

**Pre-vocational therapy in mental health.  
Clients' desired and achieved productivity status**

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**Abstract**

**Background:** Knowledge about work-related occupational therapy in psychiatric inpatient and day hospital clients is limited.

**Aims:** The aim of the study was to explore the desired and achieved productivity status in mental health service users participating in a pre-vocational therapy (PVT) intervention.

**Outcome variables** were productivity status and achievement of desired productivity status at discharge, and change or persistence of productivity status between admission and discharge.

**Methods:** This is a short-term prospective study based on observational data from health records (N = 98).

**Results:** At admission, 53.2% of participants named a clear desired productivity status; 46.8% did not. Of the former, 76.9% expressed a desire for employment or education on the regular job market; 28.0% achieved their desired outcome at discharge, whereas 72.0% did not.

Overall, 58.5% retained, established or increased productive activities, while 41.5% were not engaged in or had reduced productive activities at discharge. These two groups differed in socio-economic and social-security-related characteristics, treatment-related characteristics and psychiatric diagnosis.

**Conclusions and significance:** Some, but not all kinds of clients in acute psychiatric inpatient and day hospital settings manage to take a first step towards productive activities during the first phase of treatment.

## **Introduction**

### ***Background***

In many European countries, including Switzerland, social policies are increasingly oriented towards vocational (re)integration of people out of work [1,2]. However, people with mental health conditions are still less likely to participate in work than others, despite existing efforts related to reintegration [2-4]. There are two main intervention strategies in vocational rehabilitation: ‘first train, then place’ approaches such as Pre-Vocational Therapy (PVT), and ‘first place, then train’ approaches such as Supported Employment (SE) [4].

Guidelines recommend that vocational interventions start early [4]. However, research efforts on vocational interventions in mental health services have focused mainly on outpatient interventions. For example, there is ample evidence on approaches of SE, especially Individual Placement and Support interventions [5-8]. These interventions are based on the principle of placing mentally ill persons on the regular job market without a prolonged training phase and coaching them on the job [9]. Guidelines clearly recommend SE interventions for vocational rehabilitation in mental health when competitive employment is the goal. At the same time, the guidelines state that SE approaches may not be suitable for all client groups and that other approaches should be offered to persons for whom competitive employment is not (yet) achievable [4]. This is the case for clients who are treated in acute inpatient and day hospital settings: they cannot (yet) work on the regular job market because of their severe health conditions and because they are legally considered to be unfit for work during a hospital stay. Few studies have investigated interventions directed at work-related participation in the inpatient and day hospital setting [10-13], and little is known about the clients' desired and achieved productivity status at this early stage of treatment. Generally, evidence in the field of work-related interventions carried out by occupational therapists is scarce, and results are very heterogeneous [14-17].

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Previous evidence, mainly applicable to SE interventions, suggests that attaining or retaining employment on the regular job market is associated with socio-economic and social-security-related characteristics and psychiatric diagnosis, in addition to further factors such as work history and clinical background (e.g. symptom severity, functional capacity) [2,18-23]. It has been shown that socio-economic characteristics such as education or vocational qualification are positively associated with attaining or retaining employment. Results of studies that included social-security-related characteristics suggest that people who receive financial aid are less likely to attain or retain employment on the regular job market [21,24], but this is not the case in one study by Twamley et al. [19]. With respect to psychiatric diagnosis, previous evidence suggests that people with schizophrenia or psychotic disorders and people with substance use disorders have more difficulties in attaining and retaining employment [22-27]. However, other studies did not find an association between diagnosis and work-related outcomes [20,21].

The main concern of occupational therapy is participation in occupations. Occupations are ‘everyday activities that people do as individuals, in families and with communities to occupy time and bring meaning and purpose to life’ and include ‘things people need to, want to and are expected to do’ [28]. Productivity is a component of occupations. The Canadian Model of Occupational Performance and Engagement (CMOP-E) defines productivity as ‘occupations that make a social or economic contribution or that provide for economic sustenance’ [29,p.37]. This includes both paid and unpaid work, including housework. As Wilcock [30] argues, several studies from occupational science have shown that occupation and health are closely related. Occupations can promote health and well-being, and the lack of occupation can lead to ill health, exclusion and misery [30]. Correspondingly, unemployed people are more likely than others to perceive their well-being as reduced and to suffer from health problems [31-33]. Hence, occupational therapists support people with regard to productivity and participation in work, whether or

not they work – or want to work – on the regular labour market or participate in another productive activity.

Most studies about work-related participation focus on competitive employment as the main outcome [6-8], although guidelines state that vocational rehabilitation should not exclusively be directed at employment on the regular job market [4]. Client-centredness and the focus on individually meaningful occupations belong to the core values of occupational therapy [34]. Also, some clients may not strive for employment on the regular job market while still expressing a desire to participate in a productive occupation. Therefore, it does not seem sufficient to use only competitive employment as an outcome. Instead, differentiated outcomes, which take the clients' desired outcomes regarding productivity and work-related occupations into account, seem more appropriate for investigating work-related occupational therapy interventions than focusing exclusively on competitive employment.

### *Aims*

The aim of our study was to explore the desired and achieved productivity status among inpatients and day hospital clients in mental health service participating in a pre-vocational therapy (PVT) intervention. Outcome variables were productivity status and achievement of desired productivity status at the time of the clients' discharge, and change or persistence of productivity status between admission and discharge. A further aim was to explore whether socio-economic, social-security-, and treatment-related characteristics and psychiatric diagnosis were associated with the outcome variables. Socio-economic characteristics were age, gender, citizenship, education, and vocational qualification; social-security-related characteristics were invalidity insurance benefits and welfare assistance benefits; treatment-related characteristics were productivity status at admission to PVT, desired productivity

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status at admission to PVT, stating a desired productivity status at admission to PVT, duration of stay in PVT, and subsequent treatment.

### *Description of pre-vocational therapy intervention*

PVT is part of the multidisciplinary treatment of a large University Hospital of Psychiatry in Switzerland. The hospital offers treatment to clients with mental illness. In most cases, the hospital stay represents the first phase of treatment and takes place while the clients are not (yet) able to work. The duration of this phase varies depending on the client's health condition and the course of illness. PVT aims to support inpatients and day hospital clients in goals or issues concerning work-related participation. In the hospital, a physician decides, ideally together with the client, to which therapies and hospital services a client is referred. If they consider PVT suitable, the physician refers the client to PVT. Occupational therapists are not systematically involved in the decision-making process concerning whether or not a potential client should be referred to PVT. However, occupational therapists take part in the interprofessional case conferences and may suggest that PVT be considered for inpatients or day hospital clients. PVT is meant to be a first step for clients to reflect upon their work situation and provides a starting point for further steps towards vocational (re)integration. The PVT concept is based on the Model of Human Occupation (MOHO) [35]. A team of occupational therapists delivers therapy interventions in groups and individual therapy settings. Thus, there are various groups or individual therapy within the umbrella intervention termed PVT. The individual therapy sessions usually include talks about various work-related topics or applying MOHO assessments. The therapy groups have different foci and are directed at assessment, training, and reflection on work-related skills including social skills, exchanging views and experiences related to vocational (re)integration, planning activities, and involvement in application procedures. The PVT interventions are not manualized. The

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occupational therapists, however, use established assessment tools, provide standard tasks with written instructions to the clients, and follow standardized procedures (for more details see supplemental material, Description of Pre-Vocational Therapy Interventions). After referral from a hospital physician, one of the occupational therapists contacts the client for an initial therapy session. In this talk, the therapist always asks the client about his or her desired work-related situation after discharge from the hospital and explores the work-related issues with the client (c.f. Table 1 for examples of clients' desired work-related situation). The client and the occupational therapist jointly set up a therapy plan for treatment in PVT, mainly on the basis of the work-related issues and taking into account the desired work-related situation of the client. The therapy plan usually includes participation in one or more therapy groups. The therapy arrangement may change in due course. PVT usually ends when either the client leaves the hospital, the goals of PVT have been achieved, or when the focus of therapy changes and PVT accordingly is replaced by another type of therapy.

**Table 1.** Examples of clients' desired work-related situations and related categories of the desired productivity status

Examples of desired work-related situations that clients named in the first PVT session	Categories of the desired productivity status based on the clients desired work-related situation
<ul style="list-style-type: none"> <li>- Resume an existing employment</li> <li>- Get a job on the regular job market</li> <li>- Quit current job to find a new one</li> </ul>	Employment (regular job market)
<ul style="list-style-type: none"> <li>- Resume an existing education or training</li> <li>- Start an education or training on the regular job market</li> </ul>	Education or training (regular job market)
<ul style="list-style-type: none"> <li>- Participate in an integration measure financed by invalidity insurance or social welfare</li> </ul>	Vocational integration programme
<ul style="list-style-type: none"> <li>- Resume an existing employment</li> <li>- Get a job on the protected job market</li> <li>- Quit current job to find a new one</li> </ul>	Employment (protected job market)
<ul style="list-style-type: none"> <li>- Resume an existing education or training</li> <li>- Start an education or training with support from invalidity insurance or in an institution on the protected job market</li> </ul>	Education or training (protected job market)
<ul style="list-style-type: none"> <li>- Resume an existing activity (e.g. voluntary work)</li> <li>- Start a (new) activity (e.g. voluntary work)</li> </ul>	Unpaid work or other productive activity
<ul style="list-style-type: none"> <li>- Not intending to start a productive activity (clients who do not wish to establish a productive activity are unlikely to participate in PVT)</li> </ul>	No productive activity
<ul style="list-style-type: none"> <li>- Client is unsure what type of work suits his or her abilities or what conditions he or she needs at a workplace</li> <li>- Client is unsure whether he or she should look for a job on the regular or on the protected job market or whether to start an education or training</li> <li>- Client names various job perspectives that he or she could imagine, but does not give priority to any of them</li> <li>- Client is unsure whether he or she will ever be able to work again</li> <li>- Come to a decision whether or not to resume an existing employment</li> </ul>	Unclear or no productivity status named

Notes: PVT = Pre-vocational therapy



*A brief overview of the Swiss welfare system*

Many clients in PVT are supported by one of the institutions of the Swiss welfare system. Therefore, we briefly describe those agencies of the Swiss welfare system that are relevant for clients in PVT. At the end of this section, we briefly address the regulations that prohibit the employer from dismissing employees who are unable to work (protection from dismissal). The Swiss welfare system is based on two pillars: welfare assistance and social security [36]. Welfare assistance is a 'last resort safety net' [37,p.82], which provides the recipients with the basic necessities to lead a decent life [36]. It is financed and regulated on a cantonal (i.e. regional) level [36,37]. Many welfare assistance recipients face difficulties in re-entering the job market and might depend on welfare assistance benefits for considerably long-term periods. Some short-term recipients receive benefits while they are waiting for a 'decision on entitlements or benefits' [36,p.582] from other social security providers.

Social security is regulated on the federal (i.e. national) level and aims to promote job market participation [37]. For the purposes of the present study, unemployment insurance and invalidity insurance are relevant. Unemployment insurance benefits are provided to people who have been engaged in salaried work for a certain period of time [2]. The length of the benefit entitlement period is limited [37], and the recipients must be at least partially fit for work and actively searching for a job [2]. Due to severe mental illnesses, most clients receiving PVT are usually not fit for work and therefore are not eligible for unemployment insurance benefits. The invalidity insurance benefits (full or partial pensions) are provided to people with long-term illness-induced work disability. Additionally, the invalidity insurance has two instruments to promote job market re-entry: vocational integration programmes support job market re-entry, while subsidies for permanent jobs on the so-called protected job market promote adapted work environments [2].

All employees are legally protected from dismissal for a certain period of time if they are unable to work. In the first year of employment with an employer, the protection from dismissal is 30 days. Between the second and the fifth year, the protection from dismissal is 90 days, and as of the sixth year, 180 days (Swiss Code of Obligations, Article 336c [38]).

## **Methods**

### ***Study design***

We conducted a quantitative analysis of health records and used a short-term prospective design [39].

### ***Recruiting and data collection***

We used a convenience sampling approach due to issues of feasibility and scope. All clients included in the study were inpatient or day hospital clients receiving PVT at a large University Hospital of Psychiatry in Switzerland. In order to participate in PVT, the clients needed to be able to leave the ward or reach the hospital from home without assistance and tolerate and respect a group setting. In all, in our study we included PVT clients who would have attended PVT even if the study had not been conducted.

We chose the following eligibility criteria: clients had to be of working age (18–65 years) and had to have attended at least two therapy sessions in PVT. Also, the clients had to be able to judge and be proficient in German to understand the study information and give their written consent to the data collection. We did not apply any other eligibility criteria, such as level of cognitive functioning. However, because this study took place in a real-world setting, the therapists responsible decided at what point in time a client should best be approached for informed consent. Since we considered treatment more important

than conducting our study, the occupational therapists did not approach clients for the study if they considered that this might pose a risk to their mental health or to the therapeutic process. Therefore, some clients had been discharged before their therapist considered them well enough to be approached for informed consent. FR provided instruction and support to the therapists concerning important aspects of the recruiting procedures.

After a client who had consented to participate in the study had been discharged from PVT, FR extracted the data for the study from the electronic health records.

The participants were informed about the study and gave written informed consent before their data were extracted from the health records. The participants were not exposed to any additional risk or burden compared to non-participants. The study was approved by the Ethics Committee Zurich (BASEC Project ID: 2016-01092).

### ***Description of variables***

Outcome variables were productivity status at discharge from PVT, achievement of desired productivity status at discharge, and change or persistence of productivity status between admission and discharge.

To measure productivity status at discharge from PVT in line with the definition of productivity of the CMOP-E [29], we included, for example, unpaid work or participating in a vocational integration programme as productive activities in addition to employment on the regular job market. We categorized the data into the following categories, which are ordered along a continuum of activities ranging from full integration in labour-market activities to no productive activity: employment on the regular job market, education or training on the regular job market, vocational integration programme, employment on the protected job market, education or training on the protected job market, unpaid work or other productive activity, actively looking for a job on the regular job market, actively looking for a job on the

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protected job market, and no productive activity. If a client was involved in more than one productive activity, the activity occupying most of his or her time was selected. We report how we constructed the other two outcome variables in the next section and describe the correlates in the remainder of this section.

We collected data on the following socio-economic variables: gender, age, citizenship, education, and vocational qualification. We categorized education into the following categories: mandatory education (completed or not completed), upper-secondary-level education, and tertiary educational qualification. Upper-secondary-level professional education corresponds to the first stage of post-mandatory education or vocational training. Tertiary-level education corresponds to advanced professional education in a college of higher education, university of applied science, or university [40]. Regarding vocational qualification, we distinguished whether the clients held a vocational qualification or not.

We collected social-security-related data about invalidity insurance benefits and welfare assistance benefits at admission to and discharge from PVT. We categorized invalidity insurance benefits as follows: receiving a full or partial invalidity insurance pension at admission and discharge, receiving support for vocational integration measures at discharge, having applied for invalidity insurance support but the decision being still pending at discharge, and not receiving invalidity insurance pension either at admission or at discharge. We categorized welfare assistance benefits as follows: receiving welfare assistance benefits at admission and discharge, receiving welfare assistance benefits at discharge but not at admission, receiving welfare assistance benefits at admission but not at discharge, and not receiving welfare assistance benefits either at admission or discharge.

Treatment-related data were productivity status at admission to PVT, desired productivity status at admission to PVT, stating a desired productivity status at admission to PVT or not, duration of stay in PVT (defined by admission and discharge date of PVT), and subsequent treatment after discharge from PVT. To classify the information about the productivity status

at admission to PVT and the desired productivity status at admission to PVT, we used the same categories as the ones that we used to classify productivity status at discharge, as described above. We used the information about the desired work-related situation given by the clients in the first PVT session to derive the desired productivity status (c.f. Table 1 for examples of desired work-related situations and corresponding categories of productivity status). If the clients differentiated between short-term and long-term objectives, we extracted the information with respect to the discharge situation. Stating a desired productivity status at admission to PVT was categorized as ‘unclear or no productivity status named’ if the client did not name or prioritize a desired productivity status vs ‘clear productivity status named’ if he or she did. We assessed duration of stay in PVT as a proxy variable for intensity of treatment: if clients stay longer in PVT, they usually have access to a higher dosage of therapeutic interventions. Subsequent treatment was defined as being in subsequent treatment after discharge from PVT, e.g. treatment in a day hospital or inpatient treatment. For the purpose of this study, outpatient treatment or residence in an establishment for sheltered living was not classified as subsequent treatment. We assessed the main diagnosis group according to ICD-10 diagnosis groups: F0–F9 [41]. We categorized the diagnoses into the following groups: F1, F2, F3, F4, F6 and other (c.f. Table 2 for the titles of the diagnosis groups).

In some cases, information was unclear, inconsistent, or missing in the health records, and the corresponding variables were classified as ‘missing’ in the dataset. Therefore, certain variables have a higher proportion of missing values, which are shown in Table 2.

### ***Data analysis***

We used descriptive statistics to describe socio-economic, social-security- and treatment-related variables and psychiatric diagnosis as well as the outcome variables.

Achievement of desired productivity status at discharge: To determine whether the clients achieved their desired productivity status at discharge, we compared the desired productivity status with the actual productivity status at discharge.

Change or persistence of productivity status at discharge: We used a two-step approach in order to classify whether the clients shifted their productivity status closer to or further away from the labour market. If the productivity status at discharge and the productivity status at admission were equally close to the labour market, the level of productive activity was used as a second criterion. The first step was cross-tabulating the productivity status at admission and at discharge. The second step was assigning each cell a category according to the productivity status at admission and at discharge. If the clients shifted their productivity status closer to the regular labour market, increased productive activity or retained employment or education on the regular labour market, category 'A' was assigned to the respective cell. If the clients retained a productive activity, category 'B' was assigned. If the clients shifted the productivity status further away from the labour market, reduced productive activity, or were not engaged in any productive activity at discharge, category 'C' was assigned. Finally, if the clients planned to take up an activity later than two weeks after discharge or when a general rating was impossible, we categorized their situation on a case-by-case basis (see Table 4 for the categorization).

We applied two-tailed chi-square tests and t-tests to explore whether the productivity status changed or persisted between admission and discharge in relation to socio-economic, social-security- and treatment-related variables and main diagnosis. We chose an alpha value of 0.05 and reported exact significance tests [39]. When at least one cell had an expected count of less than five, we applied Fisher's exact test [42,43]. To compare the proportions of clients without a productive activity at admission and discharge, respectively, we used the McNemar test. We used IBM SPSS Statistics Version 26 [44] for the analyses.

## **Results**

The sample size was 98 clients. Table 2 shows descriptive results of socio-economic, social-security- and treatment-related characteristics and psychiatric diagnosis. Duration of stay in PVT was a minimum of 2 and a maximum of 442 days (first quartile 27.75, median 56.5, third quartile 107.0). At admission to PVT, 57.7% of the clients were not involved in any productive activity, 31.9% were in employment or education on the regular job market, and 10.4% were involved in other productive activities. Results in Table 2 show that 45.8% of the clients stated an unclear or no desired productivity-related status in the first PVT session. A desire for employment or education on the regular job market was expressed by 41.7%; this corresponds to 76.9% of those who did name a clear desired productivity status.

### ***Productivity status at discharge***

At discharge from PVT, 35.8% of the clients were without productive activity, 25.2% were in employment or education on the regular job market, 13.7% were involved in a vocational integration programme, 13.7% were actively looking for a job on the regular job market, and 11.6% pursued other productive activities. Between admission and discharge, 58.5% of the clients retained, established, or increased productive activities, while 41.5% of the clients were not engaged in or had reduced productive activities at discharge.

Table 3 shows productivity status and achievement of desired productivity status at discharge, given the desired productivity status that the clients named in the first PVT session. The results show that out of 32 clients who had named employment on the regular job market as their desired productivity status in the first PVT session, 34.4% were employed at discharge, 46.8% were engaged in some other productive activity (other than employment on the regular job market), and 18.8% were not engaged in any productive activity. It should be noted that the number of cases reported in Table 3 is fairly low given the number of rows and columns.

The proportions and the result of the significance test should therefore be interpreted with caution.

**Table 2.** Outcome variables and correlates

		N	%
<b>Outcome variables</b>			
Productivity status at discharge from PVT	Employment (regular job market)	22	23.1
	Education or training (regular job market)	2	2.1
	Vocational integration programme	13	13.7
	Employment (protected job market)	4	4.2
	Education or training (protected job market)	0	0.0
	Unpaid work or other productive activity	6	6.3
	Actively looking for a job (regular job market)	13	13.7
	Actively looking for a job (protected job market)	1	1.1
	No productive activity	34	35.8
	Total	95	100.0
	Missing	3	3.1
Achievement of desired productivity status at discharge	Yes	14	28.0
	No	36	72.0
	Total	50	100.0
	Missing	48	49.0
Change or persistence of productivity status	Retaining, establishing or increasing productive activities	55	58.5
	Not being engaged in or reducing productive activities	39	41.5
	Total	94	100.0
	Missing	4	4.1
<b>Correlates</b>			
Age (mean / SD)		37	10.6
Gender	Male	56	57.1
	Female	42	42.9
	Total	98	100.0
	Missing	0	0.0
Citizenship	Swiss	76	77.6
	Non-Swiss	22	22.4
	Total	98	100.0
	Missing	0	0.0
Education	Mandatory education (completed or not completed)	8	11.4
	Upper-secondary education	44	62.9
	Tertiary education	18	25.7
	Total	70	100.0
	Missing	28	28.6
Vocational qualification	Yes	66	74.2
	No	23	25.8
	Total	89	100.0
	Missing	9	9.2
Invalidity insurance benefits	Full or partial pension at admission and discharge	9	12.0
	Vocational integration measures at discharge	15	20.0
	Applied for pension, decision still pending at discharge	41	54.7
	No pension at admission and discharge	10	13.3



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	Total	75	100.0
	Missing	23	23.5
Welfare assistance benefits	Welfare assistance at admission and discharge	26	33.3
	Welfare assistance at discharge only	11	14.1
	Welfare assistance at admission, none at discharge	1	1.3
	No assistance at admission and discharge	40	51.3
	Total	78	100.0
	Missing	20	20.4
Productivity status at admission to PVT	Employment (regular job market)	28	28.8
	Education or training (regular job market)	3	3.1
	Vocational integration program	2	2.1
	Employment (protected job market)	2	2.1
	Education or training (protected job market)	0	0.0
	Unpaid work or other productive activity	4	4.1
	Actively looking for a job (regular job market)	2	2.1
	Actively looking for a job (protected job market)	0	0.0
	No productive activity	56	57.7
	Total	97	100.0
	Missing	1	1.0
Desired productivity status at admission to PVT	Employment (regular job market)	33	34.4
	Education or training (regular job market)	7	7.3
	Vocational integration programme	2	2.1
	Employment (protected job market)	4	4.2
	Education or training (protected job market)	4	4.2
	Unpaid work or other productive activity	2	2.1
	No productive activity	0	0.0
	Unclear or no productivity-related status named	44	45.8
	Total	96	100.0
	Missing	2	2.0
Duration of stay in PVT	1-30 days	30	30.6
	31-60 days	20	20.4
	61-90 days	17	17.4
	90+ days	31	31.6
	Total	98	100.0
	Missing	0	0.0
Subsequent treatment	Yes	32	34.8
	No	60	65.2
	Total	92	100.0
	Missing	6	6.1
Main diagnosis group	F1 Mental and behavioural disorders due to psychoactive substance use	19	19.4
	F2 Schizophrenia, schizotypal and delusional disorders	18	18.4
	F3 Mood [affective] disorders	34	34.7
	F4 Neurotic, stress-related and somatoform disorders	16	16.3
	F6 Disorders of adult personality and behaviour	8	8.1
	Other diagnosis groups	3	3.1
	Total	98	100.0
	Missing	0	0.0

Notes: SD = Standard Deviation; PVT = Pre-vocational therapy; Diagnosis groups according to ICD-10

**Table 3. Productivity status and achievement of desired productivity status at discharge**

		Desired productivity status stated by the client at admission														X <sup>2</sup>	p-value
		Employment (regular job market)		Education (regular job market)		Vocational integration programme		Employment (protected job market)		Education or training (protected job market)		Unpaid work or other productive activity		Total			
		N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Productivity status at discharge from PVT	Employment (regular job market)	11	34.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	11	22.0	42.292	0.006 <sup>a</sup>
	Education (regular job market)	0	0.0	1	14.3	0	0.0	0	0.0	0	0.0	0	0.0	1	2.0		
	Vocational integration program	3	9.4	1	14.3	1	100.0	0	0.0	0	0.0	0	0.0	5	10.0		
	Employment (protected job market)	1	3.1	0	0.0	0	0.0	1	25.5	1	25.5	0	0.0	3	6.0		
	Unpaid work or other productive activity	3	9.4	1	14.3	0	0.0	0	0.0	1	25.5	0	0.0	5	10.0		
	Actively looking for a job (regular job market)	8	25.0	4	57.1	0	0.0	0	0.0	0	0.0	0	0.0	12	24.0		
	No productive activity	6	18.8	0	0.0	0	0.0	3	75.0	2	50.0	2	100.0	13	26.0		
	Total	32	100.0	7	100.0	1	100.0	4	100.0	4	100.0	2	100.0	50	100.0		
Achievement of desired productivity status at discharge	Yes	11	34.4	1	14.3	1	100.0	1	25.5	0	0.0	0	0.0	14	28.0	4.971	0.412 <sup>a</sup>
	No	21	65.6	6	85.7	0	0.0	3	75.0	4	100.0	2	100.0	36	72.0		
	Total	32	100.0	7	100.0	1	100.0	4	100.0	4	100.0	2	100.0	50	100.0		

Notes: 44 clients (46.8 %) did not name or prioritize a desired productivity status. Those cases do not appear in this table; PVT = Pre-vocational therapy; a) Exact p value based on Fisher's statistic.

***Achievement of desired productivity status at discharge***

Regarding achievement of desired productivity status, results in Table 3 show that out of those clients who did name a clear productivity status at admission to PVT, 28.0% had achieved it at discharge, while 72.0% had not.

***Change or persistence of productivity status at discharge***

In Table 4, the productivity status at admission to PVT and the productivity status at discharge from PVT are cross-tabulated, together with our categorization of the change or persistence of productivity status between admission and discharge. Results show that 28 clients had been employed on the regular job market at the time of their admission to PVT. Out of those 28 clients, 75.0% retained their employment status at the time of their discharge, while 25.0% did not (14.3% were actively looking for a job on the regular job market, and 10.7% had started a vocational integration programme or found employment on the protected job market). At admission to PVT, 54 clients (57.4%) were without a productive activity and at discharge from PVT, 33 clients (35.1%) were without a productive activity, McNemar  $X^2 = 14.8, p < 0.001$ . Out of those clients who were without a productive activity at admission, 55.5% remained without a productive activity at the time of their discharge, while 18.5% started a vocational integration programme, and 14.8% were actively looking for a job on the regular job market. The cases of those clients who retained the same productive activity from admission to discharge are given in the diagonal cells of Table 4. Adding those cases up shows that 28 clients (29.8% of all cases) retained the same productive activity from admission to discharge, of which 21 retained employment on the regular job market.

**Table 4.** Productivity status at admission to and at discharge from PVT

Productivity status at discharge from PVT <sup>a</sup>	Productivity status at admission to PVT																						
	Employment (regular job market)			Education or training (regular job market)			Vocational integration program			Employment (protected job market)			Unpaid work or other productive activity			Actively looking for a job (regular job market)			No productive activity			Total	
	N	%	Rating <sup>b</sup>	N	%	Rating	N	%	Rating	N	%	Rating	N	%	Rating	N	%	Rating	N	%	Rating	N	%
Employment (regular job market)	21	75.0	A	0	0.0	X	0	0.0	A	0	0.0	X	0	0.0	X	0	0.0	A	1	1.9	A	22	23.4
Education or training (regular job market)	0	0.0	X	2	66.7	A	0	0.0	A	0	0.0	X	0	0.0	X	0	0.0	A	0	0.0	A	2	2.1
Vocational integration program	2	7.1	B	0	0.0	B	1	50.0	B	0	0.0	A	0	0.0	X	0	0.0	A	10	18.5	A	13	13.8
Employment (protected job market)	1	3.6	X	0	0.0	X	0	0.0	X	2	100.0	B	1	25.0	X	0	0.0	A	0	0.0	A	4	4.3
Unpaid work or other productive activity	0	0.0	X	1	33.3	X	0	0.0	X	0	0.0	X	1	25.0	B	0	0.0	X	4	7.4	A	6	6.4
Actively looking for a job (regular job market)	4	14.3	C	0	0.0	C	0	0.0	C	0	0.0	C	0	0.0	X	1	100.0	B	8	14.8	A	13	13.8
Actively looking for a job (protected job market)	0	0.0	C	0	0.0	C	0	0.0	C	0	0.0	C	0	0.0	X	0	0.0	X	1	1.9	A	1	1.1
No productive activity	0	0.0	C	0	0.0	C	1	50.0	C	0	0.0	C	2	50.0	C	0	0.0	C	30	55.5	C	33	35.1
Total	28	100.0		3	100.0		2	100.0		2	100.0		4	100.0		1	100.0		54	100.0		94	100.0

Notes: PVT = Pre-vocational therapy; a) In cases when the uptake of the activity was planned to take place later than two weeks after discharge or when a general rating was impossible, the rating was assessed on a case-by-case basis. b) Assessment of the productivity status at discharge with consideration of the productivity status at admission; the main criterion was proximity to the labour market. If the productivity status at discharge and the productivity status at admission were equally close to the labour market, the level of activity was used as a second criterion: A = Shifting productivity status closer to the regular job market, increasing productive activity, or retaining employment or education on the regular job market; B = Retaining productivity status; C = Shifting productivity status further away from the labour market, reducing productive activity, or not being engaged in any productive activity at discharge; X = indeterminate (rating was assessed as A, B or C on a case-by-case basis).

How to read the table: The data on the productivity status at admission to PVT are reported in the columns; the data on the productivity status at discharge from PVT are reported in the rows. In each column, the number and proportion of clients with a specific productivity status at discharge are given. The proportions relate to the productivity status at admission. Furthermore, the productivity status at discharge was categorized with respect to the productivity status at admission. The assessment criteria were the proximity of a productive activity to the labour market and the activity level. The result of the categorization is given in capital letters.

**Table 5.** Productivity status at discharge by socio-economic, social-security- and treatment-related characteristics and diagnosis

		Change or persistence of productivity status between admission and discharge							
		Retaining productivity status, shifting it closer to the labour market or increasing activity <sup>a</sup>		Shifting productivity status further away from the labour market, reducing activity or staying without any productive activity <sup>b</sup>		Total		X <sup>2</sup> / (t[ <i>df</i> ])	p-value
		N / (M)	% / (SD)	N / (M)	% / (SD)	N / (M)	% / (SD)		
Age		(36.7)	(11.2)	(38.0)	(10.2)	(37.4)	(10.6)	(-0.586 [92])	0.559
Gender	Male	29	54.7	24	45.3	53	100.0	0.720	0.409 <sup>c</sup>
	Female	26	63.4	15	36.6	41	100.0		
	Total	55	58.5	39	41.5	94	100.0		
Citizenship	Swiss	42	56.8	32	43.2	74	100.0	0.441	0.613 <sup>c</sup>
	Non-Swiss	13	65.0	7	35.0	20	100.0		
	Total	55	58.5	39	41.5	94	100.0		
Education	Mandatory or no school education	5	62.5	3	37.5	8	100.0	10.547	0.004 <sup>d</sup>
	Upper-secondary education	22	51.2	21	48.8	43	100.0		
	Tertiary education	16	94.1	1	5.9	17	100.0		
	Total	43	63.2	25	36.8	68	100.0		
Vocational qualification	Yes	39	60.9	25	39.1	64	100.0	0.536	0.622 <sup>c</sup>
	No	12	52.2	11	47.8	23	100.0		
	Total	51	58.6	36	41.4	87	100.0		
Invalidity insurance benefits	Full or partial pension at admission and discharge	5	55.6	4	44.4	9	100.0	9.974	0.018 <sup>d</sup>
	Vocational integration measures at discharge	14	93.3	1	6.7	15	100.0		
	Applied for pension, decision still pending at discharge	20	51.3	19	48.7	39	100.0		
	No pension at admission and discharge	4	44.4	5	55.6	9	100.0		
	Total	43	59.7	29	40.3	72	100.0		

Welfare assistance benefits	Welfare assistance at admission and discharge	9	37.5	15	62.5	24	100.0	8.361	0.025 <sup>d</sup>
	Welfare assistance at discharge only	4	36.4	7	63.6	11	100.0		
	Welfare assistance at admission, none at discharge	1	100.0	0	0.0	1	100.0		
	No assistance at admission and discharge	27	69.2	12	30.8	39	100.0		
	Total	41	54.7	34	45.3	75	100.0		
Productivity status at admission to PVT	Employment (regular job market)	24	85.7	4	14.3	28	100.0	15.260	0.002 <sup>d</sup>
	Education or training (regular job market)	2	66.7	1	33.3	3	100.0		
	Vocational integration program	1	50.0	1	50.0	2	100.0		
	Employment (protected job market)	1	50.0	1	50.0	2	100.0		
	Unpaid work or other productive activity	2	50.0	2	50.0	4	100.0		
	Actively looking for a job (regular job market)	1	100.0	0	0.0	1	100.0		
	No productive activity	24	44.4	30	55.6	54	100.0		
Total	55	58.5	39	41.5	94	100.0			
Desired productivity status at admission to PVT	Employment (regular job market)	23	71.9	9	28.1	32	100.0	11.193	0.015 <sup>d</sup>
	Education or training (regular job market)	5	71.4	2	28.6	7	100.0		
	Vocational integration programme	1	100.0	0	0.0	1	100.0		
	Employment (protected job market)	0	0.0	4	100.0	4	100.0		
	Education or training (protected job market)	2	50.0	2	50.0	4	100.0		
	Unpaid work or other productive activity	0	0.0	2	100.0	2	100.0		
Total	31	62.0	19	38.0	50	100.0			
Stating a desired productivity status at admission to PVT	Unclear or no productivity status named	23	53.3	20	46.5	43	100.0	0.688	0.528 <sup>c</sup>
	Clear productivity status named	31	62.0	19	38.0	50	100.0		
Duration of stay	Total	54	58.1	39	41.9	93	100.0	7.727	0.052 <sup>d</sup>
	1-30 days	12	41.4	17	58.6	29	100.0		
	31-60 days	11	55.0	9	45.0	20	100.0		
	61-90 days	9	60.0	6	40.0	15	100.0		
	90+ days	23	76.7	7	23.3	30	100.0		
Total	55	58.5	39	41.5	94	100.0			

Subsequent treatment	Yes	10	31.3	22	68.8	32	100.0	17.101	<0.001 <sup>c</sup>
	No	44	75.9	14	24.1	58	100.0		
	Total	54	60.0	36	40.0	90	100.0		
Main diagnosis group	F1 Mental and behavioural disorders due to psychoactive substance use	4	21.1	15	78.9	19	100.0	15.374	0.006 <sup>d</sup>
	F2 Schizophrenia, schizotypal and delusional disorders	12	66.7	6	33.3	18	100.0		
	F3 Mood [affective] disorders	22	71.0	9	29.0	31	100.0		
	F4 Neurotic, stress-related and somatoform disorders	11	73.3	4	26.7	15	100.0		
	F6 Disorders of adult personality and behaviour	5	62.5	3	37.5	8	100.0		
	Other diagnosis groups	1	33.3	2	66.7	3	100.0		
	Total	55	58.5	39	41.5	94	100.0		

Notes: M = Mean; SD = Standard Deviation; PVT = Pre-vocational therapy; Diagnosis groups according to ICD-10; df = degrees of freedom a) Cases whose productivity status at discharge was rated as 'A' or 'B' (see Table 4); b) Cases whose productivity status at discharge was rated as 'C' (see Table 4) c) Exact p value based on Pearson's statistic; d) Exact p value based on Fisher's statistic

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In Table 5, we compared the clients who shifted their productivity status closer to the regular job market, increased productive activity or retained their productivity status with those clients who shifted their productivity status further away from the labour market, reduced productive activity or were not engaged in any productive activity at discharge.

**Socio-economic characteristics:** Clients with tertiary education were more likely and clients with upper-secondary education were less likely to belong to the group of clients who retained productivity status, shifted it closer to the labour market or increased activity. We did not find significant differences regarding age, gender, citizenship, and vocational qualification.

**Social-security-related characteristics:** Clients who benefitted from invalidity insurance support for vocational integration measures at discharge were more likely to belong to the group of clients who retained productivity status, shifted it closer to the labour market or increased activity, and clients who received welfare assistance benefits were less likely to belong to this group.

**Treatment-related characteristics:** Clients who were in regular employment at admission were more likely and clients without productive activity at admission were less likely to belong to the group of clients who retained productivity status, shifted it closer to the labour market, or increased productive activity. Also, clients who named employment or education on the regular labour market were more likely to belong to the group mentioned above. It should be noted that the number of cases for this association is fairly low, and proportions and the result of the significance test should be interpreted with caution. Finally, clients who were in subsequent treatment after discharge from PVT were less likely to belong to the group of clients who retained productivity status, shifted it closer to the labour market, or increased productive activity. We did not find significant differences regarding stating a desired productivity status at admission and duration of stay in PVT.



Psychiatric diagnosis: Clients with an F2, F3, or F4 diagnosis were more likely and clients with an F1 diagnosis were less likely to belong to the group who retained productivity status, shifted it closer to the labour market, or increased productive activity.

Finally, we found that productivity status at discharge is associated with stating a desired productivity status at admission (N = 50) vs. stating an unclear or no productivity status at admission (N = 43): Clients who named a clear productivity status at admission were more likely to actively look for a job on the regular or protected job market or to be engaged in unpaid work or other productive activity (34.0% vs. 7.0%) and less likely to not have a productive activity (26.0% vs. 46.5%) than clients who named an unclear status or no productivity status at admission,  $X^2(2, N = 93) = 10.8, p = 0.004$  (exact p value based on Pearson's statistic).

## **Discussion**

This study explored the desired and achieved productivity status among inpatients and day hospital clients in mental health service participating in a pre-vocational therapy (PVT) intervention.

Most clients expressed a desire to attain competitive employment or education. Knaeps et al. [45] reported comparable results for psychiatric inpatients. Many clients, however, did not achieve this outcome. This result points to the dilemma between expressed motivation to work and corresponding difficulties of people with mental health problems, which has been described in the literature [3,4]. Also, it might reflect their wish to 'have a normal life', which people with mental illness often express [46-48]. More generally, only somewhat over a quarter of those who had named a clear desired productivity status at admission had achieved it at discharge. The results showed, however, that many clients were engaged in some activity other than their desired productive activity or were actively looking for a job on the regular

job market at discharge. The results further show that the proportion of clients who were not involved in any productive activity is lower at discharge than at admission. This shows that some clients without a productive activity at admission are able to take at least a first step towards productive activities during the first phase of treatment. Given that many clients stated that they aimed for employment or education on the regular job market, it seems therefore important to us that services addressing work-related interventions are offered early on in the treatment process. This is in line with the guideline recommendation for early vocational intervention [4].

Slightly more than half of the clients were more active at discharge or had been able to retain their productivity status during the course of PVT, which might suggest that some clients manage to retain or establish productive activities during the first phase of treatment. Somewhat less than half of all clients, however, shifted their productivity status further away from the labour market, reduced productive activity, or were not engaged in any productive activity at discharge. This was associated with their productivity status at admission, their educational level, their diagnosis, or with a subsequent day hospital or inpatient treatment.

The proportion of clients without productive activity at admission was higher in the group of people who shifted their productivity status further away from the labour market, reduced productive activity, or were not engaged in any productive activity at discharge. This finding suggests that it might be easier to retain a productive activity than to re-establish one when in a state of being without any productive activity. This corresponds to findings by Bejerholm and Areberg [49], who showed that occupational engagement and a higher return to work potential were positively associated. Having a job can also have a positive influence on the belief in a future role as a worker [50]. Therefore, we suggest that it is particularly important to support PVT clients in retaining productive activities. This is in line with the recommendation from guidelines which emphasize that job retention and early interventions for people with severe mental illness are important [4].

A higher educational level was associated with whether the clients were able to shift their productivity status closer to the regular job market, increase productive activity, or retain employment or education on the regular job market. This finding is in line with previous evidence that suggests that higher education is positively associated with employment status [2,22,23,51]. A participation report from Germany shows that students in higher education often name mental health issues as a barrier to their studies [51]. Mental illness may therefore hinder them in completing their studies. Thus, it could also be that the clients with completed higher education had less severe mental health problems. On the other hand, education provides individuals with skills to deal with challenges in the course of their life [51]. So it could also be that the clients with higher education had more skills to handle their situation and illness.

Our results show that a higher proportion of clients with an F1 diagnosis belonged to the group who shifted their productivity status further away from the labour market, reduced productive activity, or were not engaged in any productive activity at discharge. Clients with substance use disorders generally have higher dropout rates than clients with other diagnoses [25,26]. This group of clients might have adhered less strongly to therapy and might have quit therapy before having been able to shift their productivity status closer to the regular job market or increase productive activity. Moreover, stigma might play a role. Bauld et al. [26] found that clients with alcohol misuse named stigma as one barrier to employment and Crisp et al. [52] showed that negative attitudes towards alcoholism and drug addiction are more common than negative attitudes towards other psychiatric disorders. Surprisingly, clients with F2 diagnoses showed better outcomes in our study than we expected based on findings from the literature, which showed that persons with schizophrenia or similar disorders also have great difficulties in attaining and retaining employment [22-24,27].

The association between receiving invalidity insurance support and belonging to the group of clients who retained productivity status, shifted it closer to the labour market, or increased

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productive activity is mainly due to the fact that invalidity insurance support is a prerequisite in order to take part in vocational integration measures. In contrast, receiving welfare assistance benefits was associated with belonging to the group of clients who shifted productivity status further away from the labour market, reduced productive activity, or were not engaged in any productive activity at discharge. Some evidence with regard to SE points in the same direction: Campbell et al. [24] and Metcalfe et al. [21] found that people who received financial aid were less likely to attain or retain employment on the regular job market, but Twamley et al. [19] did not.

Finally, more clients in the group who shifted productivity status further away from the labour market, reduced productive activity, or were not engaged in any productive activity at discharge had been in subsequent day hospital or inpatient treatment after discharge from PVT. This suggests that those clients were more severely ill and had therefore not been able to increase productive activity yet. This corresponds to the findings of Bejerholm and Areberg [49], who showed that more psychiatric symptoms were negatively associated with return-to-work potential.

### *Methodological considerations*

The following limitations should be considered when judging the implications of our results. It should be taken into account that we conducted our study in a very specialized context and with a relatively small sample. Due to the very specific real-world setting, the study cannot be replicated. Because the data are observational, no causal inferences should be made. We analysed neither the intervention characteristics of PVT nor other factors, such as symptom severity, nor other concurrent therapeutic interventions or social work services in the hospital, which might also have contributed to retaining the productivity status or shifting it closer to the labour market. For those clients who were in competitive employment at admission, job

retention may have been made easier by the regulations concerning protection from dismissal [38]. However, we did not assess the clients' work history, so we lacked information concerning the duration of the clients' current employment. Since we based our analyses on existing health records, not all desirable information such as work history or clinical background (e.g. symptom severity, functional capacity) was available to us in sufficiently good quality. Effectiveness studies in SE showed that work history or clinical background are predictive for achieving employment [2,19-21,23,24].

We consider the data to be credible and robust. First, the data are recorded routinely and, to some extent, repeatedly by trained clinical staff for therapeutic or treatment purposes (e.g. productivity status at admission and discharge, desired productivity status, diagnosis). Second, we used rather broad categories for data collection. For this reason, the risk of data having been misclassified is reasonably low. In some cases, however, information was unclear, inconsistent, or missing in the health records, and the corresponding variables were classified as 'missing' in the dataset. Therefore, certain variables have a higher proportion of missing values.

Due to the recruiting processes, the following selection biases may have been present. First, people with low proficiency in German and clients with cognitive disabilities may be underrepresented in our sample because we could not inform them adequately about the study. Second, it is likely that more stable and compliant clients have been included in the study.

The following strengths apply to our study. The outcome measure included various kinds of productive activities and was not limited to competitive employment. This sets it apart from most other studies in work rehabilitation. It reflects the client-centredness and the focus on individually meaningful occupations, which belong to the core values of occupational therapy [34]. We deliberately chose broad inclusion criteria in order to include typical PVT clients and conducted our study in a real-world setting during the usual treatment in an acute

psychiatric inpatient and day hospital setting. Also, the data collection process required little effort on the part of the clients.

### ***Implications for practice and research***

Our results have the following implications for occupational therapy practice and for research. First, the findings suggest that it might be less difficult to retain a productive activity than to re-establish it from a state without productive activity. In this regard and in line with recommendations [4], early work-related interventions like PVT in inpatient and day hospital settings can be a first step to support clients in retaining – and establishing – productive activities.

Second, some clients may not be able to participate in competitive employment immediately after the first phase of treatment. Therefore, it is important to raise awareness of the value of other productive activities and their contribution to a society, e.g. through awareness campaigns. Also, opportunities to participate in sheltered employment that are as close as possible to competitive employment should be provided. Vornholt et al. suggest ‘creat[ing] work for people with disabilities, instead of adhering to existing functions in an organization that are hard to staff with workers with disabilities’ [53,p.50]. They also state the need for workplaces to tolerate persons with mental disorders. This is particularly important because mentally ill persons are motivated to work but experience difficulties in participating in the regular labour market. Moreover, unemployment and lack of meaningful activities have a negative impact on health and well-being [30-33]. Borg and Davidson found that ‘normal environments and activities emerged as the most common and effective arenas for recovery’ [46,p.139] and that employment in a regular work setting contributes to a feeling of normality.

Third, clients who named a clear productivity status at admission were more likely to actively look for a job on the regular job market and less likely to not have a productive

activity than clients who named an unclear status or no productivity status. Previous evidence also suggests that expressing a desire for employment might be associated with a positive outcome [16,17,24]. Still, there were clients that did not express a clear desired productivity status at admission. They were more likely to not have a productive activity at discharge. It seems therefore important to consider the group of clients in the therapeutic process who do not express a clear desire to work. For this group of clients, therapy should focus first on clarifying the desired and suitable productivity status and later on engaging in productive activities.

Finally, our results suggest that not all clients in acute psychiatric inpatient and day hospital settings manage to take first steps towards productive activities in the course of the first phase of treatment. In particular, clients who have a primary or secondary education, clients who have an F1 diagnosis, and clients who need subsequent day hospital or inpatient treatment (e.g. due to the severity or type of illness) are less likely to engage in productive activities.

The need for further research is manifold. First, research should address facilitating and hindering factors associated with work-related outcomes in order to facilitate the development of suitable therapeutic approaches for those groups of people who don't manage to engage in productive activities during or directly after the first phase of treatment or who do not benefit from interventions such as PVT. Also, existing interventions and intervention characteristics that promote productive activities should be evaluated. Second, it would be desirable for quantitative studies either to use experimental designs such as randomized trials with control groups or to include enough cases to allow for multivariate analysis if experimental designs are not feasible. Third, the scope of research should include the periods before and after the treatment phase and take into account, for example, the work history and the course of the illness before admission and after discharge. Fourth, qualitative research and surveys should address clients' needs and experiences regarding intervention characteristics and their effects

on productivity and goal achievement. Considering the client-centred approach of occupational therapy, it seems important that future studies take the clients' perspective into account to evaluate the outcomes of interventions.

## **Conclusion**

This study provides explorative results concerning work-related interventions in an acute psychiatric setting. About half of the clients shifted their productivity status closer to the regular job market, increased productive activity, or retained employment or education on the regular job market in the course of PVT. The proportion of clients who were not involved in any productive activity was lower at discharge than at admission. However, not all kinds of clients in acute psychiatric inpatient and day hospital settings manage to take a first step towards productive activities. In particular, clients who have a primary or secondary education, clients who have an F1 diagnosis, and clients who need subsequent day hospital or inpatient treatment (e.g. due to the severity or type of illness) are less likely to engage in productive activities during or directly after the first phase of treatment.

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## **Supplemental material: Description of Pre-Vocational Therapy Interventions (PVT)**

The following PVT interventions are delivered by the occupational therapists of the PVT-team. Interventions in a group setting take place two to four times per week and last between 2.25 and 2.5 hours per session. The therapy groups are arranged as open groups: new clients can join the group at any time. Also, clients can leave the group at any given point in time, usually when they are discharged from the hospital. Therefore, members participate for a minimum of one session and there is no pre-defined final session.

### *Basic skills groups*

Frequency: two to four times per week; duration: between 2.25 and 2.5 hours per session; group size: 12 participants.

Clients perform standard tasks, which are carried out using written instructions of increasing difficulty. Later in the process, individual project works are possible. There are five types of groups, offering tasks in four different areas (woodwork, metalwork, computer work, paper work) between which the client can choose during the initial therapy session. The main focus of the intervention is to assess and train work-related basic skills (e.g. concentration, planning etc.), based on observation and reflection with the client during a simulated work process.

Work-related issues that are addressed: Awareness of a client's basic work-related skills; awareness of the type of work that suits the client's skills and abilities, or of the conditions a client needs in a workplace; training of basic work-related skills.

### *Group for social competences at the workplace*

Frequency: twice per week; duration: 2.25 hours per session; group size: 8 participants.

Clients exchange views and experiences related to social interaction and competences in the context of work. Different didactic approaches, such as discussion, games and role-plays, are used to facilitate assessment, reflection and training of social skills.

Work-related issues that are addressed: Difficulties related to social interactions at the workplace.

### *Group 'ready to go'*

Frequency: twice per week; duration: 2.5 hours per session; group size: 8 participants.

In one of the two weekly sessions, clients exchange views and experiences about different topics related to the change from patient role into worker role. In the other session, each client decides for an individual meaningful activity, which he/she wants to carry out in the following week. The intervention is aimed at supporting to prepare the plan and reflect on its implementation.

Work-related issues that are addressed: awareness of a client's attitude to work and related issues (e.g., importance and meaning of work for a client, strategies for coping with one's mental illness at work), difficulties related to making and implementing work-related plans.

### *Job application training*

Frequency: twice per week; duration: 2.5 hours per session; group size: 8 participants.

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Clients individually prepare their documents for application and start or continue their application process. For feedback or clarifying questions, other clients or the therapist can be approached.

Work-related issues that are addressed: Insufficient knowledge and skills to find suitable job openings, prepare application documents, prepare or practise a job interview.

### *Individual therapy sessions*

Duration and frequency of the sessions are adapted to individual needs.

Individual therapy sessions can be scheduled additionally to the therapy groups in order to discuss issues that cannot be addressed in a group setting. Also, MOHO assessments, e.g. Worker Role Interview [1] are done individually. Thus, most of the clients have one or more talks with their occupational therapist during treatment in PVT. Some clients receive only individual therapy sessions, because the individual therapy sessions fit their needs or preferences better.

Work-related issues that are addressed: The topics of the individual therapy sessions vary. Some examples are: stress management strategies, vocational options, reflection on skills and demands, assessment of work-related basic skills using standardised work samples.

### *Trial work*

Frequency and duration are defined individually, up to eight hours per day on five days per week.

Trial work gives clients the opportunity to try out their abilities in an actual work environment of the hospital, e.g. in the kitchen, laundry or cleaning department. Clients work as part of the regular teams of these departments without a therapist being present and perform real work tasks. However, regular reflective talks with an occupational therapist of the PVT-team take place. Due to the rather demanding setting and the absence of a therapist, clients must participate for at least two weeks in one of the PVT media groups and have acquired a certain level of recovery before they can start trial work. The overall number of available places varies according to the current capacity of the correspondent departments. Due to the requirements and the very limited number of available places, only few PVT clients take part in trial work.

Work-related issues that are addressed: Uncertainty about a client's ability to meet and manage the requirements of a real-world work environment.

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