

Long-term abstinence and quality of life after a socio-ecological treatment program:
an Italian experience

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According to the recent report of the National Italian Institute of Statistics (2012), alcohol consumption involves 63.9% (77.5% of men and 51.2% of women) of the population aged 11 years or older and it is widespread in the north-eastern regions Italian such as Trentino-Alto Adige, Valle d'Aosta and Friuli-Venezia Giulia, and in some central regions such as Molise, Abruzzo, Sardinia, Basilicata and Tuscany, especially among men. The elderly (over 65) are the most at-risk for non-moderated consumption, while the younger (18-24 years) are the most at risk for binge drinking.

Nevertheless, in Italy there are no national and professional guidelines for alcohol-dependence treatment (Rehm et al., 2013) and the number of published papers per million inhabitants in the field of addiction research is among the lowest in Europe (Bramness, Henriksen, Person & Mann, 2014). In most countries, alcohol dependence treatment —especially for the most severe cases—usually comprises a combination of psychotherapy (cognitive behavioral therapy, motivational interviewing, and social skills training being the most prevalent interventions) and pharmacotherapy. Psychotherapy alone is used for many therapeutic interventions as well (Martin & Rehm, 2011; Miller, Wilbourne & Hettema, 2003). Intensive transitional community residential care strongly emphasizes medical, dual diagnosis, and family treatment orientations (Moos, Pettit & Gruber, 1995). However, evidence for the effectiveness of opportunistic brief interventions in a general hospital setting for problem drinkers is still inconclusive (Emmen, Schippers, Bleijenberg & Wollersheim, 2004; Moos, Finney & Moos, 2000; Moyer, Finney, Swearingen & Vergun, 2002; Moyer, Finney, Swearingen, 2002; Rychtarik et al., 2000).

A large body of research supports the benefits of mutual-help group membership, which is considered a valuable treatment adjunct, or a treatment in itself, particularly for extended periods (Emrick, Tonigan, Montgomery & Little, 1993; Kaskutas, 2009; Kelly, Stout & Slaymaker, 2013; Moos & Moos, 2006; Timko, Moos, Finney & Lesar, 2000; Tonigan, Toscova & Miller, 1996). Among mutual-help groups, the socio-ecological method developed by Hudolin, Bano and

Milakovic (1972) in Croatia in the early 1970s has spread rapidly in Italy (Hudolin, Sakoman & Macasovic, 1984; Hudolin, 1985). Hudolin's goal was to help families in trouble, through a family (systemic) approach, to achieve sobriety and a change in behaviour and life style. This perspective translated the individual's alcoholism into the "alcoholic family," changing the individual-oriented perception of the medicalized "alcoholism" problem into a family and social issue. The socio-ecological method involves the whole family of the alcoholic subjects in the treatment programme, by considering the parts and roles which family, environment, and society can and do play in the actual addiction phenomenon. The socio-ecological method is organized into a locally based network of clubs, called 'Clubs for Alcoholics in Treatment' (C.A.T.s), a multi-family community of two to 12 families, which exert a pivotal influence on the cultural shifts in health promotion within the community. In 2004, 53.1% of health services referred their clients to the C.A.T. and 34.0% to Alcoholics Anonymous (A.A.). C.A.T. differs from A.A. in that meetings are led by a helper called "servant," who is a leader certified by means of brief Territorial Alcoholism Training. This group leader may be a health or social worker professional, or an alcoholic or family member (Alcoholnet, online document; Allamani, 2008; Italian Ministry of Health, 2005; Mäkelä et al., 1996; Salerno, 2004).

According to Hudolin (1985), the outcome of alcoholism treatment is multidimensional as abstinence is not necessarily associated with a positive outcome in other areas of functioning (e.g. physical and psychological symptoms, social functioning and occupational functioning). Abstinence has to go with a "personality change", and with the patient's awareness of his/her alcohol problem, with the involvement of the family in the rehabilitation process and with the overcoming of the shame of drinking to achieve a healthier life-style. Also, stability in treatment outcome over time is considered pivotal for a positive outcome. The national survey carried out in Italy by Curzio and colleagues (2012) on C.A.T.s has found that abstinence and lifestyle improvement were positively related to the number of years of club attendance but negatively to the presence of other problems in addition to the alcohol-related one. Moreover, attending the club with one or more family members

was associated with the achievement of a better lifestyle.

Among the many criteria measuring drinking outcome, quality of life can be used in combination with measures for overcoming drink problems (i.e. days of abstinence) in order to grasp the complexity of alcohol disease affecting medical, psychological and social domains (Adamson, Sellman & Frampton, 2009; Beccaria, Rolando & Ascani, 2012; Besta, Groshkovab, Sadlerc, Days & Whitee, 2011; Bizzarri et al., 2005; Chenhall & Senior, 2012; Luquiens, Reynaud, Falissard & Aubin, 2012). Quality of life considers the alcohol user's subjective perception about the domains of functioning that are important to them (Carr, Gibson & Robinson, 2001; Nicolucci, 2006). In view of the potential negative consequences of alcohol-consuming lifestyles upon various life domains, it is important to measure the users' quality of life as a multidimensional concept (i.e. relations with others, activities, psychological state, financial concerns, medical care) (De Maeyer et al., 2011; De Piccoli, 2014; Ugolini, 2005).

The present study documents the outcomes of a brief residential alcohol treatment as measured in terms of (a) quality of life and (b) professional evaluation, using a pre- and post-test design¹, over a 1-year period (Emmen, Schippers, Bleijenberg & Wollersheim, 2004; Gomes & Hart, 2009; Morosini, Guidi, Palumbo, 2000; Serbati, Pivetti & Gioga, 2013). The major novelty of the study is the in-depth analysis of the path of 20 alcohol-addicted persons admitted to a brief residential care setting based on the socio-ecological method.

Methodology and assessment

The study covered a one-year period (July 2011-August 2012) by following the experiences of 20 alcohol users included in a residential treatment program based on the socio-ecological approach. The treatment outcome was assessed via quality of a life measure and via professional

¹ The one-group pre-test post-test design is considered pre-experimental in that it does not prevent alternative explanations of the results such as history or growth of the participants and causal explanations are not allowed. However, when managing research in natural contexts, this kind of design is considered as "good enough" to allow for preliminary indications on the development of the phenomenon (Guba & Lincoln, 1994; Ongaro, 2000). In this study, no control group was planned since the small number of families followed by the Health Services did not allow scope for a comparison group.

service evaluation. Quality of life was measured three times: upon admission to the hospital (T₀, July-August 2011), one month after the discharge from the hospital (T₁), at the follow-up (after 3-4 months, T₂, December 2011). Moreover, four C.A.T. servants were phone-interviewed concerning the situations of 5 participants (after 7-8 months, T₃, December 2012) (Fig. 1).

In order to measure individuals' current QoL, we used the questionnaire of quality of life validated for the Italian context by Morosini et al. (2000), frequently used in mental health services (Baker & Intagliata, 1982; Candiotta, Gioga, Sartori, 2008). This is a self-report instrument including 16 items on how happy the patient is about various dimensions of life and global well-being, such as living conditions, neighbourhood, available food, clothes, health condition, flatmates, friends, sentimental life, family relations, contacts with people in general, work, spare time, outdoor hobbies, available services in the neighbourhood, financial situation, life in general. Each item is rated on a 7-point Likert scale, ranging from 1 (displayed with an icon '☺') to 7 (displayed with the icon '☹').

Moreover, the services formulated a professional evaluation of the patients' improvements/worsening based on the following: abstinence, clinical evaluation of the level of awareness of the drug problem, the capacity to question one's own way of life, the quality of the relations with family members and club attenders, participation of the family members in the treatment. The patient's situation was described in terms of patient abstinence, relapses and dropouts. Also, patient's subjective well-being achieved through group therapy and C.A.T. attendance was considered in this study using the QoL questionnaire, to improve convergent validity (Flick, 1992; Olsen, 2004).

After 7-8 months (T₃), drinking outcome was assessed via phone interviews with 4 club facilitators in regard to 5 participants (Allamani, Pili, Cesario, Centurioni & Fusi, 2009). The interview guidelines comprised the following questions: does the patient still regularly attend the club? Do any family members (or other significant persons) attend the club with him/her? What do the patient and family members say about drinking desire and drinking? What do the patient and

family members say about the patient's current life-style? What do the patient and family members say about the role played by residential treatment at Chiaromonte C.R.A. in the rehabilitation process?

Semi-structured interviews lasted approximately 30 minutes. The responses were transcribed into the guidelines during or shortly after the interviews by the interviewer herself (Pivetti, Montali & Simonetti, 2012).

(Insert Figure about 1 here)

Study recruitment and research site

In July-August 2011, twenty inpatients were recruited from the alcohol inpatient treatment centre C.R.A. (Center for Alcohol Treatment), in Chiaromonte (PZ), within the Local Health Service of Potenza. Participants were mainly men ($n=17$), Italians ($n=18$). Age ranged from 33 to 68 (mean age = 49.6; SD = 8.7). All the patients admitted to the CRA in July-August 2011 were enrolled in the study. All the enrolled participants provided written informed consent to participate in the study. The research method complies with the norms of the Code of Ethics of the Italian Psychology Association (Associazione Italiana di Psicologia, A.I.P, online document).

Chiaromonte C.R.A. is one of the main alcohol inpatient treatment centres in the south of Italy within the public health care system, with a capacity of 12 inpatients. Intensive residential treatment is abstinence-based and oriented on Vladimir Hudolin's social-ecological approach. Within this method integrating individual-focused efforts with environment-focused interventions to modify health behaviour, patients and their families are invited to follow a rehabilitation path directed towards the correction of malfunctions within the familial environment and the health promotion within the community.

In Chiaromonte C.R.A., patients are mainly involved in psycho-dynamically-oriented group therapy conducted by a psychiatrist or a psychologist, combined with health education lessons. Group therapy consists of multi-family communities which patients, their family members and healthcare professionals enrolled in the centre are requested to attend. The unique feature of the way

problems are handled in group therapy is the possibility to identify and try out new relationship patterns that allow individuals to abandon the status they have acquired because of their problems and to achieve new standing not only as a group member, but also in the outside world (Pantalone, 2013). During health education lessons, nurses deliver some information on abstinence, treatment and healthy life-style to patients and family members. Lessons and courses are organized on topics such as painting, writing, reading, English, drama, gym, meditation and relaxation on a daily basis. Patients are invited to become responsible for the functioning of the hospital division by taking turns to fill certain roles such as: library clerk, food shop manager, waiter/tress etc .

Inpatients are strongly invited to take disulfiram (Antabuse), a well-known alcohol-deterrent drug. Alcohol ingestion while on disulfiram causes acetaldehyde (the first metabolite of ethanol oxidation) to accumulate, leading to unpleasant adverse effects (such as facial flushing and nausea) known as the disulfiram–ethanol reaction (Dahl, Hammarberg, Franck & Helander, 2011).

Moreover, before admission, prospective patients are interviewed by health care professionals to test their motivation to attend the rehabilitation program. During the interview, patients are instructed about the need to regularly attend the local mutual-help group C.A.T. in Chiaromonte. The local C.A.T. meets once a week for 90 minutes in the facilities of the local Association of Voluntary Italian Blood Donors (A.V.I.S.²). Generally speaking, club members pick up the inpatients at the hospital and walk them to the facility and back. At the same time, the patient's family members are invited to attend the closest C.A.T., if different from the local Chiaromonte C.A.T. This way, the inpatients and the family member can take the same therapeutic path, even if the family is not based close to Chiaromonte territory and does not attend the same C.A.T. Patients and family members are invited to share in the impact of drinking on individual and family life.

All club members have to follow several basic rules: regular weekly attendance, punctuality, no smoking at meetings and no dissemination of personal information. A report is kept by a designated member. The chairperson and the reporting person is chosen at the previous meeting.

² A.V.I.S. is the main Italian non-profit organization for blood donations.

The club is self-led, self-reliant and independent from any private or public organization. Clubs are non-profit organizations and club attendance is free of charge for participants. The mutual-help group becomes a space where the stigmatization is reduced to a minimum. Joining and participating in the group are moments that affirm an identity that, albeit problematical, if faced with awareness, encourages the reduction of social stigma by increasing acceptance of the subject and working together to establish new social standing for them (Curzio et al., 2012; Pantalone, 2013).

Generally speaking, hospitalization lasts about 3-4 weeks. After that, patients are invited to discuss matters with the healthcare professionals and to decide whether to stay or to leave the C.R.A. Club attendance after discharge is strongly encouraged. Before discharge, inpatients need to get in touch with the relevant C.A.T. he/she is going to attend, if different than the Chiaromonte one. Family attendance at the closest C.A.T. promotes the attendance of the inpatients, once they have been discharged from the hospital.

Results

Admission

Out of the 20 patients, three had concurrent drug problems, one had a psychiatric condition, one had been discharged from the same service previously. We computed 16 indexes as the mean scores of the 20 patients for the 16 items of the questionnaire at T_0 . According to quality of life questionnaire, patients were quite happy with their lives. In particular, patients were satisfied with basic elements of living, namely accommodation, flatmates, clothes and food. However, they were less satisfied with their financial situation and their health condition (Fig. 2).

(Insert Figure 2 about here)

Evidences of change at T_1

As for perception of quality of life, out of the 20 initial patients at admission to the hospital (T_0), 17 were scored again one month after discharge (T_1). We computed 16 indexes as the mean scores of the 17 patients for the 16 items at T_0 and T_1 . When taking into consideration the 17 patients as a whole, we observed a generally improved situation (Fig. 3). Out of 16 items, 10

(62.4%) improved while 6 worsened. The Wilcoxon signed-rank test for the 16 items showed a significant improvement in terms of financial situation ($Z = -2.04$; $p < .05$; $r = .35$) and a tendency to significance for improvements in life in general ($Z = -1.911$; $p = .06$; $r = .33$), health conditions ($Z = -1.806$; $p = .07$; $r = .31$), family relations ($Z = -1.76$; $p = .08$; $r = .30$).

(Insert Figure 3 about here)

Moreover, an index was computed as a mean of the 16 scales for any patient. The paths of the patients were plotted across T_0 and T_1 , showing how many patients had moved and in which direction. Out of 17 patients, 10 improved (58.8%), while 7 worsened.

As for service evaluation, thirteen patients fully attended the program and were successfully discharged (60%), while four patients had a negative outcome as three were expelled from the centre for not having respected the treatment rules and one patient was moved to another rehabilitation centre. As for dropouts, two patients decided to stay in the centre for longer and one was discharged contrary to the opinion of the professionals.

We have calculated the mean scores for each item separately for the 13 patients with a positive outcome and the 4 patients with a negative outcome according to the professionals. As for patients with positive outcome, out of 16 items, 10 (62.4%) improved, while 4 worsened and 2 were stable. Improvements appeared stronger for sentimental life (+31.3%), friends (+25.7%) and family relations (+26.3%). The Wilcoxon signed-rank test for the 16 items showed a tendency to significance for improvements for life in general ($Z = -1.91$; $p = .06$; $r = -.38$) (Fig. 4). Moreover, for the 13 patients with positive outcome, we have calculated the mean of the 16 items. The patients' QoL improved on average by 14.6% at T_1 ($M_{T_0} = 2.73$; $M_{T_1} = 2.33$).

As for patients with negative outcome, out of 16 items, 9 (56.3%) improved, while 7 worsened. Worsening appeared stronger for items related to friends (-50%) and sentimental life (-49%). The Wilcoxon signed-rank test for the 16 item showed no significant differences (Fig. 5). The mean of the 16 items for the 4 patients with negative outcome improved by just 2.4% ($M_{T_0} = 2.53$; $M_{T_1} = 2.47$).

(Insert Figure 4, 5 and 6 about here)

Evidence of change at T₂, after 5-6 months

Three-four months after discharge from the hospital, we were able to get in touch with ten patients. Their quality of life at T₂ was compared with the one at T₀ (Fig. 4). Out of 16 items, 8 (50%) improved, such as family relations (+22.2%), health condition (+32.1%) and life in general (+38.5%), while 7 worsened such as work (-16.7%) and clothes (-29.4%), and one was stable (i.e. food). The Wilcoxon signed-rank test for the 16 item showed a significant improvement for health condition ($Z = -2.165$; $p < .05$; $r = -.43$) and a tendency to significance for improvements in life in general ($Z = -1.913$; $p = .06$; $r = -.48$) (Fig. 7).

(Insert Figure 7 about here)

Qualitative findings at T₃: club facilitators' interviews

After 7-8 months (one year after admission), semi-structured interviews were run with the four facilitators of the clubs attended by five Italian former patients. They were all Italian males, ranging from 50 to 58 years old. Out of ten patients at T₂, we were unable to get in touch with three former patients and we were informed that two patients no longer attended the club. As for working situation, one participant owned a pub and four participants were only able to find occasional jobs.

As reported by the club facilitators, four out of five patients were living their lives without alcohol, they attended the club regularly with their family members, and they followed a healthy lifestyle, even outside the hospital. Club facilitators reported that those patients improved the way they face the difficulties life can pose in a constructive way, founded on rationality and on the willingness to solve (and not flee from) problems.

Firstly, an important role was played by the path started during hospitalization, where patients could openly express their experiences with no stigma and no feeling of marginalization. Sharing those emotions helped them to feel part of a group, where they could understand that each individual experience could help other patients improve their condition. CRA was defined as a "life-school" where a more active style of life is designed for the patients, where they and their

families do not feel excluded, ashamed or stigmatised.

Secondly, servants pointed to individual intrinsic motivation to embark on the path towards an alcohol-free life-style as playing a pivotal role in the patients' enduring positive condition. Being fully aware of the problem affecting them and their family and deliberately choosing to try to cope with it, is the first step towards sobriety and towards the choice of what is best for them and their family.

Thirdly, the presence of strong family relations and the involvement of family members in the clubs has played a significant role in achieving lifestyle improvements, and indeed active family participation is a basic factor in the socio-ecological method. The patient feels that he/she is not alone in facing the alcohol problem and that he/she can make it with the collaboration of all the family.

Only one patient had a relapse in the past few months. The relapse was evident to the facilitator and to the other members in that the patient was sleepy, spoke slowly and had difficulty in grasping the meaning of the topic. However, he attended the club weekly together with his family member and openly asked the other participants for help in overcoming his drinking problem. The facilitator reported that the patient felt safe at the club, where was able to open up to other participants much more than in everyday situations.

Discussion

As a whole, the study supports the idea that one out of four alcohol-addicted persons, who were admitted to a short residential treatment based on the socio-ecological method (Hudolin, 1985), were still sober about one year after discharge and attended the C.A.T. regularly. In particular, one month after discharge (T_1), quality of life data and professional evaluation converged in showing improvements in thirteen (76.5%) out of 17 participants (available data). As for their quality of life, we observed a generally improved situation with specific regard to financial situation, life in general, health conditions and family relations. After 3-4 months (T_2), the outcome of 10 patients was positively evaluated by professionals. Their quality of life showed improvements

in the health conditions and in life as a whole. According to qualitative interviews with four club facilitators run after 7-8 months (T₃), the positive outcome was stable for four patients who were sober and attended the club regularly. A positive outcome can also be referred for one patient who relapsed but still attended C.A.T..

Our results on brief interventions for alcohol use are in line with those by Stasiewicz et al. (2013), Amaro et al. (2010) and Moos et al (2000) showing a reduction of drinking use between baseline and 6 months. In particular, Moggi, Brodbec, Költzsch, Hirsbrunner and Bachmann (2002) found that about a quarter of the dual diagnosis patients were still abstaining from alcohol at the 1-year follow-up.

As for the association between brief residential intervention and the mutual-help group, a large body of literature indicate that patient outcomes may be increasingly influenced by the degree to which professional treatment programs help patients, including among emerging adults (Kelly et al., 2013), to take maximum advantage of mutual-help groups (Allamani, 2008; Baltieri & Filho, 2012; Gossop, Stewart & Marsden, 2008; Humhreys, Huebsch, Finney & Moos, 1999; Moos et al, 2000; Walker, Donovan, Kivlahan & O'Leary, 1983). During C.A.T. attendance, participants and family members are encouraged to share their problems and resources, by increasing acceptance of the participant in an empathetic and supportive environment. The families start to understand that other families attending the club and the community as a whole can become a valuable resource for the improvement of their living conditions. Moreover, family attendance to the relevant C.A.T. during patient hospitalization allows for a common path toward abstinence and plays a pivotal role for the attendance of the inpatients, once discharged from the hospital.

However, our results indicate a worse outcome than another study on the socio-ecological method who found that positive indicators of therapy success (abstinence or a decrease in drinking, stable social relations, and more positive self-evaluation of well-being) were found in 53.0% of patients at 3 months, and 30.6% at 12 months (Rus-Makovec & Čebašek-Travnik, 2008).

The QoL instrument by Morosini, Guidi, Palumbo (2000), given its simplicity and clarity for

both interviewers and interviewees, has effectively documented the changes in the patient situation over time. The multidimensional approach has allowed for a better understanding of the areas where patients improved more and the area where they worsened, even beyond statistical significance, and could be broadly used within social and healthcare service research.

Moreover, using a QoL instrument has allowed for shared evaluation of the patient situation and has contributed to promoting patient empowerment, as they were involved in the evaluation of the treatment and its efficacy (Serbati et al., 2013). The instrument could help patients to reflect on their own situation, giving them a prominent role in their rehabilitation process by asking them to discuss how they felt at that very moment, as compared with before treatment.

Quality of life data were consistent with the evaluation delivered by professionals in terms of the positive/negative outcome of the intervention. This methodological convergence enhances the value of our results, which are not based on a single instrument but rely on the assessment of two sources of information: the QoL questionnaire and professional evaluation (Flick, 1992).

Given the pre-experimental design of this study, it is not possible to provide a causal explanation for our results. The absence of a control group and the small sample are the most important methodological limitations. In other words, we cannot directly connect our positive results with the intervention provided. The results presented here await support from controlled studies. Moreover, 75% of our sample dropped out between discharge and the 1-year follow-up. Their psychosocial functioning at follow-up is unknown.

Hence, caution is warranted in that a recent review has shown that during and post-treatment data collection activities (i.e. both research and clinical data) positively influence clinical outcomes in terms of participant reactivity and simultaneously hamper the interpretability of the research findings (Clifford & Davis, 2012).

Conclusion

In conclusion, the brief residential program based on the socio-ecological model appears to be a feasible path for those looking for alcohol treatment in Italy, as a positive outcome was reported

by half of the patients in terms of better QoL at the 6 month follow-up and by one quarter of patients in terms of sobriety and club attendance at the one-year follow-up. Using an instrument to measure QoL contributed to involving patients in the evaluation of their situations, by asking them to think critically about their condition and take a leading role in their rehabilitation process.

Moreover, in this current period of economic crisis, the contribution of outcome evaluation has become an important issue to show the policy-makers that promoting healthy life-style is not a cost but an investment, in that it allows for the reduction in emergency interventions (e.g. hospitalization) and the social costs of drink problems (Prilleltensky & Nelson, 2000).

By documenting the outcome of a cohort of inpatients on an alcohol treatment program, this study could also provide inspiration for professionals who are wondering whether their daily efforts in the implementation of the rehabilitation program are unsuccessful or else whether they can make a difference.

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Figure 1 – Flow chart

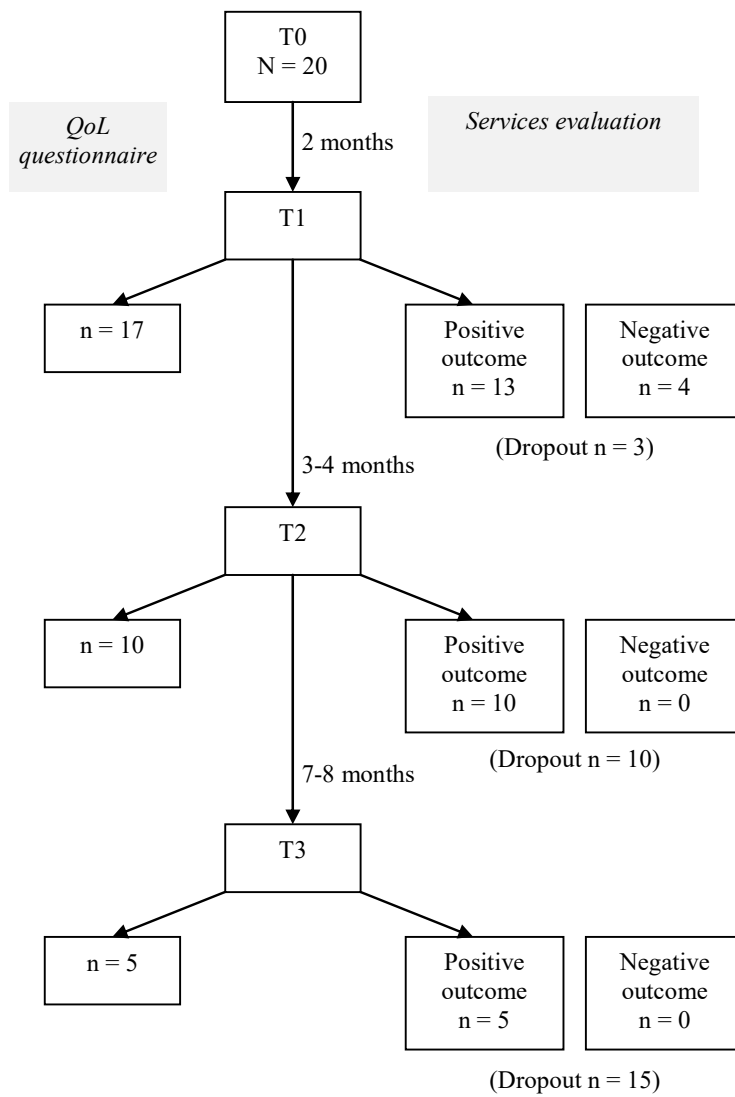


Fig. 2 – Mean index on quality of life (T₀)

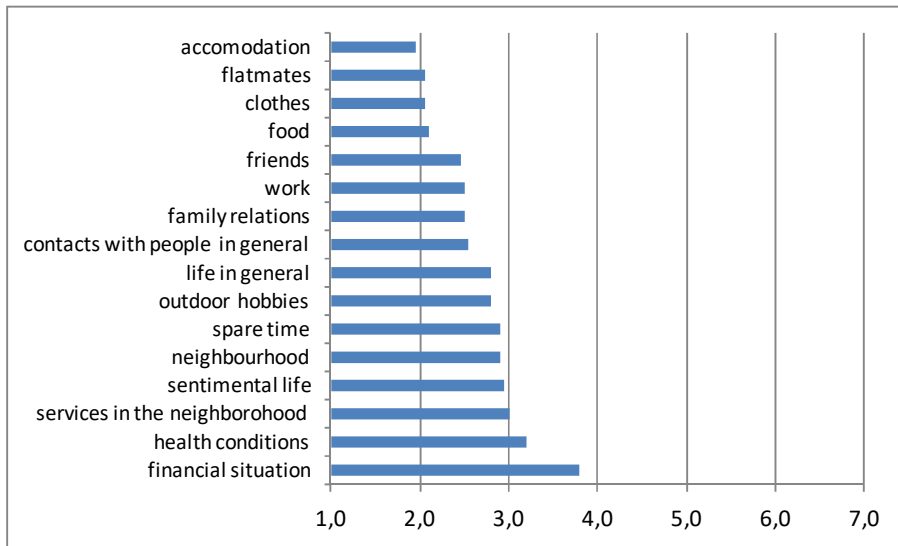
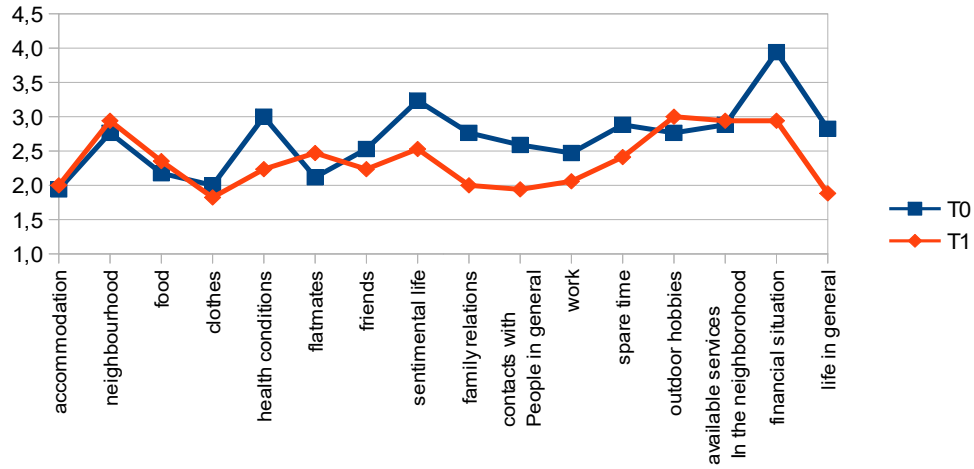


Fig. 3 - Mean change in the items related to the quality of life one month after discharge (T₀ – T₁; N=17).



Note: Low scores are a positive outcome.

Fig. 4 - Mean change in the items related to the quality of life one month after discharge (T₀ – T₁; n = 13) for patients with positive outcome

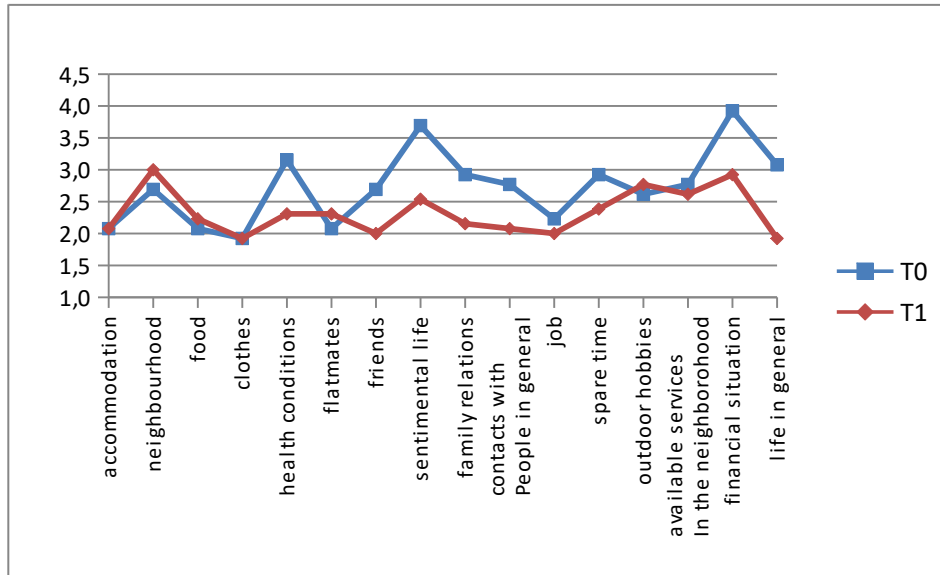


Fig. 5 - Mean change in the items related to the quality of life one month after discharge (T₀ – T₁; n = 4) for patients with negative outcome

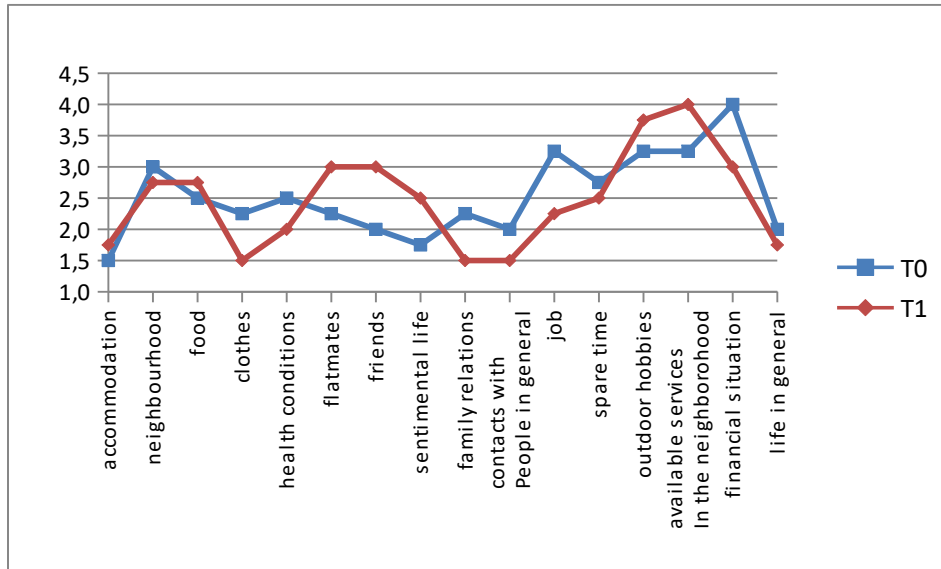


Fig. 6 – Improvements and worsening for the participants with a positive outcome (n = 13) and a negative outcome (n = 4) (T₀ – T₁).

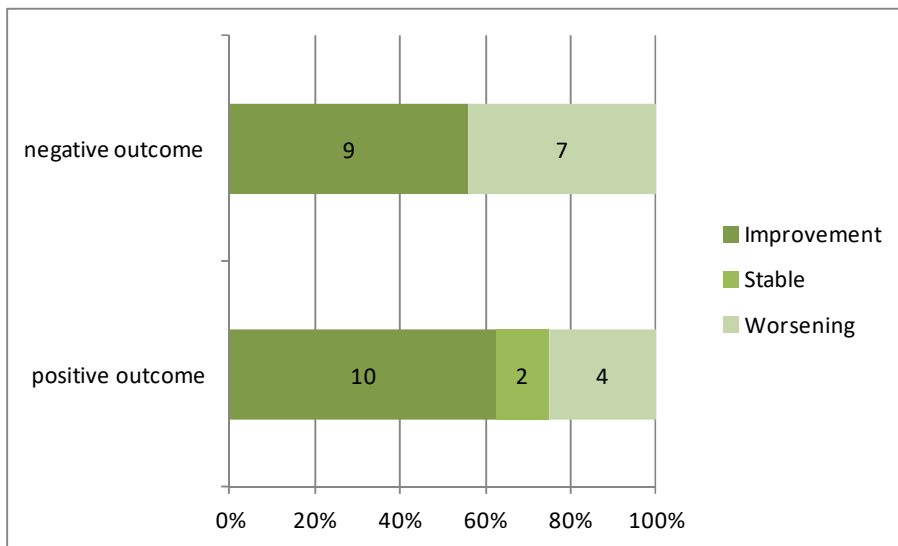


Fig. 7 - Mean change in the items related to the quality of life after 5-6 month (T₀ – T₂; n=10).

