


Article

Belbin's Team Role Balance and Team Effectiveness in Community Mental Health Teams in an Area of Northwest Ireland: Implications for Leadership

Dimitrios Adamis *, Georgia Maria Krompa, Abdul Rauf, Owen Mulligan and Edmond O'Mahony

Sligo/Leitrim Mental Health Services Clarion Rd., F91 CD34 Sligo, Ireland; georgiamariakr@gmail.com (G.M.K.); abdul.rauf2@hse.ie (A.R.); owen.mulligan@hse.ie (O.M.); edmond.omahony@hse.ie (E.O.)

* Correspondence: dimaadamis@yahoo.com; Tel.: +353-(0)71-914-4829; Fax: +353-(0)71-914-4177

Abstract: Community Mental Health Teams (CMHTs) have been introduced as an alternative to hospital-based treatment. Their effectiveness and the factors that may influence it have not yet been fully investigated. According to Belbin's theory, a team is more effective if its members have diverse roles. The aim of this study was to investigate if there is an association between CMHTs' effectiveness and Belbin's team role balance. Participants were members of eight CMHTs. The data collected were demographics (age, gender), discipline, years of experience, and team tenure. Also, the following scales were administered: the Belbin Team Role Self-Perception Inventory (SPI) and team effectiveness scale (TES). One hundred and six members participated. A significant correlation between team role diversity and effectiveness was found. Multilevel analysis showed that role diversity and being a doctor were the only two significant independent predictors of team effectiveness. Belbin's theory is therefore applicable to CMHTs. The more diverse roles the members of a team have, the better the effectiveness of the team. Given that roles can be modified, team leaders need to be aware of the members' roles and be able to modify them. Thus, they can increase the effectiveness of their teams.

Keywords: community mental health teams; CMHTs; team effectiveness; Belbin role balance; leadership



Citation: Adamis, D.; Krompa, G.M.; Rauf, A.; Mulligan, O.; O'Mahony, E. Belbin's Team Role Balance and Team Effectiveness in Community Mental Health Teams in an Area of Northwest Ireland: Implications for Leadership. *Merits* **2023**, *3*, 604–614. <https://doi.org/10.3390/merits3030036>

Academic Editor: Wendy M. Purcell

Received: 11 July 2023

Revised: 6 August 2023

Accepted: 31 August 2023

Published: 11 September 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

European and international mental health policies emphasize and endorse community-based mental health care as opposed to institutionalized care, although its implementation varies between countries [1]. The delivery of community care is through Community Mental Health Teams (CMHTs). In Ireland, "A Vision for Change" was published in 2006, introducing CMHTs as an alternative to inpatient treatment. Two previous studies on CMHTs in Ireland showed that service users in Ireland did not have multidisciplinary access and input, that the medical model was the prominent model, and that there was little involvement of service users in decision-making about their treatment [2,3].

Thus, CMHTs are relatively new; they are, at present, the only alternative therapeutic approach to asylum treatment and institutionalization, and their effectiveness has not been fully evaluated—if at all. Most studies until now have looked only into the implementation of policies; they are sparse and based on a small number of qualitative data which perhaps do not reflect the overall picture. Furthermore, failures to implement policies or the underdevelopment of teams do not necessarily imply a lack of effectiveness. Perhaps a lack of resources, mismanagement, unwillingness, or other reasons are the main causes, but not necessarily a lack of effectiveness. Even underdeveloped teams can be effective if other conditions are met within them. Previous research has looked into different external outcomes which are more related to the performance, rather than the effectiveness, of CMHTs. Outcomes like Key Performance Indicators (KPIs), waiting lists, or admission rates may reflect organizational deficits, under-resourced situations, bad management, or other deficits, but not necessarily the lack of effectiveness of CMHTs. What has been defined as

effectiveness in other organizational teams perhaps does not apply to CMHTs. CMHTs are different from other general organizational or industrial teams. Also, they are different from their nearest comparable multidisciplinary healthcare teams. The environment in which CMHTs work is more complex and more diverse, and service user needs are bigger and more challenging compared to general healthcare teams. Similarly, given the mental health problems and the subsequent social and family problems, carers of service users also need to be involved and supported by the CMHTs. In addition, relatively high caseloads and multiple demands from external constituents differentiate CMHTs from other general multi-professional teams. Furthermore, competing pressures and priorities that CMHTs face, e.g., a chronic lack of resources and competing interests around prioritizing needs, make the work of CMHTs more demanding [4]. Finally, the management and leadership of CMHTs is more challenging and difficult because CMHTs are typically more diversely multi-professional compared to general health teams [5]. Thus, the effectiveness of CMHTs needs to be defined in other ways. Concepts like continuity of care, service user wellbeing, therapeutic relationship and empathy, engagement with carers, and relationships within the teams need to be taken into account. A previous work by El Ansari et al. [6] developed different operational criteria for effectiveness specifically for CMHTs. They tried to capture effectiveness from a different perspective by looking at multiple stakeholders. They specified seven themes that constitute effectiveness in CMHTs. These themes are as follows: (a) improved service user well-being, (b) therapeutic relationships with service users, (c) provision of continuous care, (d) effective inter-teamwork, (e) engagement with carers, (f) creative problem solving, and (g) respect between professionals. Then, they developed a scale, the team effectiveness scale, which we also used in the present research.

Team Roles and Belbin's Team Role Model

Despite the fact that CMHTs are multidisciplinary and each member has a professional role, each member simultaneously has a role within the team and interacts with other members of the team. This interaction is perhaps reciprocal. The term "role" as a general concept can be seen from two different theoretical points of view: a sociological one, in which attitudes and behavior are assigned by the members of a group or team to a person occupying a specific position, and a psychosocial one, in which a role can be defined as the behavior expected from an individual occupying a specific position. In the former situation, members expect this behavior or role from a person on the basis of his/her social position and social status in their team roles; in the latter situation, members expect this role because the position is associated with these specific role(s). These two concepts are not mutually exclusive and one person can have both roles [7]. There are many theoretical models of how roles are developed [8]. The first set of role theories (role-taking theories) is those which consider roles as a passive phenomenon [9,10]. There are two parts to it: the person who performs the role (focal person) and the person who has certain beliefs about the role (role sender). The role sender communicates their beliefs about the role to the focal person and the focal person acts accordingly, internalizing that this is his/her role. The second set of theories (role-taking theories) supports the belief that individuals are more motivated and active when they have roles that they can successfully perform. In the second model, the role sender is also influenced by the focal person [7]. Thus, team roles (and more generally group roles) are performed patterns of behavior which are influenced by experience, motivations, abilities, personality, values, contexts, and learning. Team roles can explain work-related outcomes and character strengths [11]. It has been suggested that successful teams owe their success to their composition of roles [12]. In this context, Belbin suggested that team roles are defined as a behavior pattern which makes team members interact with each other in order to achieve greater success [7]. Belbin [13] proposes that, for a team to be effective, a balance of roles is needed and all roles must be present within the team. Also, he asserts that duplicate roles must be avoided in order to have a balanced team. Team role balance assumes that team performance will have more positive outcomes. The eight roles (he later added one more, the specialist) are: Plant (PL); monitor/evaluator (ME);

company worker (CW), which later in 1993 he renamed to Implementer (IM); shaper (SH); completer/finisher (CE); team worker (TW); Chairman (CH) (later the name changed to Coordinator); and resource investigator (RI). Belbin's team role categorization has become very popular amongst many others [14]. In 1981 Belbin created the Belbin Team Roles Self-Perception Inventory (SPI) questionnaire, which was used to measure team roles in the present study. SPI was proposed after a nine-year study around team effectiveness and team building [15]. According to Belbin [16], teams should have a mixed combination of the types he includes in his SPI.

In addition, Belbin's theory distinguishes between a person's role and a functional role. The functional role is what the job demands from the person who has the skills and the knowledge for this job. Many team members may have the same functional role but perhaps have different team roles. Therefore, Belbin's theory can be applied to multidisciplinary teams.

Thus, given the above, the aims of this study are: (a) to explore if Belbin's theory may be applicable to CMHTs and (b) to investigate if there is a direct association between team effectiveness (as defined specifically for CMHTs) and Belbin's team role balance.

2. Materials and Methods

2.1. Design, Setting, Sample

The design of the study was prospective cross sectional. All the members of CMHTs in Sligo Leitrim Mental Health Service were eligible to participate. The only exclusion criterion was if the person declined to participate. The total number of CMHTs in Sligo/Leitrim was 9, and the number of members in CMHTs was 141 employees.

2.2. Measurements/Scales

- (a) Demographics: data have been collected on the following demographics: age, gender, profession, years of experience, and team tenure.
- (b) Team effectiveness scale: Twenty items reflecting the seven dimensions of effectiveness in CMHTs (see also literature review above). The items are rated on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). Some of the items are worded negatively and for them the scoring is reversed. Higher scores indicate more effective teams [6].
- (c) Team Roles scale: Belbin Team Roles Self-Perception Inventory (SPI) [16]. The SPI includes seven sections, and each section comprises eight sentences. Participants need to distribute a total of 10 among the sentences while selecting which sentences best describe their behavior. Points cannot be allocated to more than four sentences. The older version of SPI was used for this study as there are more empirical data for it and more research enabling comparisons with previous studies. Furthermore, its psychometrics have been investigated extensively. An individual's primary role is considered the role with the highest score, and the secondary role is the role with the second highest score.

2.3. Procedure

The study was carried out between May 2018 and August 2018. Team members were offered an appointment to complete questionnaires at the time of their community team meeting. Those who were not in attendance at the team meeting for any reason were contacted again in person or by post and invited to participate. For those who declined to participate, no further contact was made. For those who did not reply after the first contact in person or by post, a reminder letter was sent together with the questionnaires again via internal post after a few weeks. If four weeks had elapsed with no reply given after two instances of contact, those individuals were recorded as non-participants.

2.4. Ethics

Ethical approval was granted from the Local Ethical Committee on the 5 March 2018. Informed consent was obtained from all participants in writing (anonymously) by ticking the relevant box in the questionnaires.

2.5. Statistical Analysis

SPSS software (v.25) was used to analyze the data. Continuous data are presented as means and standard deviations (SDs), with categorical data presented as counts and percentages. The effectiveness between teams was tested with ANOVA, using Bonferroni corrections for multiple testing. To examine the association of team effectiveness and Belbin's Team Roles scale (SPI), Spearman's correlation test was used (data not normally distributed). To investigate the effects of team roles, demographics, team tenure, years of experience, profession, and team size on team effectiveness, a multilevel regression model was conducted with team effectiveness as a dependent variable and with all others as independent variables. The multilevel approach was used because individuals were nested within the teams. This model takes into account the fact that observations within a team are correlated [17]. In addition, the interactions between independent variables were examined to investigate for moderator and/or mediator factors. A new variable was created by measuring the balance/imbalance of each team. This was based on both of Belbin's theoretical principles: (a) that all roles must be present for a team to be balanced, and (b) roles should not duplicated. Therefore, teams were considered imbalanced by 1 point if (a) teams (with more than 10 members) had a primary role missing. For each missing primary role one point was added, (b) for teams with 10 or less members the secondary role was taken into account (to avoid penalizing small teams) and the above rule was applied. If statistically significant overlap in primary roles (for big teams) existed, one point was given for each overlap. For smaller teams (which may not have all the primary roles) the secondary role was also examined. The overlap was examined by using an χ^2 test (goodness-of-fit test) and by examining if the overlap was statistically significant (adjusted residuals ≥ 2). This variable was hereafter called the Imbalance Index. Higher scores indicate more imbalanced teams. Finally, a post hoc calculation for the achieved power was performed by using G*Power version 3.1.9.7. software [18].

3. Results

3.1. Descriptive Statistics

The number of teams analyzed was 8, and the total number of participants was 106 (response rate 87%). One team was excluded because of a very low response rate (2 out of 19, 11%).

3.1.1. Demographics

The demographics of the sample are presented in Table 1 in total and categorized by profession. Also, the composition of each team in demographic variables and profession is presented in Table S1 (supplementary material).

Table 1. Demographics of the sample.

Profession	n (%)	Age Mean (S.D)	Gender Female (%)	Team Tenure in Years Mean (S.D)	Years of Experience Mean (S.D)
Nurse	55 (51.9%)	46.51(8.97)	36 (65)	5.01 (4.57)	19.78 (9.68)
Nurse (student)	5 (4.7%)	19.80 (1.79)	5 (100)	0.29 (0.50)	1.80 (1.48)
Doctor	22 (20.8%)	42.18 (10.83)	5 (22.7)	3.19 (4.66)	14.77 (11.27)
OT	3 (2.8%)	45.00 (0.00)	0 (0)	5.06 (5.49)	15.67 (4.04)
Social worker	6 (5.7%)	51.50 (8.55)	4 (66.7)	6.17 (5.67)	20.33 (4.97)
Secretary	9 (8.5%)	48.78 (12.07)	9 (100)	5.03 (4.64)	19.22 (11.09)
Psychologist	6 (5.7%)	42.17 (8.11)	4(66.7)	3.69 (2.29)	15.50 (10.43)
Total	106(100%)	44.54 (10.94)	63 (59.4)	4.40 (4.55)	17.52 (10.33)

3.1.2. Team Effectiveness Scale

The descriptive statistic of the seven dimensions of the scale and its total is presented in Table 2. Table 3 shows the mean Total Effectiveness Scale in each team, the Standard Deviation (SD), and the significant differences found between teams by using the ANOVA test and Bonferroni corrections.

Table 2. Descriptive statistics of team effectiveness scale.

	I.W	T.R	P.C	E.I	E.C	C.S	R.P	T.E.S
Mean	21.42	12.65	12.47	7.92	8.42	12.25	8.16	83.30
SD	2.92	1.67	1.86	1.71	1.47	2.17	1.70	10.75
Median	21.00	13.00	12.00	8.00	9.00	12.00	8.00	83.00
Min	12.00	9.00	8.00	3.00	3.00	6.00	4.00	51.00
Max	25.00	15.00	15.00	10.00	10.00	15.00	10.00	100.00
Range	13.00	6.00	7.00	7.00	7.00	9.00	6.00	49.00
Max score	25	15	15	10	10	15	10	100

IW: improved service user well-being; TR: therapeutic relationships with service users; PC: provision of continuous care; EI: effective inter-teamwork; EC: engagement with carers; CS: creative problem solving; RP: respect between professionals; TES: total effectiveness scale.

Table 3. Descriptive statistics of team effectiveness scale (TES) in each team and comparison of effectiveness between the teams (ANOVA).

TES	A	B	C	D	E	F	G	H
Mean	75.56	83.86	82.71	77.15	90.50	89.05	88.71	90.88
SD	8.15	5.24	11.13	14.88	5.25	7.32	6.92	7.83
Significant level	*** E, *** F, * G, ** H	none	none	* E, * D, * H	*** A, * D	*** A, * D	* A	** A, * D

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

From Table 3, it can be seen that the least effective was team A followed by team D, while the most effective were teams H and E.

3.1.3. Belbin’s Primary and Secondary Roles

The distribution of primary and secondary Belbin’s team roles across the eight teams is presented in Table 4.

Table 4. Belbin’s primary and secondary roles in each team (n).

		A	B	C	D	E	F	G	H
Primary role	Company worker	9	3	3	4	5	9	2	3
	Chairman	0 *	0	1	2	1	2	0	3
	Shaper	2	1	2	3	0	1	1	0
	Plant	0	1	1	0	0	1	0	0
	Resource investigator	1	0	2	0	0	2	0	0
	Monitor/evaluator	4	0	1	3	1	0	1	1
	Team worker	8	1	3	1	1	3	2	1
	Completer/finisher	1	1	4	0	2	1	1	0
	Total (n)	25	7	17	13	10	19	7	8
Secondary role	Company worker	4	1	9	4	3	3	2	2
	Chairman	5	2	1	1	0	0	0	1
	Shaper	1	1	0	0	1	4	0	1
	Plant	2	0	0	0	0	1	1	1
	Resource investigator	4	1	0	3	1	2	0	0
	Monitor/evaluator	4	1	2	0	3	2	1	1
	Team worker	4	1	5	4	1	4	2	0
	Completer/finisher	1	0	0	1	1	3	1	2
	Total (n)	25	7	17	13	10	19	7	8

* In **bold** the missing roles in each team.

3.2. Bivariate Statistics

Here, a correlation is performed between the variables, total effectiveness scale, and Imbalance Index by ignoring the other variables and the fact that data are nested. Spearman's correlation test shows that there is a significant negative correlation between the Imbalance Index variable and the total team effectiveness scale (Spearman's rho = -0.355 , $p < 0.01$). Therefore, more imbalanced teams are less effective. In addition, despite the small sizes of the teams and by ignoring that the data are correlated (nested), a comparison of the teams using the demographic variables (age, gender) and the years of experiences, years of tenure, and profession variables was performed. For the categorical variables gender and profession, a χ^2 test was performed, and for the continuous variables (age, years of experience, and years of tenure) a ANOVA test was performed. Differences among the teams in terms of gender and profession ($\chi^2 = 5.952$, df: 7, $p = 0.545$; $\chi^2 = 35.611$, df:42, $p = 0.746$, respectively) were not significant. Regarding the continuous variables, no differences were found in terms of age and years of experience but differences were found in years of tenure between teams C, F, and G (less years of tenure in team C). (Table S2 in supplementary material shows the ANOVA results and the multiple comparisons after Bonferroni corrections).

3.3. Multilevel Analysis (Hierarchical)

An initial model was constructed with team effectiveness as a dependent variable and all others (the Imbalance Index, profession, years of experience, time of tenure [in years], gender, age, and team size) as independent variables. The unit of analysis was the eight teams, and they were used as random effects with the remaining variables used as fixed effects. Variables which did not significantly contribute to the model were dropped one by one from the model with the guidance of the Akaike's Information Criterion (AIC). A lower AIC score for a model compared to a previous one means that the new model is better. The final parsimonious model with the estimate parameters is presented in Table 5. In the initial model (full model), the AIC was equal to 814.06, with 26 levels and 23 parameters. In the final presented model, the AIC was 745.36, with 9 levels and 9 parameters. The test of fixed effects (Type-III test of fixed effects) showed that the Belbin's Imbalance Index was significant ($F = 24.87$, DF:(1, 98), $p = 0.001$, but not the professions ($F = 1.567$, DF: (6, 98), $p = 0.165$).

Table 5. Parameter estimates of the final model.

Parameter	Estimate *	Std. Error	df	t	Sig.	95% C. I	
						Lower Bound	Upper Bound
Intercept	80.34	3.94	98	20.39	0.001	72.52	88.16
Nurse	6.83	4.18	98	1.63	0.105	-1.47	15.14
Student Nurse	9.08	5.88	98	1.54	0.126	-2.59	20.75
Doctor	10.99	4.43	98	2.48	0.015	2.19	19.78
Occupational Therapist	0.66	6.79	98	0.10	0.922	-12.82	14.15
Social worker	9.84	5.59	98	1.76	0.082	-1.25	20.94
Secretary	10.12	5.10	98	1.98	0.050	0.00	20.24
Psychologist		0.00					
Imbalance Index	-2.01	0.40	98	-4.99	<0.001	-2.80	-1.21

* The $-/+$ sign in front of the estimates shows the direction of the effects in relation to the dependent variable (team effectiveness). In **bold** are the significant effects.

It can be seen from Table 5 that there is an independent negative effect of the imbalance of roles on team effectiveness. The more imbalanced the team is, the less effective it becomes. Also, there is an independent significant effect of the profession of doctor on the effectiveness of CMHTs. Demographics (age and gender), team tenure, years of experience of each member, and size of the team did not have any significant effect and they did not contribute to the final model.

3.4. Power Calculations

The power of the study to detect true significant correlations was calculated post hoc. For the given sample size ($n = 106$), for correlation the calculated effect size was 0.6 and the power of the study 1. Similarly, the power for the multilevel analysis was equal to 1 (two-tailed hypothesis, effect size = 0.65, $n = 106$, number of predictors = 8).

4. Discussion

The results indicated that teams with duplicated roles or lack of some roles in their teams are less effective. We found no previous similar studies with which to perform a direct comparison with the results of this study. However, an indirect comparison can be performed with studies which investigate performance in other teams (although, as it was argued above, performance is different from effectiveness). For instance, a study of 11 management teams in public and private organizations reported an association between team balance and team performance [19]. Similar results have also been reported in Integrated Project Teams [20]; in software development teams [21]; in teams of management games [22]; and in groups of engineering students [23]. In contrast, no associations or weak associations have been reported in teams involving management games [24]; in student groups [25]; and in student virtual teams [26]. There are multiple possible reasons for these discrepancies. Firstly, a number of studies (even where they found positive or no associations) used sample artificial groups or lab experimental designs, e.g., Prichard [22] or Batenburg [24]. Therefore, they may not reflect reality as artificial groups are not equivalent to teams. A second reason is the different outcome that they measured, or the different concepts that they used to define the same outcome, e.g., performance or effectiveness. Using different outcomes contributing to the same roles will inevitably give different results. A third (and possibly the most important) reason for these discrepancies is the different scoring systems of SPI that these studies used. Big teams have more chance of duplicated roles, while small teams have more chance of missing roles. None of the current scoring systems control for this chance. Another reason is the statistical approach that has been used. Most studies (if not all) have failed to take into account the hierarchical (nested) nature of the data. Individuals are nested within teams and teams within organizations; therefore, the data are intercorrelated and this correlation needs to be controlled for. In addition, some studies compared teams between themselves; comparisons of small numbers give uncertain results with large confidence intervals, and therefore the results are underpowered and questionable.

Another interesting result from the present study is the association between the profession of doctor and team effectiveness. Some previous publications about CMHTs in Ireland reported that the majority of CMHTs are not truly multidisciplinary, but rather medically orientated [2,3,27]. Although the present study cannot confirm or contradict this claim, it seems that after controlling for other variables doctors have a significant effect on the effectiveness of the teams in question. This does not mean that care is medically orientated, as other disciplines also exist within teams. The likely explanation is that doctors tend to be involved with all of the patients, whereas the other disciplines may be involved in smaller subsections of the team caseload. Alternatively, perhaps other disciplines for different reasons are not as involved in the care of patients as the doctors. Whatever the explanation is, it cannot be given by this study. However, this result is also a worrying finding. It can have an impact on patients' care, as patients possibly cannot access all disciplines within the teams, and thus lack the different professional inputs

necessary for their improvement. In modern healthcare, and especially mental healthcare, all disciplines need to contribute to team effectiveness. Buljac-Samardzic and colleagues [28] in their systematic review suggested that in order to increase team effectiveness among all team members who are from different disciplines, standardized training is needed. Training has also been suggested by [29] in their systematic review on the effectiveness of multidisciplinary interventions in improving quality of life for people with Parkinson's disease. However, training is not a panacea [30,31]. Perhaps other hidden or less obvious factors—such as attitudes, perceptions, beliefs, or burnout—need to be investigated.

Nevertheless, from the results above, it seems that Belbin's theory and inventory can be applied to CMHTs. There was a significant association between team role balance and effectiveness. Also, team role balance was an independent predictor of effectiveness after controlling for other variables. Belbin's team role theory has previously been applied in nearly all kinds of teams but very seldom in health care teams and perhaps not at all in mental health teams. Each role has some strengths and some allowable weakness. For instance: (a) The Plant is often free-thinking and creative but also might ignore incidentals and may be too concerned to communicate effectively. Plants may also be absent-minded or forgetful, but can open new ways in the service development for better care provision. (b) The Monitor/evaluator can judge accurately but often lacks the ability to inspire others. This type of role can help the CMHTs with audits, team evaluations, and service evaluations. (c) The Company worker (CW) or Implementer is practical, efficient, and reliable but is also inflexible, slow in responding to new opportunities, lacks imagination, and has difficulty inspiring others. However, despite some negatives, the CW can help the team by implementing policies and guidelines. (d) The shaper is dynamic, highly motivated, and challenging, although can be prone to provocation and can offend other's feelings. This role can help the team to innovate, research, expand the service, and attract funding. (e) The completer/finisher is conscientious and anxious and has a preference for guidelines and policies. This role type can be criticized for taking their perfectionism too far but is still helpful in identifying risks, potential mistakes, and giving a team some stability. (f) The team worker can be diplomatic, flexible, and co-operative, keeping balance within the team but can also be indecisive in difficult situations. (g) The Coordinator or Chairman is usually confident and mature but can be seen as manipulative by others. (h) The resource investigator (RI) explores opportunities and is both enthusiastic and outgoing. However, the RI might also lose interest easily and can be over-optimistic.

Despite the wide acceptance of Belbin's theory, there is also some criticism. Fisher [32] suggested that Belbin's roles in reality are personality traits and thus difficult to change. However, Belbin [33] showed that certain behaviors in organizations are in agreement with the "personality" of the culture of the organization rather than the personality of the individual. Although for some individuals it is more natural to perform specific roles related to their personalities compared to others, with a distance between their role and their own personality, learning also has a role. Therefore, changes of roles are always possible.

4.1. Implications for Leadership

According to Belbin the leadership of a team is not static and the most effective team leaders are not always those with the highest mental ability but those with certain team roles. The most successful team leaders are those with the Chairman role and at times the shapers, who are less calm but more driven [33].

In CMHTs in Ireland, the leaders are usually consultant psychiatrists. Despite earlier concerns that in leadership many different activities are involved which cannot be all carried by one person [34], until now the role of consultants as leaders has remained ambiguous [35]. This is especially the case when the consultant psychiatrist also has clinical responsibilities and often lacks leadership training and knowledge.

In addition, the other disciplines which constitute CMHTs have line managers outside of the team who are also involved directly or indirectly in mental health teams (at least in the area in which this research was carried out). Therefore, the leaders of CMHTs often

do not have full managerial power to move personnel around in order to have balanced—and thus effective—teams. However, they can easily—particularly if they are aware of imbalances within their teams—encourage the development of certain missing team roles within the team, making specific individuals who have them as secondary roles take them on as primary ones or the other way around (if duplicated roles). Roles are modifiable, and thus teams can be more effective. Also, Belbin’s inventory is a good tool for the placement of newcomers in teams. Most importantly, team leaders need to be aware of their own role within the team and to adjust their role and leadership style accordingly in order to have more effective teams. CMHTs need to have diversity, not only in the professions that are involved, but also in the roles of their members in order to be more effective. These roles are also changeable. Belbin’s theory can help to make teams more effective. The findings of this study show that putting different professions together in one team does not, in itself, ensure effective team-working. Simply “picking” up personnel and appointing them to different teams or to teams which have a shortage of a specific discipline is not the best strategy. Appointing new members to a team requires good planning in order to appoint the right person for the team not only in terms of profession but also in terms of Belbin’s roles in order to increase the dynamics of the team and to make it more effective. To do so, managers and leaders need to know in advance the distribution of roles within each team, its effectiveness, and its needs. Thus, if the association of CMHT effectiveness and role balance can be replicated in other studies in mental health teams, it may have considerable benefits, not only in terms of the effectiveness of teams, but also for the leadership and the management of teams.

4.2. Limitations and Strengths of the Study

The present study is not without limitations. First of all, the results are not generalizable as the data were collected from only one mental health service in Ireland. A second limitation is that this study is cross-sectional. Generally, teams change and evolve over time, as do personnel and perhaps effectiveness. Cross sectional studies cannot capture those changes. In contrast, the present study has several strengths as well. It is the first (at least in Ireland) which investigates the effectiveness of CMHTs from an internal (within the teams) perspective. It uses different operationalization criteria to define the concept of effectiveness which are more appropriate and more specific to CMHTs. Finally, although the results may not be generalizable, the methodology we used here can be easily replicated in CMHTs elsewhere.

5. Conclusions

This study has implemented Belbin’s team roles balance theory to investigate the effectiveness of CMHTs in one area of North-Western Ireland. Notwithstanding the fact that this study has used a different concept of effectiveness which applies only to mental health teams, it is in accordance with most previous studies that have shown an association between team balance and effectiveness in different organizations. In addition, it was found that team role balance and the discipline of doctor were the only two independent factors which predicted effectiveness in a CMHT. However, the results need replication in other CMHTs before firm conclusions can be reached. Furthermore, team leaders need to be aware of their team members’ roles, as well as to be aware about their own role within the team. This is going to help them first to adjust their role, but also to promote secondary roles to primary, if there is a missing role in the team, or, if there are duplicated primary roles, to change them to secondary roles. Team roles are modifiable and by doing so they will produce a diverse team with perhaps less conflicts but, most importantly, a team with viability and effectiveness which will help both their patients and the members of their team.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/merits3030036/s1>. Table S1: composition of each team in the investigated variables; Table S2: comparison of numeric variables (age, years of experience, and years of tenure) among the teams.

Author Contributions: Conceptualization, D.A. and G.M.K.; methodology, D.A., G.M.K., A.R., O.M. and E.O.; formal analysis, D.A.; investigation, D.A., G.M.K., A.R., O.M. and E.O.; resources, D.A., G.M.K., A.R., O.M., E.O. and D.A.; writing, D.A.; writing—review and editing, G.M.K., A.R., O.M. and E.O.; supervision, E.O.; project administration, D.A., G.M.K., A.R., O.M. and E.O. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Research Ethics Committee (REC) at Sligo University Hospital on 5 March 2018.

Informed Consent Statement: Written informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data are available from the correspondent author after request.

Acknowledgments: We are grateful to each member of the CMHTs for their participation. Without their participation and support it would not have been possible to complete this work.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Ozamiz, J.A. Mental health promotion policies in Europe. *J. Ment. Health* **2011**, *20*, 174–184. [[CrossRef](#)] [[PubMed](#)]
- Vitale, A.; Mannix-McNamara, P. Promoting mental health through multidisciplinary care: Service users' experience in Ireland. *Int. J. Ment. Health Promot.* **2013**, *15*, 134–147. [[CrossRef](#)]
- Vitale, A.; Mannix-McNamara, P.; Cullinan, V. Promoting mental health through multidisciplinary care: Experience of health professionals working in community mental health teams in Ireland. *Int. J. Ment. Health Promot.* **2015**, *17*, 188–200. [[CrossRef](#)]
- Spitzer, E.G.; Kaitz, J.; Fix, G.M.; Harvey, K.L.; Stadnick, N.A.; Sullivan, J.L.; Williamson, A.K.; Miller, C.J. Developing Relational Coordination: A Qualitative Study of Outpatient Mental Health Teams. *Adm. Policy Ment. Health Ment. Health Serv. Res.* **2023**, *50*, 591–602. [[CrossRef](#)] [[PubMed](#)]
- Interprofessional Care and Mental Health: A Discursive Exploration of Team Meeting Practices*; Springer: Berlin/Heidelberg, Germany, 2019.
- El Ansari, W.; Lyubovnikova, J.; Middleton, H.; Dawson, J.F.; Naylor, P.B.; West, M.A. Development and psychometric evaluation of a new team effectiveness scale for all types of community adult mental health teams: A mixed-methods approach. *Health Soc. Care Community* **2016**, *24*, 309–320. [[CrossRef](#)]
- Aritzeta, A.; Swailes, S.; Senior, B. Belbin's team role model: Development, validity and applications for team building. *J. Manag. Stud.* **2007**, *44*, 96–118. [[CrossRef](#)]
- Ilgen, D.R.; Hollenbeck, J.R. The structure of work: Job design and roles. In *Handbook of Industrial and Organizational Psychology*; Dunnette, M.D., Hough, L.M., Eds.; Consulting Psychology Press: Palo Alto, CA, USA, 1991; pp. 165–207.
- Graen, G.B. Role-making processes within complex organizations. In *Handbook of Industrial and Organizational Psychology*; Dunnette, M.D., Ed.; Rand McNally: Chicago, IL, USA, 1976; pp. 1201–1245.
- Katz, D.; Kahn, R.L. *The Social Psychology of Organizations*; Wiley: New York, NY, USA, 1978.
- Ruch, W.; Gander, F.; Platt, T.; Hofmann, J. Team roles: Their relationships to character strengths and job satisfaction. *J. Posit. Psychol.* **2018**, *13*, 190–199. [[CrossRef](#)]
- Roh, H.; Chun, K.; Ryou, Y.; Son, J. Opening the Black Box: A Meta-Analytic Examination of the Effects of Top Management Team Diversity on Emergent Team Processes and Multilevel Contextual Influence. *Group Organ. Manag.* **2019**, *44*, 112–164. [[CrossRef](#)]
- Belbin, R.M. *Team Roles at Work*, 2nd ed.; Routledge: London, UK, 2012.
- Senior, B.; Swailes, S. A comparison of the Belbin self perception inventory and observer's assessment sheet as measures of an individual's team roles. *Int. J. Sel. Assess.* **1998**, *6*, 1–8. [[CrossRef](#)]
- Lawrence, S. The team road to success. *Pers. Manag.* **1974**, *6*, 28–32.
- Belbin, R.M. *Management Teams*, 1st ed.; Routledge: London, UK, 1981.
- Heck, R.H.; Thomas, S.L.; Tabata, L.N. *Multilevel and Longitudinal Modeling with IBM SPSS*; Routledge: London, UK, 2013.
- Faul, F.; Erdfelder, E.; Buchner, A.; Lang, A.-G. Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behav. Res. Methods* **2009**, *41*, 1149–1160. [[CrossRef](#)]
- Senior, B. Team roles and team performance: Is there 'really' a link? *J. Occup. Organ. Psychol.* **1997**, *70*, 241–258. [[CrossRef](#)]

20. Blenkinsop, N.; Maddison, A. Team roles and team performance in defence acquisition. *J. Manag. Dev.* **2007**, *26*, 667–682. [[CrossRef](#)]
21. Rajendran, M. Analysis of team effectiveness in software development teams working on hardware and software environments using Belbin Self-perception Inventory. *J. Manag. Dev.* **2005**, *24*, 738–753. [[CrossRef](#)]
22. Prichard, J.S.; Stanton, N.A. Testing Belbin's team role theory of effective groups. *J. Manag. Dev.* **1999**, *18*, 652–665. [[CrossRef](#)]
23. Gutiérrez, L.; Flores, V.; Keith, B.; Quelopana, A. Using the Belbin method and models for predicting the academic performance of engineering students. *Comput. Appl. Eng. Educ.* **2019**, *27*, 500–509. [[CrossRef](#)]
24. Batenburg, R.; van Walbeek, W. Belbin role diversity and team performance: Is there a relationship? *J. Manag. Dev.* **2013**, *32*, 901–913. [[CrossRef](#)]
25. Flores Ureba, S.; Simón de Blas, C.; Borrás-Gené, O.; Macías-Guillén, A. Analyzing the Influence of Belbin's Roles on the Quality of Collaborative Learning for the Study of Business Fundamentals. *Educ. Sci.* **2022**, *12*, 594. [[CrossRef](#)]
26. Vukasinovic, N.; Cok, V.; Zavbi, R. Correlation between team composition and team performance in virtual student product development teams. In Proceedings of the 21st International Conference on Engineering Design (ICED 17): Design Education, Vancouver, BC, Canada, 21–25 August 2017; pp. 139–148.
27. De Búrca, S.; Armstrong, C.; Brosnan, P. *Community Mental Health Teams Determinants of Effectiveness in an Irish Context*; Health Systems Research Centre: Dublin, Ireland, 2010.
28. Buljac-Samardzic, M.; Dekker-van Doorn, C.M.; van Wijngaarden, J.D.; van Wijk, K.P. Interventions to improve team effectiveness: A systematic review. *Health Policy* **2010**, *94*, 183–195. [[CrossRef](#)] [[PubMed](#)]
29. Tan, S.B.; Williams, A.F.; Kelly, D. Effectiveness of multidisciplinary interventions to improve the quality of life for people with Parkinson's disease: A systematic review. *Int. J. Nurs. Stud.* **2014**, *51*, 166–174. [[CrossRef](#)]
30. Adamis, D.; Tatlow-Golden, M.; Gavin, B.; McNicholas, F. General practitioners'(GP) attitudes and knowledge about attention deficit hyperactivity disorder (ADHD) in Ireland. *Ir. J. Med. Sci.* **2019**, *188*, 231–239. [[CrossRef](#)] [[PubMed](#)]
31. Fishbein, M.; Ajzen, I. *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*; Addison-Wesley Pub. Co.: Boston, MA, USA, 1975.
32. Fisher, S.G.; Hunter, T.; Macrosson, W. A validation study of Belbin's team roles. *Eur. J. Work. Organ. Psychol.* **2001**, *10*, 121–144. [[CrossRef](#)]
33. Belbin, R.M. *Management Teams*, 3rd ed.; Routledge: London, UK, 2010.
34. Randall, R.; Southgate, J.; Tomlinson, F. *Co-Operative and Community*; Barefoot: London, UK, 1980.
35. Berghout, M.A.; Fabbriotti, I.N.; Buljac-Samardžić, M.; Hilders, C.G.J.M. Medical leaders or masters?—A systematic review of medical leadership in hospital settings. *PLoS ONE* **2017**, *12*, e0184522. [[CrossRef](#)] [[PubMed](#)]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.