,0.110]		[-0.096,0.072]		[-0.203,0.146]
-4		0.007		-0.006		-0.013		-0.050
		(0.019)		(0.021)		(0.013)		(0.042)
		[-0.044,0.058]		[-0.060,0.049]		[-0.046,0.020]		[-0.164,0.063]
-3	0.020	0.001	-0.007	0.005	0.018	0.022	0.000	0.053
	(0.009)	(0.014)	(0.001)	(0.016)	(0.022)	(0.018)	(0.000)	(0.038)
	[0.000,0.040]	[-0.037,0.039]	[-0.010,-0.004]	[-0.037,0.046]	[-0.054,0.090]	[-0.023,0.067]	[0.000,0.000]	[-0.049,0.154]
-2	0.015	-0.005	-0.010	-0.007	0.027	-0.010	0.000	0.012
	(0.015)	(0.012)	(0.006)	(0.015)	(0.018)	(0.018)	(0.000)	(0.037)
	[-0.018,0.048]	[-0.038,0.027]	[-0.022,0.002]	[-0.048,0.033]	[-0.031,0.084]	[-0.054,0.034]	[0.000,0.000]	[-0.088,0.111]
-1	0.006	0.002	-0.008	-0.006	-0.018	-0.059	0.000	-0.005
	(0.026)	(0.013)	(0.026)	(0.017)	(0.013)	(0.046)	(0.000)	(0.052)
	[-0.051,0.062]	[-0.032,0.036]	[-0.059,0.042]	[-0.052,0.039]	[-0.061,0.026]	[-0.172,0.055]	[0.000,0.000]	[-0.144,0.135]
0	-0.008	0.038	0.008	0.014	-0.016	0.035	0.004	-0.043
	(0.014)	(0.016)	(0.007)	(0.016)	(0.012)	(0.036)	(0.006)	(0.030)
	[-0.037,0.022]	[-0.005,0.082]	[-0.006,0.021]	[-0.028,0.055]	[-0.057,0.024]	[-0.055,0.124]	[-0.012,0.020]	[-0.124,0.038]
1	-0.010	0.052	-0.013	0.013	-0.056	0.132	0.013	-0.029
	(0.034)	(0.041)	(0.031)	(0.019)	(0.016)	(0.076)	(0.007)	(0.077)
	[-0.082,0.062]	[-0.055,0.159]	[-0.073,0.047]	[-0.036,0.063]	[-0.107,-0.004]	[-0.055,0.319]	[-0.005,0.030]	[-0.237,0.179]
2	0.047	0.053	-0.038	0.065	-0.070	-0.125	0.027	-0.047
	(0.085)	(0.080)	(0.089)	(0.043)	(0.018)	(0.143)	(0.010)	(0.151)
	[-0.134,0.228]	[-0.159,0.264]	[-0.213,0.137]	[-0.049,0.180]	[-0.129,-0.010]	[-0.477,0.227]	[0.002,0.052]	[-0.455,0.361]
3	0.067	0.038	-0.070	0.134	-0.090	0.003	0.041	-0.117
	(0.119)	(0.104)	(0.114)	(0.097)	(0.027)	(0.034)	(0.017)	(0.052)
	[-0.189,0.322]	[-0.239,0.315]	[-0.293,0.152]	[-0.121,0.390]	[-0.177,-0.003]	[-0.081,0.087]	[-0.001,0.083]	[-0.257,0.023]
4		-0.018		0.179				-0.167
		(0.124)		(0.050)				(0.096)
		[-0.345,0.310]		[0.046,0.311]				[-0.426,0.093]
Mean	0.945	0.138	0.016	0.068	0.957	0.054	0.012	0.749
N	618	675	618	675	239	257	239	257

Notes: See notes to Table A.1 and Table A.13. The model is estimated separately for mothers and fathers. No coefficient for employment at event time 4 is reported for fathers with mental health medication at baseline (Panel B, column 7) as there is no variation in employment to estimate standard errors. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.15: Effect of the activation program on labor market and mental health outcomes of parents split by age of child

Panel A. Parents of children 0-11

	No mental health medication at baseline				Mental health medication at baseline			
Event time	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		0.036		-0.079		-0.005		0.170
		(0.065)		(0.067)		(0.007)		(0.187)
		[-0.139,0.210]		[-0.262,0.104]		[-0.021,0.012]		[-0.332,0.672]
-5		-0.012		0.022		-0.005		0.042
		(0.014)		(0.017)		(0.016)		(0.041)
		[-0.050,0.026]		[-0.026,0.069]		[-0.045,0.035]		[-0.070,0.153]
-4		-0.010		-0.009		-0.005		-0.031
		(0.010)		(0.012)		(0.010)		(0.029)
		[-0.036,0.016]		[-0.041,0.023]		[-0.030,0.021]		[-0.108,0.046]
-3	0.029	0.003	-0.014	-0.003	0.024	0.007	-0.015	0.003
	(0.005)	(0.007)	(0.004)	(0.009)	(0.009)	(0.010)	(0.005)	(0.025)
	[0.016,0.042]	[-0.015,0.022]	[-0.023,-0.005]	[-0.028,0.022]	[0.001,0.047]	[-0.019,0.033]	[-0.030,0.000]	[-0.063,0.070]
-2	0.007	0.008	-0.007	0.003	0.012	-0.004	0.001	0.028
	(0.010)	(0.007)	(0.007)	(0.008)	(0.016)	(0.010)	(0.015)	(0.025)
	[-0.018,0.032]	[-0.010,0.026]	[-0.025,0.010]	[-0.019,0.026]	[-0.029,0.053]	[-0.029,0.022]	[-0.040,0.042]	[-0.038,0.095]
-1	0.020	-0.012	-0.011	-0.002	-0.010	-0.035	0.001	-0.030
	(0.014)	(0.009)	(0.013)	(0.011)	(0.010)	(0.023)	(0.007)	(0.035)
	[-0.015,0.056]	[-0.035,0.012]	[-0.042,0.020]	[-0.031,0.028]	[-0.036,0.016]	[-0.093,0.023]	[-0.019,0.021]	[-0.124,0.063]
0	-0.001	0.001	0.000	0.003	-0.020	0.002	0.006	0.016
	(0.008)	(0.010)	(0.007)	(0.012)	(0.008)	(0.021)	(0.006)	(0.029)
	[-0.020,0.019]	[-0.025,0.027]	[-0.017,0.017]	[-0.029,0.036]	[-0.041,0.000]	[-0.050,0.055]	[-0.010,0.023]	[-0.062,0.094]
1	0.019	-0.031	-0.020	0.013	-0.048	-0.015	0.012	-0.015
	(0.021)	(0.023)	(0.018)	(0.017)	(0.011)	(0.048)	(0.008)	(0.042)
	[-0.034,0.072]	[-0.092,0.030]	[-0.064,0.023]	[-0.033,0.059]	[-0.075,-0.021]	[-0.136,0.107]	[-0.010,0.034]	[-0.127,0.097]
2	0.062	-0.060	-0.054	0.059	-0.074	-0.139	0.032	-0.029
	(0.046)	(0.041)	(0.038)	(0.032)	(0.013)	(0.102)	(0.009)	(0.079)
	[-0.052,0.177]	[-0.170,0.050]	[-0.146,0.038]	[-0.028,0.146]	[-0.108,-0.040]	[-0.394,0.116]	[0.006,0.057]	[-0.242,0.184]
3	0.122	-0.101	-0.085	0.097	-0.062	-0.133	0.025	-0.111
	(0.071)	(0.067)	(0.062)	(0.058)	(0.016)	(0.155)	(0.009)	(0.033)
	[-0.056,0.301]	[-0.281,0.078]	[-0.235,0.064]	[-0.061,0.256]	[-0.102,-0.021]	[-0.521,0.255]	[0.002,0.049]	[-0.199,-0.023]
4		-0.101		0.011		-0.105		-0.400
		(0.080)		(0.073)		(0.160)		(0.077)
		[-0.314,0.111]		[-0.188,0.210]		[-0.506,0.296]		[-0.607,-0.193]
Mean	0.941	0.114	0.027	0.074	0.956	0.060	0.020	0.699
N	1,914	2,067	1,914	2,067	622	673	622	673

Table A.15: Effect of the activation program on labor market and mental health of parents split by age of child (continued)

Panel B. Parents of children aged 12-18

	No mental health medication at baseline				Mental health medication at baseline			
Event time	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication	Welfare benefit	Employment	Neither (self-)empl. nor benefits	Mental health medication
-6		-0.011 (0.007) [-0.029,0.007]		-0.041 (0.070) [-0.225,0.142]		0.000 (0.005) [-0.014,0.014]		0.136 (0.269) [-0.554,0.826]
-5		0.005 (0.018) [-0.043,0.053]		0.014 (0.022) [-0.043,0.072]		0.034 (0.018) [-0.014,0.083]		-0.055 (0.043) [-0.167,0.056]
-4		-0.012 (0.012) [-0.043,0.019]		-0.020 (0.015) [-0.059,0.019]		-0.022 (0.013) [-0.058,0.013]		-0.001 (0.030) [-0.077,0.075]
-3	-0.023 (0.071) [-0.186,0.139]	0.006 (0.009) [-0.017,0.029]	-0.010 (0.003) [-0.017,-0.003]	0.014 (0.012) [-0.017,0.045]	0.032 (0.010) [0.009,0.054]	0.004 (0.010) [-0.024,0.032]	-0.011 (0.006) [-0.022,0.001]	0.011 (0.026) [-0.056,0.077]
-2	0.025 (0.010) [0.001,0.049]	0.002 (0.008) [-0.020,0.024]	-0.005 (0.007) [-0.022,0.012]	-0.017 (0.011) [-0.046,0.011]	-0.006 (0.021) [-0.056,0.044]	0.001 (0.011) [-0.029,0.031]	0.023 (0.019) [-0.017,0.064]	0.021 (0.026) [-0.046,0.088]
-1	-0.013 (0.014) [-0.045,0.019]	0.001 (0.008) [-0.022,0.023]	-0.002 (0.016) [-0.044,0.039]	0.019 (0.013) [-0.014,0.051]	0.033 (0.037) [-0.053,0.119]	0.001 (0.012) [-0.031,0.033]	-0.030 (0.032) [-0.097,0.038]	-0.010 (0.025) [-0.075,0.055]
0	-0.007 (0.009) [-0.027,0.014]	0.002 (0.011) [-0.028,0.032]	0.010 (0.006) [-0.006,0.027]	-0.002 (0.013) [-0.035,0.030]	0.000 (0.010) [-0.023,0.024]	-0.006 (0.011) [-0.035,0.023]	0.008 (0.008) [-0.008,0.024]	0.032 (0.028) [-0.039,0.103]
1	-0.029 (0.018) [-0.070,0.011]	0.023 (0.029) [-0.056,0.101]	0.019 (0.006) [0.002,0.035]	-0.010 (0.022) [-0.068,0.047]	0.022 (0.038) [-0.067,0.110]	0.001 (0.013) [-0.036,0.037]	-0.011 (0.036) [-0.086,0.064]	0.070 (0.051) [-0.062,0.201]
2	-0.035 (0.029) [-0.100,0.031]	0.049 (0.057) [-0.103,0.200]	0.041 (0.006) [0.024,0.058]	-0.007 (0.038) [-0.106,0.092]	0.031 (0.096) [-0.193,0.255]	0.049 (0.048) [-0.081,0.179]	-0.009 (0.050) [-0.114,0.096]	0.099 (0.081) [-0.108,0.307]
3	-0.111 (0.014) [-0.142,-0.080]	0.084 (0.082) [-0.134,0.301]	0.045 (0.008) [0.024,0.067]	0.051 (0.112) [-0.240,0.343]	0.002 (0.113) [-0.261,0.265]	0.107 (0.111) [-0.194,0.407]	0.026 (0.012) [0.001,0.051]	0.127 (0.125) [-0.193,0.446]
4		0.112 (0.094) [-0.139,0.363]		0.005 (0.089) [-0.228,0.238]		0.167 (0.103) [-0.111,0.444]		0.214 (0.165) [-0.209,0.638]
Mean	0.946	0.102	0.023	0.087	0.948	0.058	0.019	0.736
N	1,335	1,415	1,335	1,415	524	556	524	556

Notes: see notes to Table A.1. Parents of children 0-11 and parents of children 12-18 are parents in the main sample whose youngest child living in their household on January 1st, 2013 is aged 0-11 or 12-18 respectively. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.16: Effect of the activation program on educational outcomes and mental health for children

Event time	No parental mental health medication at baseline					Parental Mental health medication at baseline				
	Years of education	Upper voc. track	Academic track	Start-qualification	Mental health medication	Years of education	Upper voc. track	Academic track	Start-qualification	Mental health medication
-6	-0.295	0.006	0.022	-0.001	-0.032	-0.686	0.044	-0.003	-0.043	0.064
	(0.308)	(0.044)	(0.045)	(0.043)	(0.044)	(0.168)	(0.092)	(0.187)	(0.148)	(0.093)
	[-1.127,0.538]	[-0.107,0.119]	[-0.096,0.140]	[-0.121,0.118]	[-0.147,0.082]	[-1.152,-0.220]	[-0.203,0.291]	[-0.472,0.466]	[-0.438,0.351]	[-0.165,0.293]
-5	0.036	0.002	0.010	0.010	0.000	0.168	0.009	0.015	0.039	-0.009
	(0.081)	(0.012)	(0.007)	(0.012)	(0.006)	(0.132)	(0.016)	(0.011)	(0.019)	(0.010)
	[-0.184,0.256]	[-0.029,0.032]	[-0.009,0.029]	[-0.023,0.042]	[-0.016,0.017]	[-0.199,0.536]	[-0.033,0.052]	[-0.013,0.044]	[-0.013,0.091]	[-0.035,0.017]
-4	-0.057	-0.007	-0.001	0.001	0.000	-0.107	0.015	0.008	-0.013	-0.005
	(0.057)	(0.007)	(0.005)	(0.008)	(0.004)	(0.083)	(0.012)	(0.007)	(0.014)	(0.007)
	[-0.210,0.097]	[-0.026,0.012]	[-0.014,0.011]	[-0.021,0.023]	[-0.009,0.010]	[-0.338,0.124]	[-0.018,0.047]	[-0.008,0.025]	[-0.050,0.024]	[-0.023,0.013]
-3	-0.005	-0.002	-0.001	-0.005	-0.003	0.035	-0.002	-0.005	-0.016	-0.001
	(0.049)	(0.006)	(0.004)	(0.007)	(0.004)	(0.072)	(0.009)	(0.005)	(0.010)	(0.005)
	[-0.138,0.129]	[-0.017,0.013]	[-0.011,0.008]	[-0.024,0.014]	[-0.012,0.006]	[-0.166,0.236]	[-0.028,0.023]	[-0.019,0.008]	[-0.042,0.010]	[-0.014,0.011]
-2	0.055	0.005	0.000	0.002	0.000	0.014	-0.009	-0.009	-0.001	0.006
	(0.047)	(0.007)	(0.004)	(0.008)	(0.003)	(0.073)	(0.010)	(0.005)	(0.011)	(0.005)
	[-0.072,0.182]	[-0.012,0.022]	[-0.010,0.009]	[-0.020,0.023]	[-0.008,0.007]	[-0.189,0.216]	[-0.036,0.018]	[-0.020,0.003]	[-0.029,0.028]	[-0.008,0.019]
-1	-0.052	0.008	0.005	0.003	0.002	-0.115	0.016	0.016	0.020	-0.001
	(0.061)	(0.009)	(0.004)	(0.009)	(0.004)	(0.099)	(0.013)	(0.007)	(0.016)	(0.008)
	[-0.216,0.112]	[-0.015,0.030]	[-0.006,0.016]	[-0.023,0.030]	[-0.008,0.013]	[-0.390,0.160]	[-0.021,0.052]	[-0.002,0.033]	[-0.023,0.064]	[-0.020,0.018]
0	0.073	0.009	0.003	0.001	-0.003	-0.085	-0.021	-0.011	-0.038	0.007
	(0.056)	(0.010)	(0.006)	(0.010)	(0.005)	(0.087)	(0.016)	(0.010)	(0.017)	(0.010)
	[-0.080,0.225]	[-0.018,0.036]	[-0.012,0.018]	[-0.027,0.030]	[-0.016,0.009]	[-0.327,0.157]	[-0.065,0.023]	[-0.037,0.015]	[-0.084,0.008]	[-0.018,0.032]
1	-0.018	0.034	0.013	0.012	-0.019	-0.287	-0.030	0.001	-0.044	0.001
	(0.117)	(0.024)	(0.012)	(0.021)	(0.014)	(0.181)	(0.031)	(0.024)	(0.036)	(0.017)
	[-0.335,0.300]	[-0.028,0.096]	[-0.018,0.044]	[-0.047,0.070]	[-0.055,0.017]	[-0.791,0.217]	[-0.113,0.052]	[-0.058,0.061]	[-0.141,0.054]	[-0.041,0.043]
2	0.046	0.099	0.036	0.036	-0.052	-0.426	0.006	-0.007	-0.073	-0.019
	(0.237)	(0.044)	(0.024)	(0.031)	(0.024)	(0.347)	(0.060)	(0.045)	(0.069)	(0.023)
	[-0.596,0.688]	[-0.012,0.211]	[-0.026,0.098]	[-0.052,0.124]	[-0.115,0.011]	[-1.392,0.539]	[-0.154,0.167]	[-0.121,0.107]	[-0.257,0.112]	[-0.076,0.037]
3	-0.039	0.128	0.050	0.060	-0.073	0.119	0.020	-0.020	-0.104	-0.018
	(0.326)	(0.061)	(0.040)	(0.049)	(0.041)	(0.542)	(0.112)	(0.065)	(0.095)	(0.036)
	[-0.921,0.843]	[-0.029,0.285]	[-0.055,0.156]	[-0.078,0.198]	[-0.179,0.033]	[-1.386,1.624]	[-0.281,0.320]	[-0.183,0.142]	[-0.359,0.150]	[-0.106,0.071]
4	-0.056	0.074	0.049	0.078	-0.085	-0.166	-0.073	-0.018	-0.098	0.072
	(0.421)	(0.076)	(0.043)	(0.073)	(0.045)	(0.819)	(0.130)	(0.077)	(0.111)	(0.045)
	[-1.194,1.082]	[-0.119,0.268]	[-0.063,0.162]	[-0.125,0.282]	[-0.202,0.033]	[-2.441,2.109]	[-0.422,0.276]	[-0.212,0.177]	[-0.396,0.199]	[-0.039,0.183]
Mean	6.343	0.307	0.110	0.274	0.028	6.510	0.304	0.098	0.278	0.040
N	3,709	3,709	3,709	3,709	3,709	1,560	1,560	1,560	1,560	1,560

Notes: See notes to Table A.1. The sample consists of children in households in the main sample aged between 7 and 18 years old on January 1st, 2013. Years of education is the years of education corresponding to the current enrolment or the highest obtained education level. Upper vocational and academic track are dummies for obtaining or being enrolled in at least this educational track. Start qualification is a dummy for obtaining or being enrolled in at least the minimum education level that is required for 16 and 17 year olds to be allowed to quit school before age 18. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.17: Effect of the activation program on educational outcomes and mental health of children split by age

Panel A. Children aged 7-14

	No parental mental health medication at baseline					Parental Mental health medication at baseline				
Event time	Years of education	Upper voc. track	Academic track	Start-qualification	Mental health medication	Years of education	Upper voc. track	Academic track	Start-qualification	Mental health medication
-6	-0.309	-0.025	-0.008	-0.008	-0.042	-0.766	-0.018	-0.004	-0.004	0.090
	(0.364)	(0.008)	(0.003)	(0.003)	(0.057)	(0.291)	(0.009)	(0.003)	(0.003)	(0.123)
	[-1.296,0.679]	[-0.047,-0.003]	[-0.015,-0.001]	[-0.016,0.000]	[-0.185,0.101]	[-1.526,-0.006]	[-0.041,0.005]	[-0.013,0.004]	[-0.013,0.004]	[-0.277,0.457]
-5	0.033	-0.003	0.007	0.007	0.004	-0.063	-0.012	0.009	0.009	-0.021
	(0.102)	(0.009)	(0.007)	(0.007)	(0.009)	(0.168)	(0.013)	(0.011)	(0.011)	(0.011)
	[-0.243,0.308]	[-0.028,0.022]	[-0.010,0.024]	[-0.011,0.025]	[-0.017,0.026]	[-0.502,0.376]	[-0.047,0.022]	[-0.018,0.036]	[-0.018,0.036]	[-0.053,0.011]
-4	-0.040	-0.001	0.004	0.004	-0.002	-0.033	0.018	0.010	0.010	0.000
	(0.071)	(0.007)	(0.004)	(0.004)	(0.005)	(0.117)	(0.013)	(0.008)	(0.008)	(0.008)
	[-0.232,0.152]	[-0.021,0.019]	[-0.008,0.015]	[-0.008,0.016]	[-0.014,0.010]	[-0.339,0.273]	[-0.016,0.053]	[-0.011,0.030]	[-0.012,0.031]	[-0.025,0.024]
-3	-0.020	-0.001	-0.003	-0.003	-0.001	0.071	0.001	-0.005	-0.005	0.001
	(0.059)	(0.007)	(0.004)	(0.004)	(0.004)	(0.096)	(0.009)	(0.006)	(0.006)	(0.007)
	[-0.179,0.139]	[-0.019,0.018]	[-0.012,0.006]	[-0.013,0.007]	[-0.012,0.011]	[-0.179,0.322]	[-0.023,0.026]	[-0.020,0.009]	[-0.020,0.009]	[-0.019,0.021]
-2	0.076	-0.002	-0.002	0.000	-0.003	0.032	-0.020	-0.009	-0.011	-0.001
	(0.059)	(0.007)	(0.004)	(0.005)	(0.003)	(0.101)	(0.011)	(0.006)	(0.007)	(0.007)
	[-0.084,0.236]	[-0.023,0.020]	[-0.013,0.009]	[-0.013,0.013]	[-0.011,0.005]	[-0.231,0.296]	[-0.050,0.011]	[-0.025,0.008]	[-0.030,0.007]	[-0.023,0.021]
-1	-0.036	0.017	0.005	0.009	0.006	-0.163	0.037	0.015	0.026	-0.006
	(0.072)	(0.010)	(0.005)	(0.008)	(0.005)	(0.123)	(0.021)	(0.013)	(0.020)	(0.013)
	[-0.232,0.160]	[-0.012,0.045]	[-0.007,0.017]	[-0.013,0.030]	[-0.005,0.018]	[-0.483,0.157]	[-0.018,0.093]	[-0.018,0.049]	[-0.026,0.077]	[-0.045,0.034]
0	0.062	0.000	0.005	0.001	-0.002	-0.099	-0.018	-0.016	-0.041	0.026
	(0.081)	(0.014)	(0.007)	(0.010)	(0.005)	(0.105)	(0.022)	(0.015)	(0.019)	(0.017)
	[-0.157,0.281]	[-0.041,0.040]	[-0.012,0.023]	[-0.026,0.029]	[-0.015,0.010]	[-0.373,0.176]	[-0.077,0.040]	[-0.054,0.021]	[-0.091,0.009]	[-0.024,0.076]
1	0.037	0.031	0.028	0.020	-0.011	-0.164	-0.022	-0.019	-0.029	0.036
	(0.153)	(0.033)	(0.012)	(0.022)	(0.017)	(0.221)	(0.050)	(0.039)	(0.041)	(0.020)
	[-0.379,0.452]	[-0.061,0.124]	[-0.002,0.059]	[-0.038,0.077]	[-0.053,0.031]	[-0.740,0.412]	[-0.157,0.112]	[-0.120,0.081]	[-0.136,0.077]	[-0.024,0.097]
2	0.172	0.128	0.062	0.060	-0.034	-0.317	0.035	-0.051	-0.086	0.002
	(0.304)	(0.054)	(0.021)	(0.035)	(0.029)	(0.475)	(0.098)	(0.082)	(0.089)	(0.007)
	[-0.652,0.996]	[-0.024,0.281]	[0.009,0.115]	[-0.034,0.153]	[-0.107,0.040]	[-1.557,0.923]	[-0.226,0.297]	[-0.261,0.159]	[-0.316,0.143]	[-0.020,0.025]
3	0.091	0.197	0.082	0.076	-0.038	0.912	-0.001	-0.102	-0.064	0.000
	(0.394)	(0.078)	(0.035)	(0.062)	(0.046)	(0.783)	(0.164)	(0.107)	(0.136)	(0.010)
	[-0.977,1.160]	[-0.023,0.418]	[-0.008,0.173]	[-0.089,0.241]	[-0.155,0.079]	[-1.132,2.956]	[-0.440,0.438]	[-0.376,0.172]	[-0.414,0.285]	[-0.031,0.030]
4	0.104	0.149	0.081	0.073	-0.065	0.265	-0.132	-0.116	-0.097	0.016
	(0.561)	(0.089)	(0.061)	(0.071)	(0.051)	(1.154)	(0.142)	(0.125)	(0.148)	(0.027)
	[-1.418,1.626]	[-0.103,0.401]	[-0.077,0.239]	[-0.117,0.263]	[-0.194,0.063]	[-2.749,3.279]	[-0.512,0.248]	[-0.435,0.204]	[-0.478,0.284]	[-0.063,0.096]
Mean	4.564	0.223	0.069	0.126	0.029	4.702	0.229	0.061	0.120	0.037
N	2,348	2,348	2,348	2,348	2,348	954	954	954	954	954

Table A.17: Effect of the activation program on educational outcomes and mental health of children split by age (continued)

Event time	No parental mental health medication at baseline					Parental Mental health medication at baseline				
	Years of education	Upper voc. track	Academic track	Start-qualification	Mental health medication	Years of education	Upper voc. track	Academic track	Start-qualification	Mental health medication
-6	-0.432	0.119	0.130	0.020	-0.002	-0.438	0.241	0.010	-0.203	-0.011
	(0.417)	(0.165)	(0.179)	(0.211)	(0.004)	(0.623)	(0.246)	(0.040)	(0.196)	(0.009)
	[-1.517,0.652]	[-0.318,0.556]	[-0.343,0.603]	[-0.529,0.569]	[-0.011,0.007]	[-2.136,1.261]	[-0.411,0.894]	[-0.097,0.116]	[-0.723,0.318]	[-0.033,0.010]
-5	0.025	0.009	0.015	0.014	-0.008	0.293	0.047	0.025	0.091	0.012
	(0.102)	(0.027)	(0.017)	(0.029)	(0.009)	(0.164)	(0.039)	(0.026)	(0.050)	(0.020)
	[-0.239,0.289]	[-0.061,0.080]	[-0.030,0.059]	[-0.060,0.089]	[-0.030,0.015]	[-0.155,0.740]	[-0.055,0.150]	[-0.046,0.096]	[-0.041,0.224]	[-0.038,0.062]
-4	-0.041	-0.014	-0.010	-0.006	0.005	-0.194	0.010	0.007	-0.062	-0.013
	(0.067)	(0.015)	(0.011)	(0.022)	(0.005)	(0.102)	(0.026)	(0.013)	(0.030)	(0.012)
	[-0.214,0.133]	[-0.053,0.025]	[-0.040,0.019]	[-0.063,0.052]	[-0.009,0.018]	[-0.473,0.084]	[-0.058,0.079]	[-0.027,0.041]	[-0.141,0.018]	[-0.044,0.018]
-3	0.022	-0.005	0.001	-0.007	-0.007	0.009	-0.009	-0.006	-0.020	-0.004
	(0.060)	(0.013)	(0.008)	(0.017)	(0.006)	(0.085)	(0.020)	(0.010)	(0.024)	(0.008)
	[-0.135,0.178]	[-0.039,0.030]	[-0.020,0.022]	[-0.052,0.039]	[-0.024,0.009]	[-0.222,0.241]	[-0.062,0.044]	[-0.032,0.021]	[-0.084,0.043]	[-0.024,0.016]
-2	0.005	0.016	0.002	0.006	0.004	-0.023	0.004	-0.011	0.022	0.016
	(0.064)	(0.013)	(0.007)	(0.018)	(0.005)	(0.105)	(0.018)	(0.007)	(0.026)	(0.010)
	[-0.161,0.171]	[-0.018,0.050]	[-0.016,0.020]	[-0.041,0.052]	[-0.009,0.018]	[-0.308,0.263]	[-0.043,0.051]	[-0.031,0.009]	[-0.047,0.090]	[-0.007,0.040]
-1	-0.092	-0.005	0.003	-0.016	-0.006	-0.038	-0.012	0.021	-0.002	0.001
	(0.077)	(0.019)	(0.007)	(0.023)	(0.011)	(0.125)	(0.018)	(0.008)	(0.030)	(0.010)
	[-0.292,0.108]	[-0.054,0.045]	[-0.016,0.022]	[-0.076,0.043]	[-0.034,0.022]	[-0.378,0.301]	[-0.061,0.036]	[-0.002,0.043]	[-0.081,0.078]	[-0.024,0.027]
0	0.094	0.032	0.000	0.007	-0.002	-0.241	-0.022	-0.003	-0.044	-0.017
	(0.087)	(0.017)	(0.010)	(0.023)	(0.010)	(0.109)	(0.020)	(0.012)	(0.028)	(0.020)
	[-0.131,0.319]	[-0.013,0.077]	[-0.027,0.027]	[-0.054,0.067]	[-0.027,0.022]	[-0.538,0.056]	[-0.076,0.031]	[-0.034,0.028]	[-0.118,0.031]	[-0.068,0.033]
1	-0.049	0.067	-0.009	-0.004	-0.036	-0.662	-0.033	0.030	-0.106	-0.057
	(0.201)	(0.047)	(0.029)	(0.044)	(0.028)	(0.233)	(0.026)	(0.013)	(0.051)	(0.041)
	[-0.573,0.474]	[-0.058,0.192]	[-0.087,0.069]	[-0.120,0.111]	[-0.106,0.034]	[-1.296,-0.028]	[-0.103,0.037]	[-0.005,0.064]	[-0.242,0.029]	[-0.157,0.044]
2	0.016	0.082	-0.001	-0.006	-0.098	-0.796	-0.026	0.052	-0.111	-0.069
	(0.344)	(0.094)	(0.052)	(0.081)	(0.053)	(0.383)	(0.029)	(0.012)	(0.130)	(0.068)
	[-0.879,0.911]	[-0.167,0.330]	[-0.139,0.137]	[-0.217,0.205]	[-0.232,0.037]	[-1.840,0.248]	[-0.104,0.051]	[0.020,0.084]	[-0.455,0.233]	[-0.237,0.098]
3	0.008	0.051	0.010	0.018	-0.176	-1.293	0.017	0.097	-0.162	-0.066
	(0.437)	(0.127)	(0.066)	(0.095)	(0.094)	(0.777)	(0.074)	(0.026)	(0.141)	(0.117)
	[-1.127,1.143]	[-0.286,0.389]	[-0.164,0.184]	[-0.228,0.264]	[-0.412,0.061]	[-3.412,0.825]	[-0.180,0.214]	[0.028,0.166]	[-0.535,0.212]	[-0.354,0.222]
4	-0.470	-0.074	0.006	-0.079	-0.185	-0.762	0.000	0.128	-0.076	0.223
	(0.509)	(0.157)	(0.088)	(0.121)	(0.111)	(0.763)	(0.126)	(0.069)	(0.161)	(0.122)
	[-1.792,0.851]	[-0.490,0.342]	[-0.226,0.238]	[-0.394,0.236]	[-0.465,0.095]	[-2.841,1.317]	[-0.336,0.336]	[-0.057,0.313]	[-0.503,0.352]	[-0.078,0.525]
Mean	9.411	0.452	0.180	0.530	0.027	9.358	0.421	0.158	0.525	0.046
N	1,361	1,361	1,361	1,361	1,361	606	606	606	606	606

Notes: See notes to Table A.1 and Table A.16. The model is estimated separately for children aged 7-14 and 15-18 on January 1st, 2013. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

Table A.18: Effect of the activation program on mental health medication type for children split by age

Panel A. Children aged 7-14

Event time	No parental mental health medication at baseline					Parental Mental health medication at baseline				
	Antipsychotics	Anxiolytics	Hypnotics and sedatives	Antidepressants	Psycho-stimulants	Antipsychotics	Anxiolytics	Hypnotics and sedatives	Antidepressants	Psycho-stimulants
-6	0.001	-0.039	0.000		-0.004	0.001	0.001	-0.002	0.000	0.090
	(0.001)	(0.057)	(0.002)		(0.002)	(0.002)	(0.002)	(0.003)	(0.000)	(0.123)
	[-0.003,0.005]	[-0.224,0.146]	[-0.006,0.007]		[-0.010,0.001]	[-0.003,0.005]	[-0.003,0.005]	[-0.007,0.003]	[0.000,0.000]	[-0.217,0.396]
-5	-0.005	0.005	-0.005		0.007	-0.005	-0.006	-0.001	0.000	-0.016
	(0.004)	(0.003)	(0.004)		(0.006)	(0.008)	(0.008)	(0.001)	(0.000)	(0.009)
	[-0.017,0.007]	[-0.006,0.016]	[-0.017,0.007]		[-0.010,0.023]	[-0.023,0.013]	[-0.023,0.012]	[-0.003,0.001]	[0.000,0.000]	[-0.038,0.007]
-4	0.002	0.000	0.001		-0.006	0.006	-0.005	0.002	-0.001	0.003
	(0.002)	(0.002)	(0.002)		(0.004)	(0.005)	(0.004)	(0.003)	(0.001)	(0.007)
	[-0.005,0.009]	[-0.007,0.007]	[-0.006,0.008]		[-0.015,0.004]	[-0.004,0.017]	[-0.015,0.005]	[-0.005,0.008]	[-0.003,0.001]	[-0.014,0.020]
-3	0.000	-0.003	0.002		0.000	-0.005	0.002	0.000	0.001	-0.001
	(0.002)	(0.002)	(0.002)		(0.002)	(0.003)	(0.004)	(0.002)	(0.002)	(0.005)
	[-0.007,0.006]	[-0.009,0.004]	[-0.005,0.010]		[-0.007,0.006]	[-0.012,0.002]	[-0.006,0.011]	[-0.005,0.005]	[-0.003,0.005]	[-0.014,0.011]
-2	0.000	0.002	-0.002		-0.002	-0.002	0.003	-0.002	0.001	0.000
	(0.002)	(0.002)	(0.002)		(0.002)	(0.002)	(0.004)	(0.002)	(0.003)	(0.006)
	[-0.005,0.005]	[-0.004,0.008]	[-0.007,0.004]		[-0.008,0.004]	[-0.007,0.003]	[-0.007,0.013]	[-0.006,0.002]	[-0.005,0.006]	[-0.014,0.015]
-1	0.003	-0.002	0.000		0.004	-0.001	-0.012	0.001	-0.010	0.009
	(0.004)	(0.003)	(0.002)		(0.003)	(0.014)	(0.014)	(0.001)	(0.014)	(0.012)
	[-0.010,0.015]	[-0.011,0.007]	[-0.005,0.005]		[-0.003,0.011]	[-0.032,0.030]	[-0.043,0.020]	[-0.002,0.004]	[-0.036,0.017]	[-0.022,0.039]
0	0.001	0.001	-0.001		-0.002	0.001	0.008	0.000	0.008	0.013
	(0.001)	(0.002)	(0.001)		(0.005)	(0.012)	(0.013)	(0.000)	(0.010)	(0.006)
	[-0.004,0.006]	[-0.005,0.007]	[-0.006,0.003]		[-0.015,0.010]	[-0.025,0.028]	[-0.022,0.039]	[0.000,0.000]	[-0.012,0.028]	[-0.002,0.028]
1	0.010	-0.001	0.000		-0.015	-0.006	0.013	0.000	0.003	0.021
	(0.008)	(0.002)	(0.001)		(0.016)	(0.006)	(0.018)	(0.000)	(0.004)	(0.018)
	[-0.018,0.038]	[-0.006,0.005]	[-0.004,0.005]		[-0.058,0.028]	[-0.019,0.007]	[-0.029,0.054]	[0.000,0.001]	[-0.005,0.011]	[-0.023,0.066]
2	0.003	-0.001	0.003		-0.028	0.003	0.000	0.002	0.002	-0.004
	(0.002)	(0.002)	(0.002)		(0.029)	(0.004)	(0.004)	(0.002)	(0.001)	(0.005)
	[-0.003,0.009]	[-0.006,0.005]	[-0.003,0.009]		[-0.107,0.051]	[-0.006,0.013]	[-0.009,0.010]	[-0.002,0.006]	[0.000,0.004]	[-0.018,0.009]
3	0.001	0.001	0.001		-0.015	-0.002	-0.004	0.000	0.004	0.000
	(0.001)	(0.001)	(0.001)		(0.034)	(0.003)	(0.006)	(0.000)	(0.003)	(0.009)
	[-0.004,0.005]	[-0.004,0.005]	[-0.004,0.005]		[-0.107,0.078]	[-0.009,0.005]	[-0.017,0.009]	[0.000,0.000]	[-0.002,0.010]	[-0.023,0.022]
4	0.000	-0.006	0.000		-0.028	-0.016	-0.016	0.016	0.000	0.016
	(0.000)	(0.009)	(0.000)		(0.045)	(0.024)	(0.024)	(0.024)	(0.000)	(0.026)
	[0.000,0.000]	[-0.035,0.023]	[0.000,0.000]		[-0.150,0.094]	[-0.071,0.038]	[-0.070,0.038]	[-0.030,0.062]	[0.000,0.000]	[-0.047,0.080]
Mean	0.006	0.004	0.002	0.002	0.017	0.007	0.005	0.001	0.002	0.027
N	2,348	2,348	2,348	2,348	2,348	954	954	954	954	954

Table A.18: Effect of the activation program on mental health medication type for children split by age (continued)

Panel B. Children aged 15-18

Event time	No parental mental health medication at baseline					Parental Mental health medication at baseline				
	Antipsychotics	Anxiolytics	Hypnotics and sedatives	Antidepressants	Psycho-stimulants	Antipsychotics	Anxiolytics	Hypnotics and sedatives	Antidepressants	Psycho-stimulants
-6	-0.003	-0.003	0.001	-0.001	0.000	-0.004	-0.006	0.000	-0.006	0.001
	(0.002)	(0.002)	(0.001)	(0.001)	(0.003)	(0.005)	(0.006)	(0.000)	(0.005)	(0.004)
	[-0.009,0.003]	[-0.009,0.004]	[-0.002,0.003]	[-0.003,0.002]	[-0.007,0.008]	[-0.014,0.006]	[-0.020,0.009]	[0.000,0.000]	[-0.018,0.006]	[-0.008,0.010]
-5	-0.008	-0.003	0.001	-0.001	0.000	-0.005	0.018	0.000	0.005	0.002
	(0.006)	(0.002)	(0.001)	(0.001)	(0.007)	(0.004)	(0.013)	(0.000)	(0.014)	(0.016)
	[-0.024,0.007]	[-0.008,0.002]	[-0.002,0.003]	[-0.004,0.002]	[-0.016,0.017]	[-0.014,0.003]	[-0.013,0.049]	[-0.001,0.000]	[-0.028,0.038]	[-0.037,0.040]
-4	-0.002	0.003	-0.002	-0.001	0.007	0.004	-0.008	0.003	-0.001	-0.001
	(0.003)	(0.003)	(0.002)	(0.001)	(0.005)	(0.006)	(0.008)	(0.005)	(0.008)	(0.008)
	[-0.009,0.005]	[-0.007,0.013]	[-0.006,0.003]	[-0.003,0.001]	[-0.005,0.018]	[-0.010,0.017]	[-0.028,0.011]	[-0.008,0.013]	[-0.021,0.020]	[-0.019,0.017]
-3	0.001	-0.002	0.000	0.003	-0.010	-0.001	-0.006	-0.002	-0.002	-0.004
	(0.003)	(0.003)	(0.001)	(0.002)	(0.005)	(0.006)	(0.006)	(0.002)	(0.004)	(0.005)
	[-0.007,0.009]	[-0.011,0.008]	[-0.002,0.002]	[-0.003,0.009]	[-0.022,0.001]	[-0.015,0.013]	[-0.020,0.008]	[-0.005,0.001]	[-0.011,0.008]	[-0.017,0.008]
-2	0.001	0.001	0.001	-0.003	0.004	-0.001	0.013	0.002	-0.005	0.006
	(0.003)	(0.002)	(0.002)	(0.002)	(0.004)	(0.006)	(0.007)	(0.004)	(0.005)	(0.005)
	[-0.005,0.008]	[-0.006,0.008]	[-0.003,0.005]	[-0.009,0.003]	[-0.005,0.014]	[-0.014,0.011]	[-0.003,0.030]	[-0.006,0.010]	[-0.019,0.008]	[-0.006,0.018]
-1	0.003	-0.007	-0.008	0.002	0.001	0.005	-0.010	-0.004	0.014	0.002
	(0.003)	(0.011)	(0.011)	(0.004)	(0.003)	(0.004)	(0.007)	(0.005)	(0.007)	(0.006)
	[-0.004,0.009]	[-0.042,0.028]	[-0.028,0.013]	[-0.009,0.012]	[-0.006,0.008]	[-0.004,0.013]	[-0.028,0.008]	[-0.013,0.006]	[-0.002,0.030]	[-0.012,0.016]
0	-0.004	0.003	0.008	-0.001	-0.006	-0.008	0.004	0.008	-0.022	-0.007
	(0.003)	(0.008)	(0.007)	(0.003)	(0.008)	(0.021)	(0.007)	(0.005)	(0.019)	(0.006)
	[-0.011,0.002]	[-0.022,0.028]	[-0.007,0.022]	[-0.010,0.009]	[-0.025,0.013]	[-0.056,0.039]	[-0.014,0.022]	[-0.001,0.018]	[-0.070,0.025]	[-0.020,0.007]
1	-0.016	0.006	0.000	0.006	-0.022	-0.020	0.008	0.006	-0.036	-0.030
	(0.017)	(0.011)	(0.006)	(0.004)	(0.027)	(0.039)	(0.008)	(0.004)	(0.038)	(0.030)
	[-0.056,0.024]	[-0.029,0.041]	[-0.011,0.012]	[-0.005,0.016]	[-0.088,0.045]	[-0.105,0.065]	[-0.013,0.028]	[-0.002,0.014]	[-0.131,0.058]	[-0.101,0.041]
2	-0.029	0.002	-0.027	0.000	-0.040	-0.035	0.012	0.009	-0.019	-0.068
	(0.041)	(0.003)	(0.041)	(0.004)	(0.052)	(0.052)	(0.007)	(0.005)	(0.051)	(0.068)
	[-0.128,0.069]	[-0.008,0.013]	[-0.106,0.053]	[-0.011,0.011]	[-0.168,0.088]	[-0.150,0.080]	[-0.004,0.029]	[-0.002,0.019]	[-0.146,0.107]	[-0.228,0.092]
3	-0.063	0.001	-0.063	0.003	-0.052	-0.013	0.013	0.021	0.014	-0.108
	(0.088)	(0.002)	(0.091)	(0.004)	(0.064)	(0.013)	(0.012)	(0.009)	(0.018)	(0.117)
	[-0.277,0.150]	[-0.006,0.009]	[-0.241,0.115]	[-0.009,0.015]	[-0.209,0.105]	[-0.042,0.016]	[-0.016,0.043]	[0.002,0.039]	[-0.031,0.060]	[-0.384,0.168]
4	-0.082	0.000	-0.082	0.037	-0.058	0.000	0.146	0.026	0.197	0.000
	(0.110)	(0.000)	(0.110)	(0.019)	(0.062)	(0.000)	(0.124)	(0.037)	(0.128)	(0.010)
	[-0.348,0.184]	[0.000,0.000]	[-0.298,0.134]	[-0.016,0.089]	[-0.209,0.093]	[0.000,0.000]	[-0.158,0.451]	[-0.047,0.098]	[-0.118,0.513]	[-0.023,0.023]
Mean	0.010	0.005	0.002	0.007	0.009	0.013	0.009	0.004	0.014	0.015
N	1,361	1,361	1,361	1,361	1,361	606	606	606	606	606

Notes: See notes to Table A.1 and Table A.16. The model is estimated separately for children aged 7-14 and 15-18 on January 1st, 2013. The results for antidepressants use for children aged 7-14 with parents with no mental health medication at baseline are not displayed, there is little variation in antidepressant use for this group which causes the simultaneous critical value used to construct the confidence intervals to be to 'too large' to be reliable. Coefficients are from staggered DiD proposed by Callaway and Sant'Anna (2021), with timing at the neighborhood level and not-yet-treated neighborhoods as controls. Event time is the years since neighborhood is treated. Standard errors are in parentheses, 95% simultaneous confidence intervals are in brackets.

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