

**INVESTIGATING THE
NATURE AND IMPORTANCE
OF SOCIAL
CONVERSATIONS AT
WORK**

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September 2019

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Thesis submitted in partial fulfilment for the degree of
Professional Doctorate in Occupational and Business
Psychology (DOBPsych)

ACKNOWLEDGEMENTS

For Odette.

Keep asking questions. Girls can do anything; girls can be anything.

My deep thanks to my supervisors Joanna Yarker and Rachel Lewis. They have created a process that has transformed my professional practice and enabled me to achieve something incredible in two short years. You are excellent teachers, advisers, and mentors. And you have been caring and supportive when life does what life does sometimes. You recognised the signs when I needed a different type of support and gave me the permission I wouldn't give myself to step away from the doctorate. A particular thank you to the wonderful Lucie Zernerova for her expert statistical advice. You stepped in when I needed you and gave clear direction.

I am privileged to have worked in the Civil Service for nearly 15 years. There are many Occupational Psychologists doing incredible work across government departments. We support all areas of policy development, ensure recruitment is unbiased and fair, investigate air accidents, design learning so employees have skills for the future, evaluate well-being interventions, support organisational change that puts people first, are the voice of people who don't have a voice, and much more. I am proud to be part of this professional community and to show we can work at the highest academic standards and deliver something of practical value to our organisations.

Thank you to the senior leaders who supported my research and allowed me to recruit participants for my empirical study. I am eternally grateful to the 152 fellow Civil Servants who volunteered to participate in my research. Without you there would be no data and no doctorate. We all share a passion to find out what makes great working relationships in the Civil Service.

Words cannot express my gratitude to my best friend and husband, James. He has been my constant champion over the last two years – encouraging me, hearing my ideas and troubles, and giving me time to study. I have been overwhelmed by the

high esteem he has spoken to friends, family, and our daughter about my doctorate. He has constantly used my hours of studying as an opportunity to encourage Odette to learn, be inquisitive, and value science. This is a team Dietmann doctorate.

ABSTRACT

This research addresses social conversations at work. Most modern workplaces have opportunities and demands for social conversations with colleagues (Tönsing & Alant, 2004). For over two decades there have been calls for further research into social conversations at work (Kirmeyer, 1988), yet no clear understanding of the antecedents and outcomes has been established. This systematic literature review undertaken for this doctorate is the first in the field; it provides a valuable synthesis of the evidence base. From an initial 13,083 titles, the review identified 12 papers that met the inclusion criteria. There was considerable variation in study design and definition of social conversations at work across the studies, and while they give some insights into their nature, there is little evidence to inform our understanding of what predicts them, their benefits, or barriers.

To address some of the methodological limitations of the studies identified in the systematic literature review, a field intervention study was undertaken in which 76 participants in the Intervention Group were directed to increase their number of social conversations at work. An active Control Group ($n = 70$) undertook a social network mapping task, but were not directed to converse with colleagues. Further, the study expanded the focus of previous research to address a broader range of organisational outcomes and understand the nature of social conversations at work. The relationship between social conversations at work and loneliness, high-quality working relationships, team performance, and acceptance of social conversations at work was explored. The intervention successfully increased participants' participation in social conversations at work. However, this increase was observed for both the Intervention Group and Control Group. Similarly, improvements in the outcome variables (but not loneliness at work) were observed for both groups. This study advances the research by investigating key organisational outcomes with a novel field intervention methodology. Further, it shows that social conversations can be practiced and are therefore responsive to training intervention. The implications of this work on research and practice are discussed.

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PART 1 – PROFESSIONAL DOCTORATE BACKGROUND

PROFESSIONAL PRACTICE

As a Chartered Occupational Psychologist, I am exempt from the first module (Professional Practice Portfolio) of the Professional Doctorate. This thesis therefore satisfies the requirements for Part 2 of the Doctorate (Research Thesis). I provide a summary of my professional practice as context to this thesis.

I received a distinction in my MSc Occupational Psychology in 2003 and became a Chartered Member (in Occupational Psychology) of the British Psychological Society in 2008, which conferred on me registration as an Occupational Psychologist with the Health and Care Professions Council a year later. Since 2003 I have worked in the field of Occupational Psychology continuously, first as a Research Assistant at the University of Sheffield and then in the Civil Service for the past 14 years. Half of this time was in designated Occupational Psychology posts delivering psychological research, learning and development, and assessment and selection. For the second half of this time, I moved into broader Human Resources roles where I have been applying my practice as an Occupational Psychologist to the areas of talent management, diversity and inclusion, employee engagement, organisational development and change, and learning/ capability.

A thread throughout my work has been the use of evidence to solve organisational challenges. This evidence has come from research I've delivered myself or commissioned from external partners; journal articles and conferences; organisational metrics; and my relationships across academia. Evidence-based practice is core to my practice as an Occupational Psychologist. This Professional Doctorate was a natural extension to the way I approach my work. It offered me a framework for refreshing and deepening my research, analytical, and critical evaluation skills. As a result, I have been better able to direct in-house data collection and exploration, more critically appraise evidence provided by others, and encouraged my colleagues' curiosity about organisations, work, and human behaviour.

PUBLICATIONS ARISING FROM THIS THESIS

Conference Presentations

Dietmann, A., Lewis, R., Yarker, J., & Zernerova, L. (2020, January). Carry on chatting: Do social conversations improve workplace relationships, performance, & reduce loneliness. Paper presented at the British Psychological Society Division of Occupational Psychology Annual Conference, Stratford-upon-Avon. UK.

https://www.bps.org.uk/sites/www.bps.org.uk/files/Events%20-%20Files/DOP2020%20Abstracts_0.pdf

Dietmann, A., Lewis, R., & Yarker, J. (2019, January). *Social conversations at work: A systematic literature review*. Paper presented at the British Psychological Society Division of Occupational Psychology Annual Conference, Chester. UK.

<https://www.bps.org.uk/sites/bps.org.uk/files/Events%20-%20Files/Full%20Abstracts%20-%20FINAL%20v3.pdf>

Workshops

Dietmann, A. (2019, April). Social conversations at work: Building better working relationships. Workshop delivered at the HM Courts & Tribunals Service London Regional Conference, London, UK.

Dietmann, A. (2019, September). Workplace loneliness. Workshop delivered at the meeting of Inclusive Employers, London, UK.

Journal Publications

Dietmann, A., Lewis, R., & Yarker, J. (under review). The benefits and barriers of social conversations at work: A systematic literature review, *International Journal of Human Resource Management & Development*.

PART 2 – THE BENEFITS & BARRIERS OF SOCIAL CONVERSATIONS AT WORK: A SYSTEMATIC LITERATURE REVIEW

ABSTRACT

Background: Social relationships, inside and outside work, are formed through conversations and are key features of many models of health and wellbeing. Our conversations at work cover many topics, both work-related and non-work-related. Whilst there is a body of literature demonstrating the benefits of social conversations at work, the conceptual and definitional variability within this literature constrains our understanding. No systematic review of the social conversations at work literature has been conducted to systematically examine the evidence from this diverse field. It would be valuable to bring together the literature in such a manner to facilitate definitional clarity and theory building, as well as better understand the implicit and explicit processes inhibiting social conversations at work.

Purpose: This systematic review has four research questions: 1. What is the nature of social conversations at work 2. What are the outcomes? 3. What are the predictors? 4. What are the barriers of social conversations at work?

Method: A systematic literature review was conducted by searching the PsychINFO, Business Source Premier (EBSCO), and ABI/ Inform Global databases. The search parameters were: (informal OR social OR water-cooler OR watercooler OR non-work OR nonwork OR private OR small talk) AND (conversations OR interactions) AND (work OR employ* OR organi*). Titles were reviewed on the basis that they contained social, non-work conversations in the workplace. Accepted titles proceeded to first stage abstract review followed by a second abstract sift against refined criteria. Abstracts were reviewed against inclusion and exclusion criteria independently by two researchers and discrepancies resolved by a third. Inter-rater agreement at title and both abstract review stages was 80+%. Full papers were screened by the lead author to identify the final systematic literature review papers from which to extract data.

Findings: 13,083 titles were retrieved from the databases, 170 abstracts were reviewed at the first abstract review and 63 at the second; 23 full papers were reviewed resulting in 12 papers for data extraction. There is considerable variety in

study design and definitional issues across the final selection of papers. They provide some evidence about the basic nature of social conversations at work, such as the topics discussed, and there are a rich variety of mechanism and outcome variables studied.

Discussion: Despite a number of different terms used, the searches yielded only a small body of research from which to draw conclusions. While the studies give some insights into the nature of social conversations at work, there is little evidence to inform our understanding of what predicts social conversations at work, their benefits, or the barriers to such conversations. Recommendations for future research are presented.

Originality: There are no existing systematic literature reviews examining social conversations at work. This is an under-researched field despite the pervasiveness of such conversations.

Key words: social conversations, relationships, work, chatting, informal conversations, small talk, systematic literature review.

INTRODUCTION

The Importance of Social Relationships

Leaders often claim their employees are their most important asset (Fulmer & Ployhart, 2014). However, an organisation's competitive advantage is increasingly seen as the knowledge and resources embedded in human and social capital (Randel & Ranft, 2007; Villalonga-Olives & Kawachi, 2017). The social capital perspective encourages us to view the social relationships *between* employees as the asset. These social relationships are valued by both employees and organisations (Tschan, Semmer, & Inversin, 2004). This is illustrated by the presence of social variables in many models of healthy workplaces (Tschan et al., 2004). The evidence for health and wellbeing is particularly strong (Kansky & Diener, 2017). In a review of the relationship between social interaction and health, Heaphy and Dutton (2008) found positive social interactions at work were associated with positive physiological health benefits, distinct from the relationship between social support and health benefits.

Social Conversations at Work

Language has both an informational and a relational function. Social relationships are formed through conversations. In the workplace, employees build social relationships through discussing both work and non-work (or social) topics. The two can be separate conversations or woven together (Tschan et al., 2004). Both are likely to be of varying degrees of spontaneity and there could be a discord between spontaneous, organic, and authentic conversations and conversations that are created, re-created, and facilitated by various actors in the organisation. Nonetheless, most modern workplaces have opportunities and demands for social conversations (Tönsing & Alant, 2004; Holleran, Whitehead, Schmader, & Mehl, 2011; Lin & Kwantes, 2015). Whittaker, Frohlich, & Daly-Jones (1994) estimate that 31% of an employee's working time involves social conversations, while D'Abate (2005) found that 67% of respondents reported social conversations about sports, family, weddings, travel, books, television shows, and dating. Although the generalisability of these studies is limited and the applicability to the modern day workplace unknown, together they highlight the pervasiveness of social conversations at work.

Social conversations at work allow employees to construct, maintain, and strengthen social bonds with each other (Pascal, 2003; Kraut, Fish, Root, & Chalfonte, 1990; Holmes & Marra, 2004). Getting to know colleagues at an interpersonal level builds a sense of belonging and workplace social inclusion (Randel & Ranft, 2007). "[This] everyday talk . . . constitutes the social glue of any workplace" (Holmes, 2003, p. 69) and helps to "oil the social wheels" (Holmes & Fillary, 2000, p. 277).

Further support for the benefits of social conversations at work can be drawn from the strand of literature on small talk specifically (see below for a discussion on terminology). Pre-meeting small talk has been significantly linked to meeting effectiveness, over and above good meeting procedures (Allen, Lehmann-Willenbrock, & Landowski, 2014). In Chinese business negotiations, small talk is strategically interwoven throughout the negotiation to maximise its effectiveness (Yang, 2012). The use of small talk in such business negotiations could be construed as the organisation deliberately using the power of social conversations

to advance its own agenda (e.g. securing business deals). If such a tactic were also used inside the organisation, as a management tool, to influence employees it would raise ethical issues given employees' general perception that such conversations are authentic and genuine.

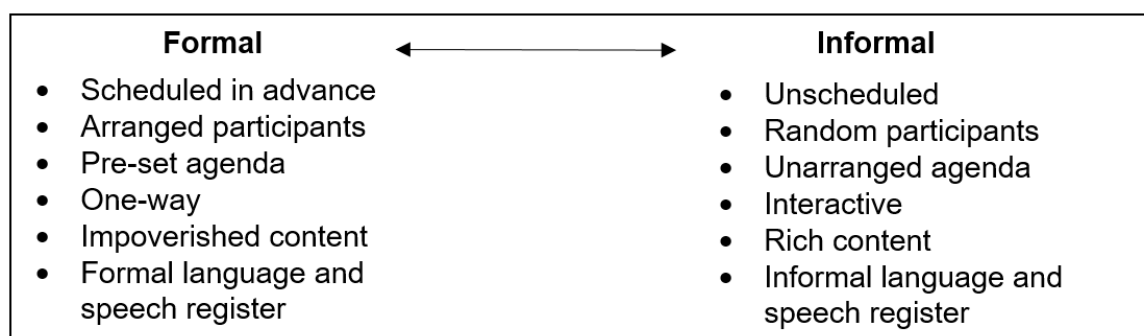
Chance conversations (which are more likely to be social in nature) encourage cooperation and innovation (Fayard & Weeks, 2011). Finally, small talk can reduce the uncertainty present in some social interactions, which provides a better context for cohesion and strong relationships to flourish (Allen et al., 2014). This may be a function of the fact that small talk satisfies employees' need for positive face time with colleagues (Holmes, 2000).

Whilst these studies suggest a range of benefits can be accrued from social relationships, the true value of social relationships and breadth of empirical evidence of the outcomes of social conversations at work is less clear. Early researchers reported exclusively on job-related workplace conversations or studied relationships between employees (Kirmeyer, 1988). They did not study the social conversations initiating and maintaining those relationships. However, the conversation "itself [is] . . . the key process through which forms of organizing are dynamically sustained and changed" (Shaw, 2002, p. 10), thus encouraging specific research. In addition, a number of different conceptualisations of social conversations at work exist, as well as the range of terms/ definitions used.

Conceptualising Social Conversations at Work

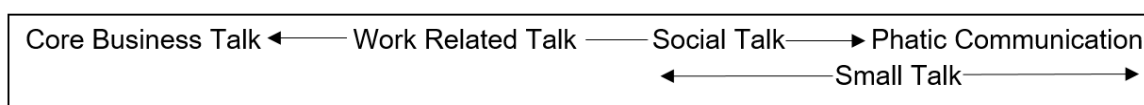
There are two dominant conceptualisations of workplace conversations in the literature. Kraut et al. (1990; see also Fish, Kraut, Root, & Rice, 1992) provide a formal/ informal continuum that is agnostic of the conversational content (see **Figure 1**). Formal conversations are planned and structured. Informal conversations are spontaneous and unstructured. Social conversations at work span the continuum, but are arguably more likely at the informal end.

Figure 1: Formality dimension of communication (Kraut et al., 1990)



Holmes' (2000) continuum focuses on content from 'core business talk' to 'phatic communication' (see **Figure 2**). However, she states that allocating talk to a particular category is a matter of degree and not absolute. Phatic communication refers to ritualised social phrases, e.g. "How are you?", with equally ritualised responses, e.g. "I'm fine". "[P]hatic communication drifts gradually towards social talk as the content of the exchange becomes more context-specific, and relates more precisely to the individuals involved" (Holmes, 2000, p. 39). These expanded, social conversations are the focus of this review. Holmes does not define small talk explicitly. Holmes and Fillary (2000) list example topics, but confusingly note "one particularly frequent and "safe" small talk topic in the workplace is work itself" (p. 279). This appears to undermine the social content that is the focus of Holmes' research.

Figure 2: Continuum of communication at work (Holmes, 2000)



Definitions of Social Conversations at Work

There are various terms and definitions used in both the research relating to social conversations at work and in colloquial speech (see **Table 1**), some of the terms are interchangeable, whilst some are more tightly defined. Different terms are sometimes used within the same study seemingly to vary the written text rather than signifying a conceptual change (e.g. Lin & Kwantes, 2015). Tschan et al. (2004) refer to all types of talking at work as 'social interactions' and divided them into 'task-related' and 'private'. D'Abate (2005), however, only refers to 'social conversations' with no differentiation by content. DeMarco Kuzdeba (2016) refer to 'water-cooler

conversations' defined as "unintentional run-ins with another coworker which could result in knowledge creation" (p. 4). Within the research, studies also refer to example conversation topics, e.g. about sports (Tschan et al., 2004). These authors principally defined private interactions by contrasting them with task-related interactions. Mirivel and Tracy (2005) list small talk as one of four types of 'pre-meeting' talk (although they do not preclude small talk occurring at other times). Allen et al. (2014) defined small talk as ". . . conversations without explicit work or task focus (e.g. discussions of the weather)" (p. 1066).

Table 1: Alternative terms for social conversations at work

Academic Terms	Colloquial Terms
Social conversations	Chit-chat
Non-work conversations	Chin-wagging
Casual conversations	Nattering
Informal conversations (In a more specific way than Kraut et al., 1990.)	Yakking
Minimal conversations	[Idle] Chatter
Private conversations	[Idle] Prattle
Private interactions	Small Talk
Social interactions	Gossip
Water-cooler conversations (declining usage)	Social talk
	Time-out talk

The suffix 'at work' or 'in the workplace' is often omitted (e.g. Tschan et al., 2004). This context is important, because social conversations at work versus outside work may have different antecedents and outcomes. Two people having a conversation about workplace issues that takes place outside the workplace, particularly when they are not colleagues, are likely to define the conversation as a social conversation, not a social conversation at work.

In this review, in line with D'Abate (2005), the term 'social conversations at work' is used. This ties the concept linguistically to 'social relationships' and is more consistent with the common understanding of the word in the UK workplace. Following Allen et al. (2014), they are defined as conversations involving other members of the company/ organisation, taking place during work time, and addressing non-work topics, i.e. topics that do not have an explicit work or task focus, and are contrasted with work or task conversations.

AIMS AND RESEARCH QUESTIONS

Whilst there is a body of literature demonstrating the benefits of social conversations at work, the conceptual and definitional variability within it constrains our understanding. No systematic literature review (SLR) of the social conversations at work evidence has been conducted to examine the evidence from this diverse field. It would be valuable to bring together the literature in such a way that facilitates definitional clarity and theory building, as well as better understand the implicit and explicit processes inhibiting social conversations at work. It is important to understand their relationship with work-related processes and outcomes (Lin & Kwantes, 2015). This SLR aims to explore existing research on social conversations at work, the nature of them, the benefits they bring, and the barriers to engaging in them. Four research questions are addressed:

1. What is the nature of social conversations at work in terms of basic descriptions, e.g. topics, frequency, and duration?
2. What predicts people's involvement in social conversations at work?
3. What are the outcomes of social conversations at work?
4. What are the barriers to employees' involvement in social conversations at work?

METHOD

In conducting this SLR, a systematic approach was adopted as outlined by Briner and Denyer (2012), adapted from Higgins and Green (2008), and as applied by Donaldson-Feilder, Lewis and Yarker (2019). The review protocol was registered with Prospero.

Search Strategy

In March 2018 the PsychINFO, Business Source Premier (EBSCO), and ABI/ Inform Global databases were searched using the terms shown in **Table 2**. These terms were identified through a preliminary review of the literature and discussion between the author and other researchers. The search parameters were: (informal OR social OR water-cooler OR watercooler OR non-work OR nonwork OR private OR small talk) AND (conversations OR interactions) AND (work OR employ* OR organi*).

Table 2: Database search terms

FIRST	AND	AND
Informal	Conversations	Work*
Social	Interactions	Employ*
Water-cooler OR watercooler		Organi*
Non-work OR nonwork		
Private		
Small talk		

(Employ* is for employee, employment, and employer. Organi* is for organisation, organisations, and organisational.)

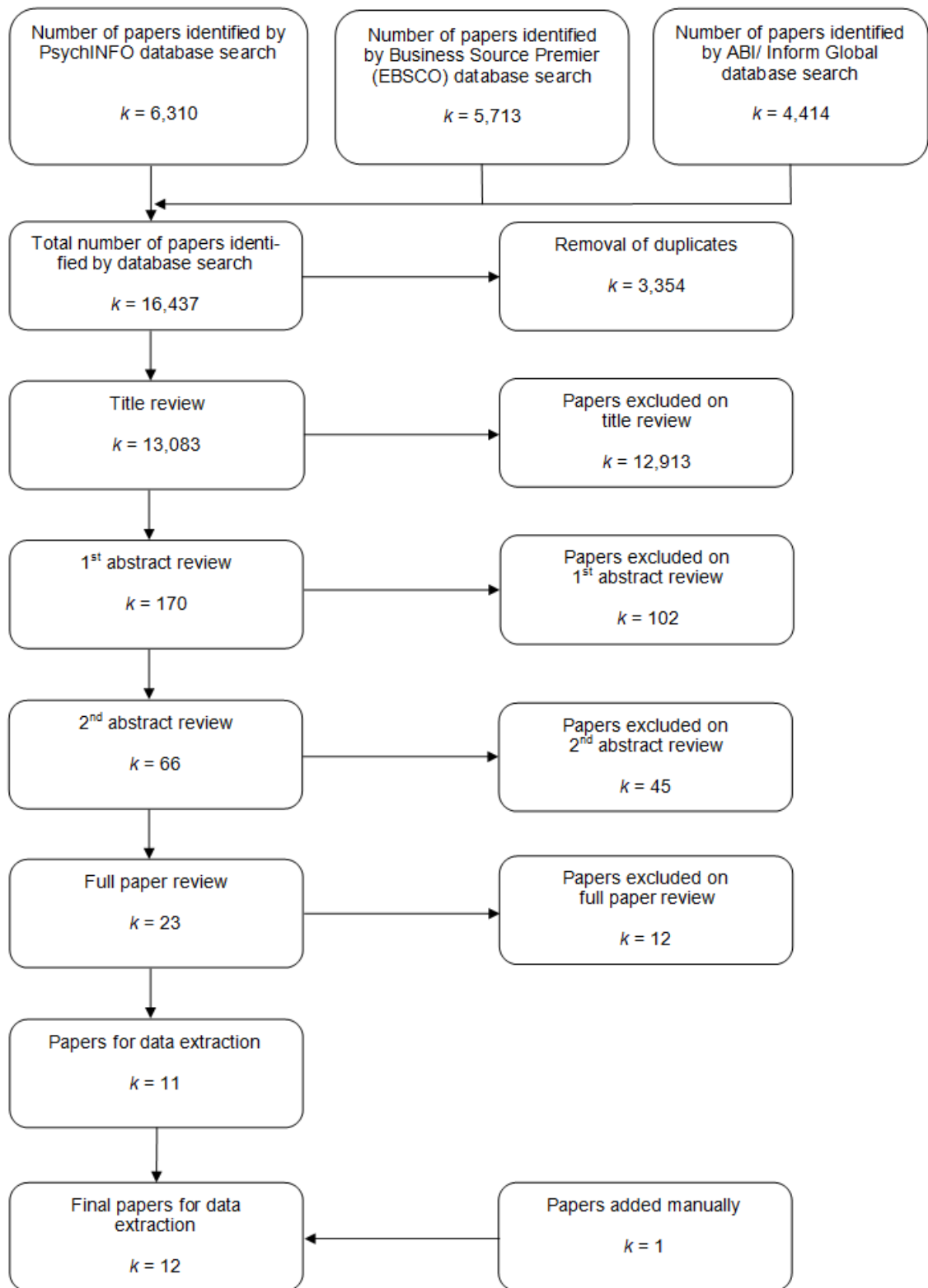
Review Strategy

Records from each database were exported into RefWorks, the automatic duplicate check was run, and references exported into an Excel spreadsheet where a manual duplicate check was conducted. All inclusion/ exclusion decisions were recorded in the spreadsheet. First, a broad sift was conducted on the basis of titles – including those that contained social, non-work conversations in the workplace. This was done independently by two researchers and discrepancies resolved by a third; disagreements were resolved by discussion. A conservative approach was adopted and titles were retained for further consideration in the narrow screening process if there was any uncertainty. Eligible abstracts were reviewed in two phases, first, by applying preliminary inclusion and exclusion criteria and second, by applying the full criteria. For each screen, two researchers independently reviewed the abstracts and disagreement was resolved by a third independent researcher. The inter-rater agreement was over 99% at title review stage, with only 93 out of 13,083 independent decisions requiring arbitration by the third researcher. At first abstract review stage the inter-rater agreement was 80% (34 out of 170 referred to the third researcher) and at second abstract review stage it was 85% (10 out of 66 referred). The author reviewed the resulting full papers to identify the final SLR papers from which to extract data.

To ensure the best available evidence was considered, a pearl-growing exercise was conducted in which the reference list of each of the final SLR papers was manually searched. The same title, abstract, full paper screening process was conducted as described above and recorded in an Excel spreadsheet. The final

paper accepted for data extraction was combined with the other SLR papers. **Figure 3** shows the literature review process and numbers at each stage.

Figure 3: Search results flow diagram



Studies were included or excluded on the basis of a priori criteria (see **Table 3**). After the first abstract sift the criteria were refined, because papers not relevant to the topic were being accepted, e.g. about general interaction, communication, or social support at work.

Table 3: Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
<ol style="list-style-type: none"> 1. Adult population (18+) 2. Any workplace setting or sector 3. Time period: unrestricted 4. English language 5. Peer reviewed and/or empirical 6. Qualitative and quantitative 7. <i>Medium of interaction: face-to-face (verbal) and social media.</i> 8. <i>Context: employees within organisations, i.e. employee to employee or employee to manager/ leader, during work time and in the work environment/ setting.</i> 	<ol style="list-style-type: none"> 1. Study did not differentiate between social (non-task) and non-social (task) related conversations, e.g. <i>might be about general interpersonal communication/ interaction, friendship, and humour.</i> 2. <i>Thought pieces.</i> 3. <i>Context: Organisational level communication when there is no human being involved, e.g. team, function, or organisation communication, either internally or externally (e.g. with patients, clients, professional communication).</i>

(The additional criteria included at the second abstract review stage are shown in italics.)

Data Extraction

A data extraction tool was developed by the author and discussed with the research team. The following data were extracted from the final set of full papers and recorded in an Excel spreadsheet: country of study; aims/ purpose; study design; number of participants; participant details; measures (including definitions); the outcome/ target variables (including any controls, mediators or moderators); type of analysis; key findings and recommendations; and limitations. Data was extracted by the author and reviewed by a second researcher for consistency and completeness.

RESULTS

Papers Included in the Review

The databases search retrieved 13,083 records after removing duplicates. After each screening process, 11 papers remained for data extraction. From the manual

review of the final papers' reference lists, 30 potential relevant titles were identified, which yielded two full papers for review. One was excluded (Johnson, Donohue, & Johnson, 1994) and one included (Allen et al., 2014). This was added to the 11, giving a total of 12 papers for data extraction: Allen et al. (2014), Fay (2011), Fay and Kline (2012)¹, Fayard and Weeks (2007), Holleran et al. (2011), Holmes (2003)², Kirmayer (1988), Kirmayer and Lin (1987), Lin and Kwantes (2015), Tönsing and Alant (2004), Tschan et al. (2004), and Yang (2012). Of these, 10 include unique datasets. Kirmayer (1988) and Kirmayer and Lin (1987), and Fay (2011) and Fay and Kline (2012), appear to be based on the same dataset, but address different variables. Therefore, data were extracted from all 12. Ten of the 12 studies were published between 2003 and 2015, preceded by a 15 year hiatus since the two Kirmayer studies.

Conversation Terms Used and Definitions

There are six primary conversation terms use across the studies: small talk, informal communication, informal interaction, social conversations, non-work communication, and private interactions (see **Table 4**). Fay (2011)/ Fay and Kline (2012) use informal communication/ talk/ interaction interchangeably. Five of the ten studies give an explicit definition of their primary term; the others give general descriptions, usually in the literature overview.

¹ Another comparable paper was not elicited by the database searches: Fay, M. J. & Kline, S. L. (2011). Coworker relationships in high-intensity telecommuting. *Journal of Applied Communication Research*, 39, 144 – 163.

² Holmes and Fillary (2000) also met the inclusion criteria at full paper review, but was excluded because it was nearly identical to the later Holmes (2003).

Table 4: Conversation terms and definitions

Primary Conversation Term Used	Study	Definition	Stated (vs general description)
Small talk	Allen et al. (2014)	““Pre-meeting talk” concerns the communication that occurs prior to the start of a scheduled meeting” (p. 1065). “[There are] four types of pre-meeting talk: small talk [conversations without explicit work or task focus, e.g. discussions of the weather], meeting preparatory talk [preparing for the meeting, e.g. discussing the agenda], work talk [talk to accomplish a work task], and shop talk” [talk about work, i.e. discussion about people, events, and issues that link to the workplace] (p. 1066).	x
	Holmes (2003)	“[T]he kind of social talk which occurs at the start of the day, at “smoko” (i.e. tea breaks), and at lunchtime” (p. 71).	x
	Yang (2012)	“[Small talk (ST)] . . . is classified into two types: social-related and work-related. A social-related ST is a ‘topical’ discourse that is not relevant to the core business negotiation, but is important for its affective or social content. It is off-task . . . A work-related ST is a ‘professional’ discourse that is relevant to the core business negotiation” (p. 108).	✓
Informal communication	Fay (2011)	“[i]nformal communication in work settings is defined as voluntary talk that does not have to be solely work or task focussed” (p. 213). [Uses informal communication/ talk/ and interaction interchangeably.]	✓
	Fay & Kline (2012)	“Informal communication in work settings is interpersonal, social, or small talk that is not solely work-task focused” (Holmes, 2000, cited in Fay and Kline, 2012, p. 63). [Uses informal communication/ talk/ interaction interchangeably.]	✓
Informal interaction	Fayard & Weeks (2007)	“[I]nformal interactions cannot be planned or regulated by fiat, but the likelihood of their occurrence can be influenced through indirect means” (p. 605).	x
Private interactions	Tschan et al. (2004)	“ <i>Task-related interactions</i> [original italics] focus on accomplishing a task . . . <i>Private interactions at work</i> [original italics] . . . talking about current events that are not necessarily task-related” (p. 147). “[T]he criterion for designating something as “task-related” [was] that its primary content is related to immediate task fulfilment” (p. 148).	✓
	Lin & Kwantes (2015)	“[S]ocial interactions in the workplace may be categorized into either task-related interactions or private interactions. Task-related interactions describe situations where the goal of the interaction is the accomplishment of a specific work-related task (p. 242).	x

Social conversations	Holleran et al. (2011)	"In any workplace environment, colleagues do not just talk about task-relevant information; they also spend some amount of time socializing. These informal, non-work-related conversations can be essential building blocks for networking" (p. 66).	x
	Tönsing & Alant (2004)	None given. The conversations were social, because they took place in a communal room for employees' meal breaks (the existence of such a room was an inclusion criteria for the study).	x
Non-work communication	Kirmeyer (1988)/ Kirmeyer & Lin (1987)	"Work-focused content encompassed references to past, present, or future work responsibilities as well as to the broader organizational context or professional goals . . . Non-work-focused content generally concerned leisure activities, politics, personal problems, or relations with friends or family" (Kirmeyer, 1988, p. 179; Kirmeyer and Lin, 1987, p. 142).	✓

There is conceptual overlap between all definitions except three. Fayard and Weeks (2007) study informal interactions (i.e. unplanned conversations as per Kraut et al. (1990) see **Figure 2**), whether they are about work topics or not. Tönsing and Alant (2004) did not specify a definition. They investigated social conversations occurring in a meal-break room and allowed for the inclusion of work and non-work topics. Yang (2012) coded the business negotiations sampled as work or non-work, but labelled both types 'small talk'. This is inconsistent with the other studies, where small talk is exclusively about non-work topics. Finally, the operationalisation of the definitions in two studies result in conceptual ambiguity. First, Kirmeyer (1988)/ Kirmeyer and Lin's (1987) definition distinguishes between work and non-work conversations. However, they coded conversations that started as work-related, but shifted to non-work topics, as purely work-related. Additionally, Tschan et al. (2004) asked participants to record conversations of 10+ minutes. Both studies therefore potentially underrepresent non-work/ social conversations.

Country of Study and Participant Details

Only two studies occur in non-Western countries (see **Table 5**): China (Yang, 2012) and South Africa (Tönsing & Alant, 2014). Seven of the 10 Western studies are North American and the remaining countries are France (Fayard & Weeks, 2007), Switzerland (Tschan et al., 2004), and New Zealand (Holmes, 2003). Both European studies involved French-speaking participants. In total, 654 participants are included across the seven studies reporting participant numbers (excluding the repeated datasets). Most participants were working adults except for 134 (20.5% of the total participants represented) undergraduate participants (Lin & Kwantes, 2015). Further, there is a large range in sample size (6 – 254; mean = 93.43) due to the different study designs.

Three studies report the number of conversations/ recordings rather than participants. Fayard and Weeks (2007) analysed observational notes made over 1 – 2 hours per week for 18 months in two organisations and three months in a third organisation, alongside 38 hours of video tape and 16 follow-up interviews. Holmes (2003) analysed 96 audio recordings taken over a two week period from five organisations. Kirmeyer (1988)/ Kirmeyer and Lin (1987) analysed 60 observational records of full-time police officers and civilians working in police radio dispatching.

Table 5: Participant details, method, and design

Study	Country	Participant Details	Method					Design	
			Non-observational		Observational			Cross-sectional	Repeated Measures
			Questionnaire	Interviews	Audio Recording	Video Recording	Researcher Note-taking		
Allen et al. (2014)	USA	Must attend at least one meeting per week as part of their job. 252 employees from various occupational groups. 57.1% female. Mean age 36.9 years (range: 19-80 years).	✓					✓	
Fay (2011)/ Fay & Kline (2012)	USA	100 full-time employees from various occupational groups who work 3+ days per week away from their organisation's central office (high intensity telecommuters). 43% male, 51% 45+ years.	✓					✓	
Lin & Kwantes (2015)	Canada	134 university undergraduate students who were currently or recently employed in any occupation. 54.5% female (N = 1 transgendered). 35.8% were 20 years old or younger, 59.7% were 21 to 30 years old, 4.5% were 31 years of age or older. 70.9% white/ Caucasian (N = 8 chose not to declare).	✓					✓	
Tschan et al. (2004)	Switzerland	54 recent apprentices (must have successfully completed their vocational training and currently employed full time). Five occupations: nurses (N = 6; 5 female), sales (N = 19; 14 female), clerical in banking (N = 7; 4 female), cooks (N = 8; 2 female), and electronic technicians (N = 14; 1 female). Mean age 20.5 years.	✓	✓ ³					✓ ⁴

³ Not reported in article.

⁴ Diary study.

Holleran et al. (2011)	USA or Canada ⁵	37 faculty members from STEM ⁶ departments at a large public, research university. 19 female (mean age 43.9 years) and 17 males matched on rank, department, and research productivity using Web of Science h-index (Hirsch, 2005).	✓ ⁷		✓			✓	
Holmes (2003)	New Zealand	96 audio recordings (ranging from 20 sec to 30 mins) over two weeks of employees with an intellectual disability plus his/ her workplace buddy/ support. Demographics not provided. Five organisations: 2 x garden centres/ plant nurseries, 1 private day-care centre, and 1 recycling plant.			✓			✓	
Tönsing & Alant (2004)	South Africa	6 employees at a university's bindery department where they had a communal space for meal-breaks. Department identified by university management as suitable employment context for someone with disabilities. (No participants listed as being disabled.) Language predominantly in Afrikaans or English. Five spoke Afrikaans as a first language and one as proficient second language. 4 males, 40 - 51 years old. 5 married and 1 divorced.	(✓) ⁸		✓			✓	
Yang (2012)	China	71 institutional commodity traders in national and regional trade fairs, or in offices and factories in Mainland China providing 30 complete conversations (600+ minutes). Participants must have engaged in a face-to-face business conversations. 47 men and 24 women from 23 provinces in China working in 28 different companies.		✓ ⁸	✓			✓	
Fayard & Weeks (2007)	France	1 – 2 hours per week observation + 38 hours of video tape + 16 follow-up interviews. Three organisations with a photocopier room: 1. Research centre of a public utility (observations over 18 months). 2. Business school departments (observations over 18 months). 3. Commercial publishing house departments (observations over 3 months).		✓ ⁸		✓ ⁸	✓	✓	
Kirmeyer (1988)/ Kirmeyer & Lin (1987)	USA	60 observational records of full-time police and civilian employees (non-managerial) in police radio dispatching across 12 police stations. 78% Police Officers. Average tenure with their station 6 years (range 1 - 17 years). 51 men (85%). 22 - 68 years old (mean 35 years).					✓		✓

⁵ Not explicitly stated in text, but likely given the authors' affiliations.

⁶ STEM = Science, Technology, Engineering, and Mathematics.

⁷ Supplementary to core data collection.

⁸ To capture demographic data only.

Holleran et al. (2011) is the only study to match participants. This allowed them to more confidently attribute differences between the two participant groups to workplace gender dynamics of rather than gender itself. Holmes (2003) uniquely studied employees with intellectual disabilities.

Study Methods

The methods of the ten unique studies divide into observational (six) and non-observational (see **Table 5**). Observational studies captured audio or video data of conversations or the researcher took field observation notes in the study setting. The description of how the field observations were conducted, protocols for researcher behaviour, approach (if any) to inter-rater consistency, and structure of recordings vary considerably. The four non-observational studies used questionnaires. Only two studies included repeated-measures (Kirmeyer, 1988/ Kirmeyer & Lin, 1987, and Tschan et al., 2004).

i. Observational Studies

Fayard and Weeks (2007) used both technology and human observation to capture employees' use of the photocopiers over long periods of time. As justified by their inductive epistemology, they adapted their method when initial insights emerged. This adaptive approach is unique amongst the papers. However, there are unanswered questions, e.g. structure of note-taking, location/ operation of the video camera, physical positioning of the researcher, and breaks in observation during a full day. The significant difference in time spent in the third organisation and the salience of the video data over the observer's notes both raise questions about data quality.

The other observational studies are simpler in approach, but this does not always correspond with greater procedural clarity. For example, Holmes (2003) used an audio recorder to capture natural conversation of employees with intellectual disabilities. However, the recording was controlled (and edited or deleted) by his/ her workplace buddy. This paper lacks detail about recording procedures, but in Holmes and Fillary (2000) it is explained that some buddies kept a recorder and microphone on their desks or counters, others carried it around. A key limitation of

this study is the pivotal role of the buddy in data recording as well as the very small sample size.

Tönsing and Alant (2004) used audio technology to record employees' conversations in the communal lunch room at a university's bindery department. A clear description of the recording process is provided. A superior employee controlled recording on a mini-cassette recorder on nine consecutive work days. His colleagues did not know he performed this role. The clearest conversations captured were transcribed, which limits the data. The role of the confederate poses the same issues as it does for Holmes (2003). Further limitations include the case study nature and narrow employment context.

In Yang's (2012) study, individual participants controlled the recording using mini-recorders and MP3 devices. Thirty conversations (600+ minutes) of face-to-face business conversations conducted by 254 (191 = male) institutional commodity traders in mainland China. After transcribing and classifying the data, the author conducted ten interviews. The process and the role of the interviews is extremely vague, as well as subsequent analysis.

Holleran et al. (2011) engaged 37 faculty members at university STEM⁹ departments to wear an Electronically Activated Recorder (EAR) on their waistband. They matched male and female participants on seniority, department, and productivity. The EAR recorded ambient sounds for 50 seconds every nine minutes between 06:00 and 23:00 (approximately 10% of the time). This potentially distorts the conversations to just short sound-bites. Further, the recording continued until well after a typical working day has finished. It was not explained if these employees routinely worked unsociable hours.

Kirmeyer (1988)/ Kirmeyer and Lin (1987) describe their observational approach in detail and notes that strict standardisation and peer-review procedures were used. At three time points a trained observer sat in the room with the employee throughout the shift. They selected characteristics on a hand-held device of all oral, face-to-face communications. The authors note that the observer's presence increased the

⁹ Science, Technology, Engineering, and Mathematics.

likelihood of multidirectional (i.e. directed at the observer themselves, peers, and supervisors) non-work conversations. Police dispatchers also prioritise work telephone communication, thus limiting the amount of social, face-to-face conversations.

ii. Non-observational Studies

As described, the non-observational studies used questionnaires. Allen et al. (2014) issued an online questionnaire to 252 participants who were paid \$0.50 for participating. It is important to note that the social conversations at work variable is assessed differently via a questionnaire in Fay (2011) and Fay and Kline (2012) (see next section about variables) even though they are both listed on the same row in **Table 5**. Tschan et al. (2004) gave 54 apprentices a questionnaire two months before their training ended and then approximately six months later. They were also given a self-observation sheet (interaction record) to complete for five days at work. It is described as a longitudinal study, but the authors note in the limitations that it is essentially cross-sectional because only one variable is assessed twice. The sample size is also very small and focused on a sample with limited work experience.

Lin and Kwantes (2015) administered a unique, quasi-experimental study using vignettes in which 134 undergraduates were randomly assigned to one of two groups. The "[v]ignettes describe[d] a scenario in which a new employee [Jamie] engaged in either a low [version A] or high [version B] level of private interaction with coworkers" (Lin & Kwantes, 2015, p. 246). Participants then answered questions about how they thought Jamie's colleagues would perceive him/her as well as other variables about themselves. The authors report the participants had current or recent employment experience, but employment data was not provided. The typical age of an undergraduate was masked by a large reported age range (21 – 30 years). It is unlikely this sample is representative of a working population.

Study Aims and Social Conversation Variable/ Measure

Seven studies are classified as having 'relational aims' (indicated by * in **Table 6**), because they investigate the relationship between social conversations at work and

other variables. Five studies are classified as having ‘descriptive aims’ (indicated by + in **Table 6**), because they describe aspects of social conversations at work (the only variable addressed). (See **Annex A** for a list of aims.) The conversation variable is variously used as an independent variable (eight studies), dependent variable (two studies), or a mechanism variable (two studies). The studies with descriptive aims were slightly more likely to use it as an independent variable (four) than those with relational aims (three). Further, whether the social conversations variable was captured via a questionnaire or qualitative methods depended on the method being non-observational or observational respectively. See **Table 6** for a full description of the social conversations at work variable.

Study Results

i. Topics of Social Conversations at Work

Five of the 12 studies give information on topics of social conversations at work (see **Table 7**) with varying specificity and method of identifying them. Overall, intimate (e.g. family news, illness, and divorce) and non-intimate (e.g. weekend activities, sport, movies, and hobbies) topics appear to be most common. In the questionnaire provided by Allen et al. (2014), participants ticked whether eight types of small talk had happened before the meeting (see **Table 6**). Some of them are not mutually exclusive (e.g. activities outside of work/ weekend activities/ movie). Further, the ‘small talk’ option within an overall scale about small talk lacks conceptual distinctiveness.

Table 6: Measures of social conversation at work

Study	Description of Social Conversation Measure	Measure Used As		
		IV	DV	Mechanism
Allen et al. (2014)*	Participants indicated whether different types of pre-meeting talk had occurred: small talk (8 items), work talk (10 items), meeting preparatory talk (5 items), and shop talk (6 items). Small talk items: discussing the weather, sporting event, television programme, a movie, 'small talk', weekend activities, activities outside of work, and hobbies.	✓		
Kirmeyer & Lin (1987)*	Researcher coded observed conversations on three dimensions: 1) Source – whether the participant or another person initiated the conversation. 2) Direction – the status of the person who spoke: peer, superior, or 2+ people of both statuses at the same time. 3. Content – work-focused or non-work focused. Conversations that started off as work content, but shifted to non-work content were classified as work unless the shift was sustained. "A sustained shift had taken place when (a) both subject and co-worker spoke about non-work matters, (b) neither party to the conversation returned to a work-related topic, and (c) the proportion of conversation time spent on non-work content was greater than that spent on work" (Kirmeyer, 1988, p. 179).	✓		
Tschan et al. (2004)*	Participants completed a five-day diary recording each social interaction lasting 10+ minutes. Recorded three dimensions: 1) Context - when it started/ ended; who started it (them, other, both); if occurred at work, but was task-related vs not task-related; occurred outside work. 2) Own activity level in the interaction: 1 (very passive) – 5 (very active). 3) Satisfaction with the interaction: 1 (very dissatisfied) – 5 (very satisfied). 4) Personal meaningfulness of the interaction: 1 (superficial) – 5 (meaningful).	✓		
Fay (2011)+	Participants had unlimited space to write down as much as they could about a recent informal interaction with co-workers (peers, not superiors), via any media, who work at the same company, but were located at the central office, i.e. remote from the participant. The following prompt was provided: "Much communication, or interaction, at work consists of simply chatting, small talk or "shooting the breeze" with other members of the company/organization. This type of informal communication can range from casual talk (e.g. simple greetings, a shared joke) and routine catching up or gossip ("Wait until I tell you what Joe did [y]"), to communicating meaning in other ways, such as by either responding quickly or not at all to an e-mail or by tone of voice. This informal kind of communication, or interaction, while seemingly insignificant, can play an important role in organizations . . . This is exactly what was said (or written) to the best of my memory, by either myself, the other person or both of us." (p. 217).	✓		

Holmes (2003) ⁺	Researcher conducted qualitative analysis of the small talk conversations observed.	✓		
Kirmeyer (1988) ⁺	As per Kirmeyer and Lin (1987)	✓		
Tönsing & Alant (2004) ⁺	Researcher coded audio recordings of conversations on three dimensions: 1) Time - whether topic of the conversation occurred in the past, present, or is a future event. 2) Person – who is being spoken about. 3) Topic – tick list of topic options based on previous research, supplemented as new topics emerged.	✓		
Fay and Kline (2012) [*]	Participants indicated the frequency on a 7-point scale of six informal communication activities: laughing, getting to know one another, expressing similarities, collaborating and complimenting one another, and learning about each other's ideas. Items averaged to form a measure of collegial talk.		✓	
Fayard & Weeks (2007) [*]	Researcher observed whether informal conversations occurred in the photocopier rooms and analysed which sociotechnical aspects of the room made such conversations more or less likely.		✓	
Holleran et al. (2011) [*]	Researcher coded audio recordings of conversations on three dimensions: 1) Participant talking to a student or a colleague. 2) Gender of the colleague. 3) Conversation topic with the colleague: about a work topic or a social matter.			✓
Lin & Kwantes (2015) [*]	Participant read one of two versions of a vignette describing a scenario in which a new employee [Jamie] engaged in either a low (version 1) or high (version 2) level of private interaction with co-workers. Participants rated on a 7-point scale (1 = very unlikely to 7 = very likely) how they thought Jamie's colleagues would respond, i.e. liking him/her, rating his/ her job performance, willingness to work together in the future, and willingness to help on job-related tasks.			✓
Yang (2012) ⁺	Researcher coded audio recordings of conversations on three dimensions: 1) Conversational partner – whether the participant spoke to a business stranger, business friend, or business partner. 2) Content – non-work or work conversation. 3) Location – the temporal position of the small talk within the conversation, i.e. opening phase, negotiation phase, or closing phase.	✓		

Key:

* Relational studies, i.e. where the study aim is to investigate the relationship between social conversations and other variables.

+ Descriptive studies, i.e. where the study aim is to describe the nature of social conversations.

Table 7: Topics of social conversations at work

Topic	Study				
	Allen et al. (2014)	Fay (2011)	Fay & Kline (2012) ¹⁰	Fayard & Weeks (2007)	Tönsing & Alant (2004) ¹¹
Learning About Other's Ideas			✓		
Compliments			✓		
Sharing Similarities			✓		
Jokes & Funny Stories			✓	✓	
Giving & Getting Support		✓	✓ ¹²		
Intimate Topics (e.g. family news, illness, divorce)		✓	✓	✓	✓
Organisational Gossip		✓ ¹³		✓	
Work Update & Exchanges				✓	✓
Non-intimate Topics (e.g. weekend, sport, movies, hobbies)	✓	✓ ¹⁴		✓	✓
Technology				✓ ¹⁵	✓ ¹⁶
Commiserating & Complaining		✓			
Food					✓

Fay (2011) identified five key themes in participants' written description of a recent informal interaction at work: 1. Personal disclosure (news and information on intimate topics, e.g. family news, illness, divorce, plans). 2. Sociality (collegial talk of a social nature). 3. Supporting giving/ getting (reframing, affirming, requesting help). 4. Commiserating/ complaining (expressing frustration, common understanding of issues or events). 5. Business update/ exchange (basic work-related interaction). This last category has been classified as 'organisational gossip' in **Table 7**, because the examples in Fay (2011) better align with that category, e.g. "“Hey Jason, did you hear about the reorganization of the company?”" (p. 219).

¹⁰ The topics for the six items from Fay and Kline's (2012) collegial talk scale (see **Table 6**) are captured.

¹¹ Top five most common topics identified are listed.

¹² Collaborating with each other item from the collegial talk measure.

¹³ Business update/ exchange category.

¹⁴ Sociality category.

¹⁵ Printer trouble-shooting. This could be classified in the 'giving/ getting support' topic.

¹⁶ Home appliances, e.g. purchasing or repairing.

Fayard and Weeks (2007) broadly report three types of informal interaction: 1. Copier-related interactions (i.e. about what participants were photocopying or the functioning of the machines, including seeking help). 2. Work-related interactions (about activities, new initiatives, or people at work). 3. Non-work-related, which sometimes started off as superficial and further developed (e.g. families, hobbies, and travel). They offer some examples, but do not provide detailed analysis and conclude that further quantitative work is needed to draw conclusions about the frequency of the different topics and the likelihood that one leads to another.

Tönsing and Alant (2004) identified 36 topics based on previous research and their own findings. The most frequent five are listed in **Table 7**. In order of frequency these were food, interpersonal relations, work, specific activities (e.g. holidays), and household equipment. Their definition (see definitions section) allowed for work topics to be included in the category of social conversations – they were social because they occurred in non-work time, i.e. the lunch break. These authors found a relatively limited number of topics dominated conversations; the top five topics accounted for 53% of all conversations and food specifically for 17.4%. The frequency of food is unsurprising given that the study occurred during the lunch break.

ii. Temporal Position, Frequency, Duration, and Conversational Partner

Two studies offer an insight into the temporal position in the discourse of social conversations at work. Holmes (2003) reports that small talk is mainly found at the boundaries of interactions (beginning/ end of meetings) and of the working day (start/ end). The first meeting can be seen as an obligatory time for small talk. Knowing when or how long to engage in small talk requires knowledge of organisational and societal norms, which can be challenging for employees with intellectual difficulties. Yang (2012) describes three ways that small talk develops: 1. Linear: participants switch to a new topic after one small talk topic is completed; there is no link between the two topics. 2. Derived: an extended new topic is developed with the information obtained from a previous topic; often with a small gap between topics. 3. Overlapped: there is a core topic and many other mini-topics are developed or extended from it.

Four studies give some insight into the frequency of social conversations at work. Tschan et al. (2004) found significantly more task-related than private interactions per day, but participants initiated a similar number of each type. Kirmeyer (1988)/ Kirmeyer and Lin (1987) found that work topics accounted for 79% of all face-to-face communication. Yang (2012) found different patterns of small talk in the opening, negotiating, and closing phases of a business conversation depending on the conversational partner (see **Table 8**).

Table 8: Number of small talks (sic) in different stages of business negotiation Yang (2012)

	Opening Stage	Negotiating Stage	Closing Stage	Preferred Pattern
Business stranger	0	13	6	Linear
Business friend	8	10	10	Linear (derived close second)
Business partner	17	4	14	Overlapped (derived and linear near equal second)

Kirmeyer (1988)/ Kirmeyer and Lin (1987) found that rates of work-focused interactions were more stable over time than non-work-focused interactions. People who initiated more work or non-work interactions with their peers/ superiors/ superiors + peers received more of the same type of interaction from their peers. These studies are the only ones to provide information on **duration**. Non-work-focused interactions were significantly longer than work-focused (66 seconds vs 39 seconds) interactions, but were shorter when with supervisors than with peers.

Holleran et al. (2011) found that the **conversational partner** for all types of conversations were more likely to be male colleagues, but there were more male colleagues in the sampled organisation. They did not find any significant gender differences in the amount of work or non-work conversations overall or when analysed by the gender of the conversational partner. The more senior person usually brings small talk to a close and workers with intellectual disabilities often miss this signal from their manager (Holmes, 2003). Kirmeyer, 1988/ Kirmeyer and Lin (1987) found people are most likely (68% of the time) to initiate a non-work conversation when talking with peers and supervisors together. Only 39% of the

conversations the participant initiated with a peer and 23% with a supervisor were about non-work. Participants were more likely to initiate a non-work conversation themselves (as opposed to initiated by a peer or supervisor).

iii. Outcomes and Determinants

Only seven of the studies explored the outcomes of social conversations (see **Table 9**). Individual studies suggest that social conversations at work are associated with more effective meetings (Allen et al., 2014), a sense of belonging in an organisation (Fay, 2011), identifying with the organisation (Fay & Kline, 2012), prosocial behaviour from colleagues including social and task support (Lin & Kwantes, 2015; Kirmeyer & Lin, 1987), and maintaining relationships (Holmes, 2003). One study suggests they are seen as more personally meaningful, but might not be associated with greater job satisfaction (Tschan et al., 2004).

Table 9: Outcomes associated with social conversations at work

Study	Outcomes Associated with Social Conversation at Work
Allen et al. (2014)	Pre-meeting small talk was a significant predictor of meeting effectiveness even after controlling for meeting practices designed to make the meeting effective (open communication, task-oriented focus, systematic approach, and timeliness of the meeting).
Fay (2011)	Informal conversations fulfil specific needs, create a perception of mattering in the organisation, and create a sense of belonging at work – cumulatively fostering perceived organisation membership.
Fay & Kline (2012)	Collegial talk was positively associated with perceived organisational identification (OI) and not with perceived organisational commitment (OC). The strongest inter-correlation was between collegial talk and social support ($r = .52$). Co-worker relationship quality was positively correlated with OI, OC, collegial talk, and social support.
Holmes (2003)	Small talk has a social function for maintaining relationships, which workers with intellectual disabilities can have trouble achieving, e.g. not recognising jokes, participating in banter.
Kirmeyer & Lin (1987)	Participants whose peers initiated long conversations with them about non-work topics (e.g. leisure pursuits, family relations, and politics) felt more socially supported at work than other participants. This was only true for long conversations. Increasing frequency (but not length) was not associated with increased social support. Non-work communication with peers contributed significantly to perceived support (explaining an additional 11% of the variance).

Lin & Kwantes (2015)	Participants believed that an employee's level of private interactions could influence how competent her colleagues rated her at her job, much they liked her, how much they were willing to help her, and how likely they would be to work with her again in the future. This finding held irrespective of the participants' level of extraversion, conscientiousness, or belief in reward for effort.
Tschan et al. (2004)	Job satisfaction level did not differ between task-related or private interactions, but the mean was higher for the latter although it was not statistically significant (perhaps due to low power). Private interactions were seen as more personally meaningful and less superficial than task-related interactions. Frequency of interactions and satisfaction with them are significant predictors of organisational commitment, but only when both task and private interactions are combined in the model explaining 14% of the variance over and above occupation, role ambiguity, and social stressors. Social stressors were not related to interaction frequency, duration, or satisfaction with interactions.

A number of factors appear to determine/ influence the relationship between social conversations at work and outcomes, including gender (Holleran et al., 2011), mutuality of a colleague starting such a conversation (Tschan et al., 2004), familiarity with the organisational environment (Tschan et al., 2004), and the environmental sociotechnical factors (Fayard & Weeks, 2007). There are mixed results for personality variables (Allen et al., 2014; Tschan et al., 2004) and only one study related to employees with intellectual disabilities (Holmes, 2003), which suggested they have difficulty navigating the social norms at work and therefore using social conversations effectively. The determinants and moderators findings are summarised in **Table 10**.

Table 10: Determinants and moderators

Study	Determinants & Moderators of Social Conversation at Work
Allen et al. (2014)	Relationship between small talk and meeting effectiveness was stronger for participants who scored low rather than high on extraversion.
Fayard & Weeks (2007)	Photocopier rooms afford informal interactions to the extent that they bring people into contact with each other (propinquity), allow people to control the boundaries of their conversation (privacy) – both in terms of spatial (can you be overheard in the space) and temporal (do you want to talk now), and provide legitimate rationalisations for people to stay and talk to each other (social designation). Three aspects determine propinquity, privacy and social designation: architecture (accessibility, enclosed/ open, size), geography (centrality – physical and functional), and function (other purposes of the room).

Holleran et al. (2011)	The more time men spent socialising with male colleagues (but not female colleagues), the more they were disengaged with their work. But the more women socialised with male or female colleagues, the less job disengagement they reported.
Holmes (2003)	Knowing when and for how long to use small talk requires knowledge of the social norms of that organisation, which people with intellectual disabilities often don't understand.
Kirmeyer & Lin (1987)	See section on Discourse Position, Frequency, Duration, & Conversational Partner.
Tschan et al. (2004)	Familiarity with the organisational environment (but not familiarity with colleagues) was associated with more, but not longer, private interactions. Extraversion and social competencies (competence to initiate social interactions) showed no relationship to frequency, duration, quality, or initiation of private interactions. There was no difference in how much the respondent participated in interactions if it was self-initiated. Private interactions were more often (70% of the time) mutually initiated, i.e. by both the participant and a colleague, than task-related (53%). Suggesting more discretion in holding private interactions.

DISCUSSION

There were four research questions for this systematic literature review:

1. What is the nature of social conversations at work in terms of basic descriptions, e.g. topics, frequency, and duration?
2. What predicts people's involvement in social conversations at work?
3. What are the outcomes of social conversations at work?
4. What are the barriers to employees' involvement in social conversations at work?

Despite a number of different terms used, the searches yielded only a small body of research from which to draw conclusions. Of the 13,083 titles retrieved from the database search, just 12 studies met the inclusion criteria for this study. This paucity of research is despite a number of authors, some 30 years ago, identifying social conversations at work as an under-researched area (e.g. Holmes, 2003; Kirmeyer, 1988). The breadth of academic disciplines that have responded to this challenge contribute to the variety in methods used, and reflect the different epistemologies and philosophical standpoints on the researchers' locus in research. The qualitative studies of Holmes (2003) and Fayard and Weeks (2007) epitomise this with their first person accounts, highly reflective writing style, and acknowledgement of the

importance and influence of researcher-participant relationship in conducting scientific enquiry.

What is the nature of social conversations at work?

The review suggests there is no consistency in the terms used for social conversations. Whilst some definitions used by researchers are clearer than others, the boundaries between related terms are ill-defined. Across the 12 studies, six conversational terms are used: small talk, informal communication, informal interaction, private interactions, social conversations, and non-work communication. Only Allen et al. (2014), Yang (2012), Tschan et al. (2004), Lin and Kwantes (2015)¹⁷, and Kirmeyer (1988)/ Kirmeyer and Lin (1987) explicitly distinguish between conversations at work about work/ tasks versus non-work/ tasks. However, this clarity is undermined somewhat by the measures or analysis used. Allen et al. (2014) measured small talk by asking respondents how often they talked with colleagues about certain topics, but the options were not mutually exclusive and one was 'small talk' itself. Yang (2012) uses the superordinate label of 'small talk' for both types of conversations (even calling them 'small talks'), which is inconsistent with other researchers who would reserve the term small talk for non-work conversations. Tschan et al. (2004) asked participants to record conversations of ten minutes or more, which would miss out many shorter instances of social conversations described in other studies, e.g. Tönsing and Alant (2004). Lin and Kwantes (2015) used an interesting method involving vignettes of social conversations at work. Participants answered questions about how they thought the protagonist's colleagues would respond to him/ her. They were therefore, not reporting how they would treat the protagonist. It might have been less cognitively demanding if they had imagined they were the protagonist's colleagues.

The review also suggests that there is little understanding of what is discussed in a social conversation. Only five of the 12 studies address this; all in a ten year window from 2004 – 2014. They suggest intimate (e.g. family news, illness, divorce) and non-intimate topics (e.g. weekend activities, sport, movies, and hobbies) are the most common topics. The poor conceptual clarity has potentially resulted in two of

¹⁷ Lin and Kwantes (2015) actually use Tschan et al.'s (2004) definition.

the topics captured being about work – ‘organisational gossip’ and ‘work update/exchanges’. These topics come from Fayard and Weeks (2007) who principally focused on the informality (i.e. unplanned nature) of interactions rather than the content. It was clear, however, that many of the participants were talking about non-work topics and described it as “stopping to chat” – a phrase the authors often used.

What predicts people’s involvement in social conversations?

As expected, employees are more likely to discuss work topics than non-work topics at work. The latter might well be the social glue of an organisation, but if employees do not talk about work they will soon come unstuck and risk losing their jobs. Perhaps for the same reason, work conversations are typically longer than non-work conversations. Social topics are reserved for the boundaries of interactions, in particular the start and end of the day (Holmes, 2003), but have been found to occur in the middle of business negotiations (Yang, 2012). Finally, people who talk most often about either work or non-work are more likely to receive the same type of conversation from their colleagues. Most of these findings described were identified by Kirmeyer (1988)/ Kirmeyer and Lin (1987). Therefore, it would be worth confirming them in a modern organisation perhaps with a more typical employee group. Finally, it is interesting to note the lack of gender differences in the amount of work or non-work conversations overall or when analysed by the gender of the conversational partner (Holleran et al., 2011). This counters a common gender stereotype of women socialising at work, which is often an undercurrent of the negative terms (e.g. prattle, gossip).

The conversations investigated across all the studies take place face-to-face, ignoring technology-mediated socialising. This is true even for the most recent study by Lin and Kwantes (2015)¹⁸. Social conversations via technology (telephone, instant messenger, message boards, and social media) are likely to be prevalent in modern organisations with employees who work remotely and as the boundaries between work and non-work blur. Only Kirmeyer (1988)/ Kirmeyer and Lin (1987) refer to technology, but it is only used for work purposes to take police emergency calls. In fact, the authors note the police call handlers (justifiably) prioritise telephone

¹⁸ The original manuscript was received 30 January 2013.

conversations and will cut short face-to-face work and non-work conversations to answer the telephone.

What are the outcomes of social conversations at work?

The review suggests there are a number of potential benefits of social conversations at work. However, the lack of consistency in methodology and measurement hinders the formulation of definitive conclusions. A wide range of methods are seen across just seven studies. Individual studies suggest social conversations at work are associated with more effective meetings (Allen et al., 2014), a sense of belonging in an organisation (Fay, 2011), identifying with the organisation (Fay & Kline, 2012), prosocial behaviour from colleagues including social and task support (Lin & Kwantes, 2015; Kirmeyer & Lin, 1987), and maintaining relationships (Holmes, 2003). One study suggests they are seen as more personally meaningful, but might not be associated with greater job satisfaction (Tschan et al., 2004). A number of factors appear to determine/ influence the relationship between social conversations and outcomes, including gender (Holleran et al., 2011), mutuality of a colleague starting such a conversation (Tschan et al., 2004), familiarity with the organisational environment (Tschan et al., 2004), and the sociotechnical factors of the environment (Fayard & Weeks, 2007). There are mixed results for personality variables (Allen et al., 2014; Tschan et al., 2004) and only one study related to employees with intellectual disabilities (Holmes, 2003). The authors suggested they have difficulty navigating workplace social norms and therefore using social conversations effectively.

What are the barriers to employees' involvement in social conversations at work?

The review did not elicit any studies that explicitly examined the barriers to social conversations at work. A number of studies, however, considered determinants and moderators. Allen et al. (2014) found good meeting practices, such as having an agenda, did not enhance the meeting outcome more than attendees engaging in small talk beforehand. The authors conclude “. . . managers aiming to improve meeting effectiveness should encourage their employees to arrive in time to engage in pre-meeting talk” (Allen et al., 2014, p. 1078). Fayard and Weeks (2007) found the social designation of a space was one of three factors determining whether

informal conversations occurred. The police call dispatchers studied by Kirmeyer (1988)/ Kirmeyer and Lin (1987) experienced a specific form of organisational structure and process that limited their social conversations. Their very role had to be responsive to inbound emergency calls, which very often cut short the social conversations.

Limitations and Future Research

This review adopted a rigorous systematic approach, however, it is somewhat limited by the paucity of research examining social conversations at work. Despite a wide review and an initial identification of 13,083 titles, only 12 studies examined face-to-face or technology-mediated social conversations between employees in a workplace setting. While the studies give some insights into the nature of social conversations at work, there is little evidence to inform our understanding of what predicts social conversations, the benefits of social conversations, or the barriers to social conversations at work. Given the benefits of having good relationships at work, there is a need to better understand the role of social conversations. Four recommendations for future research are presented.

First, there need for a more consistent approach to study design and measurement. Observational, field methods were more prevalent, accounting for seven of the 12 studies¹⁹, and the remaining involved a non-observational (questionnaire) method²⁰. Of the observational studies, all used different methods. Audio recording was more typical than video recording or researcher note-taking. This is understandable given how resource intensive the latter are, both in terms of data collection and analysis. It is also likely to be harder to negotiate organisational access and address ethical considerations, including privacy and informed consent, using these methods. On the one hand, this breadth demonstrates the methodological creativity in the field. It also feels right that such rich data collection methods and qualitative analysis are often used given the subject matter. However, this reliance on rich observational data does limit the literature's consistency and means there is a gap for large-scale

¹⁹ Counting Kirmeyer and Lin (1987) and Kirmeyer (1988) separately.

²⁰ Counting Fay (2011) and Fay and Kline (2012) separately.

quantitative studies. This would move the field beyond descriptions of social conversation at work.

Second, there is some diversity in country of study with two non-Western studies (China and South Africa) and three non-North American studies (France, Switzerland, and New Zealand). Although, the Swiss participants were all French-speaking. This diversity is valuable and provides a richness to the field. However, one must also be aware of differing cultural influences on social conversations in the workplace. This is illustrated by the way that the Chinese business people studied by Yang (2012) interwove social topics into different stages of their business negotiations – to the extent that the author did not define such small talk as distinct from work/ task-related conversations. Further, there were no UK-based studies identified.

Third, there is need for a focus on the outcomes and further explore the benefits of social conversations at work. Despite the increasingly interdependent nature of work, a number of modern working practices, such as virtual and flexible working, the formalisation and over-structuring of work have been found to limit the chances of interactions between colleagues (Pascal, 2003; DeMarco Kuzdeba, 2016). The power of unstructured or loosely structured conversations is emerging in the organisational learning literature with the growth of techniques such as knowledge jams, open space technology, and world cafés (e.g. Wilson & Hartun, 2015). According to Rath (2006), office space re-design is an opportunity to encourage the water-cooler effect (i.e. generating ideas and insight through chance conversations at the water point/ cooler). Furthermore, Kraut, Egido, and Galegher (1988) found laboratory scientists collaborated less on publications if their offices were not physically close. However, open-plan design might not be the panacea once thought and can cause social withdrawal, reducing face-to-face interactions by approximately 70% (Bernstein & Turban, 2018). According to Fayard and Weeks (2011), spaces need to balance proximity, privacy, and permission. A focus on outcomes of social conversations at work would help establish the business case for them and a counter-argument to these eroding factors.

Finally, there is an acute need to address the terminological and definitional issues identified by this review. Doing so would go to the heart of the implicit devaluing of

social conversations revealed by the derogatory terms used to describe them. Such terms signal they are “irrelevant to serious workplace business” (Holmes & Marra, 2004, p. 381) and a “peripheral mode of talk” (Coupland, 2000, p. 1). They are dismissed as non-work or work avoidance and discouraged by managers (Fayard & Weeks, 2007) for being costly (e.g. D’Abate, 2005). Ferreira and Eteves (2016) categorise social conversations at work as fulfilling recreational needs (and by omission, not work needs). Bethanis (2007), however, encourages organisations see them as something that can be put to work.

Such a positive reframing could lend itself to anchoring social conversations at work amongst the protective factors offered by colleagues against mental ill-health and workplace loneliness. Murthy (2017), former U.S. Surgeon-General, argues that modern life, and modern workplaces, are creating a loneliness epidemic. Loneliness is the psychological experience of isolation (Weiss, 1973). Drawing from evidence outside the workplace, a meta-analysis of 70 papers addressing 3.4m participants revealed that loneliness increased risk of death by 26% (Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015). Data from four U.S. longitudinal samples identified the effect is comparable to smoking, and is greater than the risk from obesity or physical inactivity (Yang, Boen, Gerken, Li, Schorpp, & Harris, 2016). Social conversations at work might ameliorate workplace loneliness, but employees and organisations will first need to talk about them in a more positive manner.

Conclusion

There were four research questions considered in this review. The first was about the basic nature of social conversations at work, e.g. topics, frequency, and duration. There is a reasonable amount of evidence on these aspects, which is broadly consistent and forms a coherent picture. From it we know that intimate (e.g. divorce and illness) and non-intimate topics (e.g. holidays and sport) are most frequently discussed and that social conversations are less common than work conversations. The second was about outcomes of social conversations and third about predicting people’s involvement in them. The evidence is richer in this regard with a variety of mechanisms and outcome variables studied, including job satisfaction and perceived belonging. This does mean there is little corroboration of

findings as each study tends to open up a new avenue of enquiry. It might be valuable for future research to refine a focus of study and explore it in further detail.

The final research question was about barriers to employee's involvement in social conversations at work. The finding about meeting structures and agendas hint at some of the barriers to social conversations at work – particularly if managers or the meeting chairperson do not allow social time beforehand. However, overall, there is hardly any evidence. There is very little investigation regarding the systematic over-structuring of modern organisational life and the subsequent squeezing out of opportunities for social conversations. The impact of constant organisational change and limited resources (including other people to talk to) is also not addressed in the research. Yet it is clear that social conversations at work do happen; some employees and perhaps some organisations must value them. We do not know the utility they see or, indeed, if social conversations at work are consciously undertaken. These offer fruitful areas of future study, as well as replicating some of the more fundamental findings. Given the range of methods used across the 12 studies, which include niche and small participant samples, a simple method that can be used with a large sample would advance the field. Any future research must address the definitional and conceptual issues present in the existing research body.

This study reviewed the evidence for social conversations at work. Findings suggest intimate (e.g. divorce and illness) and non-intimate topics (e.g. holidays and sport) are most frequently discussed, however the rich variety of methods applied, and mechanisms and outcomes researched, means that there is little corroboration of findings. Meeting structures and agendas could pose barrier to social conversations at work. With the tendency to structuring of modern organisational life and the subsequent squeezing out of opportunities for social conversations, against the back-drop of increased mental ill-health and loneliness at work, there is need to better understand the benefits of social conversations at work, and the ways in which these can most effectively be leveraged.

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ANNEX A: LIST OF STUDY AIMS

Relational aims:

1. Allen et al. (2014): To examine the relationship between pre-meeting talk and meeting effectiveness.
2. Kirmeyer & Lin (1987): To examine the effects of source, direction, and content of communication on perceived social support, using observational records of employees' actual face-to-face interactions with peers and superiors.
3. Tschan et al. (2004): Not stated – surmised from hypotheses: To examine the differences between task-related and private interactions; the influence of organisational and person variables on the occurrence of social interactions; the relationship between job satisfaction and organisational commitment and social interactions.
4. Holleran et al. (2011): To identify objective features of workplace conversations (two types: research and social) that correlate with job disengagement for female STEM faculty members.
5. Lin & Kwantes (2015): To examine the extent to which personality and cultural factors predict participants' perceptions of the importance private interactions in determining performance evaluations and workplace opportunities.
6. Fay & Kline (2012): To investigate impact of informal communication amongst teleworkers on their feelings of organisational identification (OI) and organisational commitment (OC).
7. Fayard & Weeks (2007): To build a theory of the social affordances of informal conversations, i.e. how much the physical and social characteristics of a photocopier room determine social interactions.

Descriptive aims:

1. Fay (2011): To examine the informal communication messages by high-intensity teleworkers with their central office peers to identify themes that emerge through everyday talk.
2. Holmes (2003): To explore some of the problems presented by small talk for workers with intellectual disabilities.

3. Kirmeyer (1988): To examine the quantity and quality of employees' actual interpersonal interactions with peers and supervisors and the stability of these interactions over time.
4. Tönsing & Alant (2004): To identify the social conversation topics discussed by South African workers with disabilities speaking in Afrikaans to aid the development of Augmentative and Alternative Communication (AAC).
5. Yang (2012): To investigate the use of small talk in three interpersonal relationships (business-stranger, business-friend, and business-partner).

PART 3 – WORKING NOT SHIRKING: UNDERSTANDING THE IMPACT OF SOCIAL CONVERSATIONS AT WORK ON WORKPLACE RELATIONSHIP QUALITY, LONELINESS, AND PERFORMANCE: A FIELD INTERVENTION STUDY

ABSTRACT

Background: Social conversations at work allow employees to build social bonds with each other. Establishing the relational importance of social conversations elevates the importance of investigating their role in creating high-quality working relationships. Despite this function, employees can receive implicit and explicit messages about the acceptability of social conversations at work, i.e. whether they are seen as working or shirking. The limiting impact of perceived negative attitudes might be compounded by working practices that minimise chance interactions between colleagues (e.g. virtual and flexible working), which could create the conditions for loneliness at work. Little is known about how to build employees' social conversational skills, and the impact increased social conversations have on individual and work outcomes; a field intervention study provides an opportunity to test this.

Purpose: This study aims to examine the impact of an intervention designed to increase social conversations at work; and examine the impact of social conversations on working relationships, team performance, acceptability of social conversations and loneliness. The following research questions and hypotheses were set: The intervention will lead to a significant increase in participation of social conversations at work (H1). The intervention will lead to significantly higher high-quality working relationships (H2a), higher team performance (H2b), increased acceptability of social conversations at work (H2c), and lower loneliness (H2d) when compared to the Control Group. The greater the acceptability of social conversations at work the stronger the relationships between social conversations and the outcomes (moderated relationship) of high-quality working relationships (H3a), team performance (H3b), and workplace loneliness (H3c). Research question four (RQ4) asked what is the nature of social conversations at work in terms of features such as the topics discussed, the conversational partner, time of day, and relationship to work-related conversations? No hypothesis was set.

Method: A field intervention study was conducted in the UK Civil Service with a pre- (T1) and post-measure (T2). The Intervention Group ($n = 76$) as asked to increase their number of social conversations at work for two weeks. The active Control Group ($n = 70$) completed an unrelated activity that involved completing a workplace social network map. Response rates (after outliers were removed) for the Intervention Group were 91% (T1) and 93% (T2) and 81% and 59% for the Control Group.

Findings: Analysis showed a significant increase in participants' participation in social conversations at work over the intervention period. However, this occurred in both the Intervention and Control Groups, i.e. H1 was partially supported. There was a significant main effect of time for high-quality working relationships (H2a), team performance (H2b), and acceptability of social conversations at work (H2c), but not for loneliness at work (H2d). However, again, the differences were observed in both groups. Therefore H2a – c were partially supported and H2d is not supported. Moderation analysis using the *PROCESS* macro for SPSS showed no significant interaction of acceptability of social conversations at work on outcome variables, i.e. H3a, b, and c were not supported. Analysis for RQ4 showed participants rated social conversations at work as very important, such conversations occur at any time of the working day, participants are equally likely to start the conversation as a colleague, jokes are the most common topic, and superiors are the least likely conversational partner whereas peers inside the team are the most likely partner.

Discussion: The intervention successfully increased participants' involvement in social conversations at work. However, an increase in participation was observed for both groups. Similarly, improvements in outcome variables of high-quality working relationships, team performance, and acceptability of social conversations (but not loneliness at work) were observed, but this occurred for both groups. Whilst it cannot be ruled out that an external event or variable not measured in this study caused the improvements over time, these results offer tentative support for the ability to increase social conversations at work via a simple intervention and for their relationship with improved organisational outcomes. More research is needed to understand the role of acceptability of social conversations at work in these relationships; potentially further developing the prototype scale used in this study. Implications for practice and theory are discussed and limitations identified.

Originality: There are no field interventions of social conversations at work. This study advances the research by investigating key organisational outcomes. This is an under-researched field despite the pervasiveness of such conversations.

Key words: social conversations, relationships, work, chatting, informal conversations, small talk, repeated measures, field intervention study.

INTRODUCTION

Social Conversations at Work Definition and Overview

Social conversations at work allow people to construct, maintain, and strengthen social bonds with their colleagues (Pascal, 2003; Kraut, Fish, Root, & Chalfonte, 1990; Holmes & Marra, 2004). They are variously called small talk, informal communication or interaction, private interactions, and non-work communication. In this study, in line with D'Abate (2005), the term 'social conversations at work' is used. Following Allen, Lehmann-Willenbrock, and Landowski (2014), we define social conversations at work as *conversations involving other members of the company/ organisation, taking place during work time, and addressing non-work topics, i.e. topics that do not have an explicit work or task focus; they are contrasted with work- or task-conversations.*

Surprisingly little is known about this important facet of organisational life. In a systematic literature review of the evidence, Dietmann, Yarker, and Lewis (in preparation) identified over 13,000 studies examining social conversations in some way, but only 12 studies (with ten unique datasets) were robust studies focused on social conversations at work. Findings, although not conclusive given the paucity of research, suggest social conversations at work are seen as more personally meaningful, but might not be associated with greater job satisfaction (Tschan, Semmer, & Inversin, 2004). They were found to be associated with more effective meetings (Allen et al., 2014), a sense of belonging in an organisation (Fay, 2011), identification with the organisation (Fay & Kline, 2012), prosocial behaviour from colleagues, including social and task support (Lin & Kwantes, 2015; Kirmeyer & Lin, 1987), and maintaining relationships (Holmes, 2003). The association with positive workplace relationships is the foundation of this current study.

Theoretical Academic Framework

The systematic literature review conducted by Dietmann et al, (in preparation) highlighted a lack of a unifying underpinning theoretical framework for social conversations at work. Most of the studies identified do not refer to a theory to explain the occurrence or outcomes of social conversations at work. The research area is primarily focused on exploring a specific workplace behaviour. A key future step would be to understand the behaviour change levers employees are using when they engage in social conversations at work as part of their broader social and interpersonal workplace toolkit.

A possible underlying theoretical mechanism could be social identity theory (Haslam, van Knippenberg, Platow, & Ellemers, 2014). Haslam et al (2014) argue in favour of the strong influence of employees' in-groups in organisations. It may be that social conversations with colleagues both reinforce and expand the groups with whom an employee identifies. Somewhat related is social exchange theory (Emerson, 1976), which addresses the processes that govern the transfer of psychological or social resources during social interactions. This would be consistent with the social capital perspective of organisations. An organisation's competitive advantage is not simply the individual employees, but the knowledge and resources embedded in the human and social capital (Randel & Ranft, 2007; Villalonga-Olives & Kawachi, 2017). The social capital perspective encourages us to view the social relationships *between* employees as the asset.

Social Conversations at Work and Working Relationships

Most modern workplaces have opportunities and demands for social conversations with colleagues (Tönsing & Alant, 2004). Getting to know colleagues at an interpersonal level builds a sense of belonging and workplace social inclusion (Randel & Ranft, 2007). Holmes (2003) calls social conversations the "social glue of any workplace" (p. 69). However, employees can take them for granted. Shaw (2002) cautions against the perception that social conversations at work are a merely background hum; asserting that they actually carry the true subject of attention and serve a psychological organising function. Such a ubiquitous component of employees' experience at work merits further investigation.

The importance of social conversations at work and the relationships they foster is further illustrated by the presence of social variables in many models of healthy workplaces (Tschan et al., 2004). Strong links between social variables, in particular social support, and positive outcomes such as job satisfaction, motivation, commitment, turnover, wellbeing, and performance, have been identified (e.g. Viswesvaran, 1999; Rousseau & Aubé, 2010; Michie & Williams, 2003). Associations between workplace relationships and physiological outcomes have also been found (Heaphy & Dutton, 2008). These positive, or high-quality, workplace relationships “. . . promote personal growth, provide a source of friendship, and provide the opportunity to give to others” (Colbert, Bono, & Purvanova, 2016, p. 1219).

Establishing the relational importance of social conversations elevates the importance of investigating their role in creating high-quality working relationships. Ragins and Dutton (2007) define these high-quality relationships as “a reoccurring connection between two people that takes place within the context of work and careers and is experienced as mutually beneficial, where beneficial is defined broadly to include any kind of positive state, process, or outcome in the relationship” (p. 9). High-quality connections or relationships have three key features (Dutton & Heaphy, 2003): greater emotional carrying capacity (i.e. expressing more and a greater range of emotions); greater tensility (i.e. ability to bend and withstand strain); and greater connectivity (i.e. openness to new ideas and generativity, as well as the ability to rebuff behaviours that interfere with generativity).

Attitudes to and Acceptability of Social Conversations at Work

It is reasonable to suggest that the physical, temporal, and psychosocial organisation of work could give employees implicit and explicit messages about the acceptability of social conversations at work, i.e. whether they are seen as working or work avoidance. These attitudes might influence how effectively employees use social conversations to improve their working relationships. Negative messages can manifest through the derogatory terms, e.g. small talk, idle chatter. These trivialise workplace social conversations and position them as irrelevant to serious business (Holmes & Marra, 2004). Cultural norms may imply that getting to know your

colleagues is not done around here. At the extreme, some managers see such conversations as “. . . a source of inefficiency and a noisy distraction from real work” (Fayard & Weeks, 2007, p. 605) and outright prohibit them. Employees who chat are perceived as not working, and worse, shirking their duties. In reality, employees are more likely to discuss work than non-work (Tschan et al., 2004; Kirmeyer, 1988; Kirmeyer & Lin, 1987). Non-work conversations are estimated to only account for 21% of all daily interactions, but do last longer than work conversations (Kirmeyer, 1988; Kirmeyer & Lin, 1987). There has not been an empirical investigation into individual or organisational attitudes, positive or negative, towards social conversations at work. This study aims to address this gap.

Social Conversations at Work and Loneliness

Despite the increasingly interdependent nature of work, a number of working practices, e.g. virtual and flexible working, the formalisation and over-structuring of work, have been found to limit the chances of interactions between colleagues (Pascal, 2003; DeMarco Kuzdeba, 2016). Rath (2006) noted the impact of the physical workspace design and encourages organisations to consider any physical re-design as a chance to encourage the “water cooler effect” (i.e. generating ideas and insight through chance conversations, typically occurring at the water point/cooler) by creating more workplace conversations and opportunities to socialise. Fayard and Weeks (2007) discuss the actions that the organisation can take in designing physical spaces to afford social interactions. Furthermore, Kraut, Egido, and Galegher (1988) found laboratory scientists collaborated less on publications if their offices were not physically close. Unfortunately, open-plan office design might not be the panacea it was once thought – actually hindering interaction between colleagues (e.g. Bernstein & Turban, 2018).

Limited opportunities for chance interactions and social conversations between employees may create conditions for loneliness, even when the workplace is full of people. Loneliness is the perception of social isolation even if it is not objectively the case (Weiss, 1973). Murthy (2017) warns that modern working practices are creating lonely employees, with organisations and society at large facing a loneliness epidemic. A vicious circle may ensue due to the need for self-disclosure in social conversations and relationship building. Loneliness affects people's

patterns of self-disclosure, which then impairs the development of normal social relationships (Solano, Batten, & Parish, 1982). Reviewing the topics discussed in social conversations at work (see Dietmann Yarker & Lewis, in preparation) reveals self-disclosure is an important component. People most commonly discuss intimate, e.g. family news, illness, divorce, and non-intimate topics, e.g. weekend activities, sport, movies, and hobbies, (Allen et al., 2014; Fay, 2011; Fay & Kline, 2012; Fayard & Weeks, 2007; Tönsing & Alant, 2004). Sharing something about yourself with someone else typically elicits reciprocal self-disclosure, which deepens the relationship (Altman & Taylor, 1973). The impact of disjointedness in reciprocal self-disclosure can be observed in employees' conversations involving colleagues with learning disabilities (see Holmes, 2003). Following Murthy's (2017) warning call that modern workplaces might be limiting social interactions and creating lonely employees, this study explores the relationship between loneliness and social conversations at work. Could they offer a simple means of addressing loneliness in organisations? This is a novel, and therefore exploratory, avenue of research in the social conversations at work literature.

Social Conversations at Work and Performance

The relational view of social conversations at work in general, and their impact on high-quality work relationships specifically, is timely. Work has become increasingly interdependent and relationships with colleagues are increasingly suggested as an important part of successful work performance (Colbert et al., 2016). High-quality workplace relationships have been found to play a role in organisational outcomes including learning behaviours (Carmeli, Brueller, & Dutton, 2009), which are likely linked to successful task performance. As people spend most of their time at work (Ragins & Dutton, 2007) and the boundaries between work and non-work identities blur (Ramarajan & Reid, 2013), it leaves more temporal and psychological space for social conversations at work to occur. Allen et al. (2014) recommends managers create this space by encouraging staff to arrive early for meetings, because of the positive impact on meeting effectiveness identified. Bethanis (2007) asks us to view social conversations at work as something that "can be put to work" (p. 17), i.e. used to derive organisational benefit. The impact of social conversations on workplace performance has not previously been investigated. This study will seek to address this gap.

Building Employees' Skills in Social Conversations at Work in a UK Context

This study is the first to investigate if employees can be supported, via an intervention, to increase the number of social conversations at work in a UK context. In doing so, it aims to contribute to the literature in this field in three ways: First, through developing and trialling an intervention to develop social conversational skills. Whilst language is part of what makes us uniquely human (see Richerson & Boyd, 2010), conversation is often described as an art; suggesting it is a skill that needs to be learned and practiced. However, a recent systematic review by Dietmann et al. (in preparation) did not identify any intervention studies that aimed to develop social conversations at work. While there is no direct evidence concerning how to build employees' social conversational skills, studies in this field offer some support for the notion that social conversational skills can be developed. Allen et al. (2014) recommend employees arrive early for meetings to engage in pre-meeting small talk. This suggests these conversations are open to managerial support and role-modelling. Further, there is evidence that neither gender (Holleran et al., 2011) nor personality variables (Tschan et al., 2004) explain the amount of social conversations at work someone engages in. The research involving employees with intellectual disabilities shows social skills are necessary to effectively use social conversations to build workplace relationships (Holmes & Fillary, 2000; Holmes, 2003). Holmes and Fillary (2000) identify exercises for teachers and trainers of people with intellectual disabilities to use to develop some of the basic sociolinguistic skills needed for social conversations at work. To the author's knowledge, no previous studies comment on how employees can increase their number of social conversations at work.

Second, a pre-post study design is employed as they offer an important means of evaluating the effectiveness of training (Birdi & Reid, 2013). Such designs include a time dimension and are able to suggest that the outcome is affected by the intervention (Thiese, 2014). Dietmann et al. (in preparation) identified only two repeated-measures studies concerning social conversations at work (Kirmeyer, 1988/ Kirmeyer & Lin, 1987, and Tschan et al., 2004). Tschan et al. (2004) acknowledge the essentially cross-sectional nature of their design when discussing limitations, because not all variables were collected at multiple time points. In

particular, the social conversations variable was only collected at time two. Therefore, addressing the gap in the literature regarding repeated measures/longitudinal design, as well as an intervention study, is needed.

Finally, conducting the research in the UK Civil Service employees will be a valuable addition to the literature by conducting research in a generalisable, UK organisational context. Most previous research was conducted in Western countries and none involving UK working adults (see Dietmann et al., in preparation). Nearly all involved niche or specific occupational groups, e.g. police call dispatchers (Kirmeyer, 1988; Kirmeyer & Lin, 1987), commodity traders (Yang, 2012), faculty members at STEM²¹ departments (Holleran et al., 2011), or participants with limited work experience, e.g. undergraduates (Lin & Kwantes, 2015) and apprentices (Tschan et al., 2004).

AIMS AND RESEARCH QUESTIONS

This study will investigate the link between social conversations at work and high-quality working relationships. It will expand the existing literature by investigating the impact of social conversations at work on team performance and workplace loneliness. Further, it will examine the role of individual or organisational acceptability of such conversations.

The first research question (RQ1) is whether the social conversations at work intervention is effective in increasing participation in social conversations at work undertaken by the Intervention Group. Hypothesis 1 (H1) is the intervention will lead to a significant increase in participation (as frequency and joining-in) of social conversations at work when compared to the (active) Control Group. The second research question (RQ2) is whether social conversations at work (as prompted via the intervention) are effective in improving high-quality working relationships, reducing workplace loneliness, increasing acceptability of social conversations at work, and increasing team performance over time. Four hypotheses are set: the intervention will lead to significantly higher high-quality working relationships (H2a),

²¹ Science, Technology, Engineering, and Mathematics.

higher team performance (H2b), higher acceptability of social conversations at work (H2c), and lower loneliness (H2d) when compared to the (active) Control Group.

The third research question (RQ3) is the degree to which acceptability of social conversations at work moderates the impact of social conversations at work on the three outcome variables. It is hypothesised that the higher acceptability of social conversations at work the stronger the relationships between social conversations and the outcomes of high-quality working relationships (H3a), team performance (H3b), and workplace loneliness (H3c). The fourth research question (RQ4) is what is the nature of social conversations at work in terms of features such as the topics discussed, the conversational partner, time of day, and relationship to work-related conversations? No hypotheses were set.

METHOD

Design and Procedure

The study was a field intervention study with pre- and post-intervention measures. A call for interest in the research was circulated across seven departments and agencies of the UK Civil Service. Advertisements requested participants to investigate what makes great working relationships in the Civil Service. Participants in the Intervention Group undertook an intervention to increase their number of social conversations at work. Participants in the Control Group undertook an active control activity whereby they reflected on their workplace relationships, but were instructed not to discuss their task with colleagues. Use of an active control aims to overcome claims of placebo effects in research (e.g. Peper & Harvey, 2017). In this research the active control also served to increase face validity and therefore reduce drop-out, because all participants believed they were testing ways of improving workplace relationships. Both groups received a toolkit detailing their task (see intervention section). The toolkits were labelled 'Programme A' and 'Programme B' to give the appearance that participants were trialling different methods of improving workplace relationships.

All volunteers were assigned a unique identifier to maintain confidentiality and anonymity of responses and to match Time 1 (T1) and Time 2 (T2) data. The T1

questionnaire was distributed on 4 March 2019 via Qualtrics with an automatic reminder sent after three days to recipients who had not yet completed. Participants had five working days to complete the survey. All participants undertook a two-week work-based activity during the intervention period. The Intervention Group engaged in social conversations at work and the Control Group undertook an active control involving self-reflection about workplace relationships. Reminders were sent to all participants on day three and day seven of the intervention period. The T2 questionnaire was distributed on 25 March 2019 with the same reminder and deadline schedule as at T1. The text of all emails sent to participants either via Outlook or Qualtrics is shown in **Annex A**. Ethical clearance was received from the Research Ethics Committee of the Faculty of Business and Social Sciences at Kingston University.

The participant information sheet and consent confirmation statements were presented on the first and second page of the questionnaire, and the participant debrief sheet was presented on the last page. The questionnaire was piloted for understandability, presentational clarity, and usability of the online system, which resulted in minor layout and text changes. All volunteers received the same T1 and T2 questionnaires irrespective of group allocation. Unique/ individual links to the online questionnaire were sent using Qualtrics to the participant's email address. To enable matching of T1 and T2 questionnaires a primary and a back-up mechanism was established. The primary mechanism was using the unique identifier assigned to each recipient in Qualtrics. The system records completed responses against the assigned unique identifier and all other identifying information (e.g. email address) can be removed from the dataset. The back-up mechanism was by asking participants to record their email address as a question response in the questionnaire. Again, these were removed from the dataset and only the unique identifier was retained the data. Data spreadsheets were stored securely, accessible only by the researcher, and password protected.

Dziura, Post, Zhaob, Fub, and Peduzzi (2013) state that addressing missing data only during analysis is not a comprehensive approach to the issue. Following a number of recommendations by the National Research Council (2010), the following steps during design were taken to manage missing data in advance. To minimise drop-out, volunteers were kept informed about when the research would start, the

intervention period was not long, and recruitment adverts and participant information sheet accurately described the study to avoid the perception that questions were irrelevant. The questionnaire design was carefully considered to maintain participants' interest and focus. For example, it only took approximately 15 – 20 minutes to complete, the number of questions per page was limited to avoid scrolling down, and a variety of question formats used (e.g. sliding scales, radio boxes, and drag and drop). Survey comprehension, usability, and layout were tested in a pilot stage involving four employees at Organisation A. Any changes to scales resulting from piloting are noted below.

Volunteer Recruitment and Group Allocation

Volunteers were recruited between January and March 2019 using emails and posters (see **Annex B** for an example) via a single point of contact in each organisation. The organisations targeted all had head offices located near Whitehall, London (i.e. the centre of UK government departments). This provided reasonable consistency in the office working environment across the organisations. Volunteers who worked in the head offices were the primary focus of recruitment, but volunteers were accepted from across the organisation.

All volunteers from Organisation A were assigned to the Intervention Group and volunteers from all other organisations combined (six in total) were assigned to the Control Group. This was done, because the Intervention Group's task involved conversations with colleagues. If participants from Organisation A had been assigned to both the Intervention and Control Groups there would have been a chance people in the former would have social conversations with people in the latter, thus contaminating the groups (Simmons et al., 2015). Contamination in an intervention study is when participants in the control arm of the study are exposed to the treatment used in the intervention condition, thereby contaminating the initial randomisation procedure and increasing the risk of a Type II error (Simmons et al., 2015). Confining the Intervention Group to one organisation nearly completely eliminated this risk. It was highly unlikely that employees in Organisation A would have any contact with employees in the other organisations given their areas of work.

Measures

The questionnaire is shown at **Annex C**. The measures and items are described below.

Social Conversations at Work: Four sub-scales were included: *Importance:* Adapted from the questionnaire used by Fay (2011), respondents were asked to rate how important social conversations at work are to them on a 1 – 5 scale: not at all important (1), slightly important (2), moderately important (3), very important (4), extremely important (5). *Frequency:* Respondents were asked for a global estimate of how frequently they take part in social conversations in a typical two weeks at work on a 0 – 5 scale: Never (0), 1 or times a week (1), 3 or 4 times a week (2), once a day (3), 2 – 5 times each day (4), 5+ times each day (5). *Topics:* Using topics identified by Dietmann et al. (in preparation), respondents were then asked to consider their social conversations at work over the last two weeks. They provided information on the frequency of discussing ten topics (plus 'other') on a 0 – 4 scale: Don't remember (0), never (1), rarely (2), sometimes (3), a lot (4). The approach of assessing conversation topics was modelled after Allen et al. (2014) and Tschan et al. (2004), drawing on the Rochester Interaction Record (Reis & Wheeler, 1991). *Conversational Features:* Further questions about the last two weeks addressed the typical conversation partner, usual time of day of the conversation, who started the conversation, how much participant joined in the conversation, and how the conversation fitted into work-related conversations.

Acceptability of Social Conversations at Work: A bespoke 12-item scale on the acceptability of social conversations at work was developed for this study with two subscales: individual acceptability (six items) and organisational acceptability (six items). No known scales of acceptability of social conversations at work were identified. The items were found to be clearly understood during piloting. The items were generated based on the previous literature including positive outcomes of social conversations at work (e.g. getting to know colleagues, making work enjoyable) and some negative perceptions of such conversations (e.g. engaging in social conversations is work avoidance). Responses were asked to rate their agreement with items on a 1 – 7 scale: strongly disagree (1), disagree (2), somewhat

disagree (3), neither agree nor disagree (4), somewhat agree (5), agree (6), strongly agree (7). Items 2, 4, 6, 7, 11, and 12 were reverse coded. Scores are summed to generate a scale score. Example items: It's important to get to know my colleagues/ We are encouraged to get to know each other at work. Scale reliability in the current study was $\alpha = 0.89$ (T1)/ 0.85 (T2).

High-quality Working Relationships: 20 items on the quality of working relationships taken from Carmeli et al. (2009) rated on a 1 – 5 scale with only 1 (not at all) and 5 (extremely) anchored. Scores are summed to generate a scale score. This scale was selected because it is the scale associated with the model of high-quality working relationships used in this study (Dutton & Heaphy, 2003) and measures five sub-scales²²: the emotional carrying capacity of the relationship (five items), tensility, i.e. the capacity of the relationship to bend and withstand strain, (four items), openness-based connectivity of a high-quality relationship (four items), sense of positive regard (three items), and mutuality, i.e. the subjective experience of high-quality relationships (four items). Scale reliability obtained in the current study was $\alpha = 0.89$ (T1)/ 0.85 (T2). Three items were adapted following the pilot (original wording in square brackets): We are very open to diverse opinions [influences], views, and beliefs, even if they come from unconventional sources, such as new employees, customers, etc/ We are open [attentive] to new opportunities that can make our work [system] more efficient and effective/ The relationship between my co-workers and myself is based on reciprocity [mutuality].

Loneliness at Work: 16 items on perceived loneliness at work taken from Wright, Burt, and Strongman (2006) rated on a 1 – 7 scale: strongly disagree (1), disagree (2), somewhat disagree (3), neither agree or disagree (4), somewhat agree (5), agree (6), and strongly agree (7). Scores are summed to generate a scale score. This scale was selected because it is was the only empirically-derived scale of workplace loneliness identified (other scales of social/ non-work loneliness exist). It measures two-subcales: emotional deprivation of being lonely (nine items²³) and social companionship (seven items²⁴). Items 1, 2, 7, 11, 13, 14, 15, 16 are reverse

²² Emotional carrying capacity: items 1 – 5 in the questionnaire, tensility: items 6 – 9, connectivity: items 10 – 13, positive regard: items 14 – 16, and mutuality: items 17 – 20.

²³ Items 3, 4, 5, 6, 7, 8, 9, 10, 16 in the questionnaire.

²⁴ Items 1, 2, 11, 12, 13, 14, 15 in the questionnaire.

coded. Scale reliabilities obtained in the current study were $\alpha = 0.89$ (T1 & T2)/ and 0.82 (T1)/ 0.85 (T2). Example items: I often feel abandoned by my co-workers when I am under pressure at work/ I often feel alienated from my co-workers.

Team Performance: Seven items of perceived team performance rated on a 1 – 7 scale: strongly disagree (1), disagree (2), somewhat disagree (3), neither agree or disagree (4), somewhat agree (5), agree (6), and strongly agree (7). Scores are summed to generate a scale score. Three items were adapted from Schaubroeck, Lam, and Cha (2007), which was also used in their earlier research (e.g. Lam, Schaubroeck, & Brown, 2004; Man & Lam, 2003): The team I'm part of is very competent/ The team I'm part of gets its work done very effectively/ This team I'm part of has performed its job well. Four items were adapted from Maynard, Mathieu, Rapp, and Gillson (2012), which has also been used in Lyubovnikova, Legood, Turner, and Mamakouk (2017). These items were: The team I'm part of makes use of the skills of the different team members/ The team I'm part of is effective in generating ideas for projects/ The team I'm part of is effective at coordinating activities/ The team I'm part of is effective in developing its projects. The two sets of items were used to combine a focus on perceptions of effective delivery of outcomes and working well together as a team. The overall scale reliability obtained in the current study was $\alpha = 0.95$ (T1)/ 0.93 (T2).

Demographics: Respondents were asked whether they work part-time or full-time, their total number of years working since leaving full-time education, seniority level, country in which they are based, age, gender identity, ethnic origin, and highest educational level. Finally, respondents were offered a space to make any final comments including describing a recent social conversation at work. These questions were only asked at T1 given the short duration between the two questionnaires it was reasoned that there would be little change in the data.

Intervention & Active Control Design and Theoretical Underpinnings

Intervention Group: The Intervention Group's task was to "start and take part in as many social conversations at work as possible over the following two weeks". Social conversations at work were described as involving other members of the company/ organisation, taking place during work time, being about non-work topics (i.e. not

about your job or tasks you have to do, or about the organisation you work for), and typically done face-to-face, but can be done via technology (e.g. telephone, instant messenger, email). Participants were emailed an interactive PowerPoint toolkit (see **Annex D**), which explained the task and gave supporting resources.

A digital intervention was used. This aimed to afford people who were more cautious about social conversations a low-threat means of trying new skills under their own terms. A workshop, for example, would have required face-to-face interaction before the intervention started, which could put some people off. A challenge where participants collected points (described in the next paragraph) allowed for a very gradual skills development, e.g. one of the early steps was to “smile at and make eye contact with someone at work you hardly know”. The toolkit also had the advantage of accommodating the geographical spread of the participants as well as the fact they would not have been afforded the time or travel costs to attend a workshop.

The toolkit detailed the task, a reminder of the research, and information about social conversations at work, e.g. types of topics, opportunities for such conversations, and suggested openings and endings for their conversations. These were provided to give inspiration for how respondents might achieve the intervention task. Links were provided to online resources as further support, e.g. articles/ blogs, videos, and a social network mapping tool (see Control Group Activity for details). Based on goal-setting theory (Locke & Latham, 1979), participants were encouraged to set goals on the opportunity to have a social conversation (e.g. when making a cup of tea), the topics they will converse about, and the conversational partner (e.g. the neighbouring team). Recent research shows that writing goals down is particularly effective for their attainment (Travers, Morisano, & Locke, 2015). There was space in the toolkit for participants to record their goals electronically. Drawing on the psychology of rewards (e.g. Bandura, 1977), a social conversations points challenge was also created, which included tasks of increasing difficulty to acquire more points (e.g. smiling at someone vs talking to a stranger). Participants could electronically tick the completed challenges in the toolkit.

Active Control Group: Participants in the active Control Group were emailed a similarly designed interactive PowerPoint toolkit (see **Annex E**). They were asked

to complete a workplace social network mapping tool (see **Annex F**) and reflection questions over the following two weeks. They were told not to discuss the task with colleagues. The social network mapping tool was chosen because it was plausibly related to improving workplace relationships, but did not involve talking to colleagues. It was created for this study based on a coaching tool. There was space in the toolkit for participants to record their reflection notes as well as a reminder of the research. Links were provided to online articles/ blogs and videos to give inspiration and ideas for achieving the task.

RESULTS

Analytic Strategy

There were four stages in the analytic strategy. Before the main analyses were done, preliminary analyses were conducted. These included randomisation checks and response rate tracking, data inspection, addressing missing data, and conducting a confirmatory factor analysis on the new scale for acceptability of social conversations at work. Apart from the use of the *PROCESS* macro (version 3.3; Hayes, 2018) and AMOS (Arbuckle, 2014), all analyses were conducted using SPSS Version 24 (IBM Corp, 2016). For convenience, a look-up table of acronyms used throughout the results section is shown below (see **Table 1**).

Table 1: Variable acronym look-up table

Variable Name	Variable Acronym	Research Question
High-quality Working Relationships	HQWR	2, 3
Loneliness at Work	LAW	2, 3
Team Performance	TP	2, 3
Acceptability of social conversations at work	A-SCAW	2, 3
Frequency of social conversations at work	F-SCAW	1, 2, 3
Joining-in social conversations at work	J-SCAW	1, 2, 3
Importance of social conversations at work	I-SCAW	4
Time of day of social conversations at work	T-SCAW	4
Who started the social conversations at work	W-SCAW	4
How the social conversation usually fits into work-related conversations	S-SCAW ²⁵	4

²⁵ 'S' stands for 'sequence' instead of 'fits in', because F-SCAW refers to frequency.

The first analysis stage involved preliminary data screening and analysis. It included exploration of missing data. Advice about addressing missing data during analysis continues to emerge. A more recent development is multiple imputation (MI). Van Ginkel, Linting, Rippe, & van der Voort (2019) recently rebutted misconceptions of using MI across all types of missing data. Tabachnick and Fidell (2013) state the advantages of MI include its application to longitudinal data and retention of sampling variability, and it makes no assumptions about randomness of missing data. In the present study, MI was selected for the reasons cited by Tabachnick and Fidell (2013) and was preferred over list-wise deletion (an alternative approach to missing data) in order to preserve sample size. This decision was further supported by the evidence that removing cases with high missing data did not change the pattern of missingness (see missing data exploration below). Data were not imputed for F-SCAW, because no missing data were present. The remaining variables in the questionnaire are reported at the descriptive level and not used in statistical analyses – they were, therefore, not imputed.

Missing data were imputed for LAW, HQWR, TP, A-SCAW, and J-SCAW using the automatic MI process in SPSS Version 24 (IBM Corp, 2016) with five imputations, 100 iterations, and automatic scanning for monotonicity. To set the random seed, the Mersenne Twister random number generator programme was used with a fixed value starting point of 200,0000. A data file containing the pooled data of the five imputations was created and the other (unmodified) variables copied into it to create an overall data file for analysis. All analysis described below using the key variables are conducted on the pooled MI data.

In stage two, two 2 x 2 repeated measures multivariate analysis of variance (RM MANOVA) were conducted. Group (Intervention versus Control) served as the between-subjects factor and time (T1 and T2) as the within-subjects factor. This approach was selected, because it assesses for both statistically significant differences between groups and across time on the outcome (dependent) variables. An alternative approach for assessing group differences is a multivariate analysis of covariance²⁶, but it does not look at the difference between T1 and T2. The first RM

²⁶ Assessing group differences in T2 scores with T1 scores as covariates.

MANOVA assessed frequency of social conversations at work (F-SCAW)²⁷ and joining in social conversations at work (J-SCAW)²⁸ to assess **RQ1 and test H1**. The mean correlation²⁹ between J-SCAW and F-SCAW across both time points is $r = .452$, i.e. a moderate correlation. The variables are therefore used as individual measures of the intervention to retain measurement sensitivity. The second RM MANOVA assessed the dependent variables: high quality working relationships (HQWR), loneliness at work (LAW), acceptability of social conversations at work (A-SCAW)³⁰, and team performance (TP). This assessed **RQ2** and tested **H2a, b, c, and d**.

Stage three aimed to understand the conditions under which the relationship between social conversations and outcomes occurs, specifically exploring the role of A-SCAW as a moderator. This assessed **RQ3** and tested **H3a, b, and c**. This was assessed using the *PROCESS* macro (Hayes, 2018). Fields (2018) recommends using *PROCESS* over the standard SPSS menu, because it centres the predictors, automatically computes an interaction term, and produces a simple slopes analysis. First, a change in F-SCAW and J-SCAW score variable was computed to capture the effect of the intervention. These two change variables were not significantly correlated ($r = .074$, $p = .474$) and were therefore retained as separate variables. This was entered as the independent variable. Next A-SCAW T2 was entered as the moderator. Next the dependent variables TP, HQWR, and LAW at T2 were entered, and then these variables at T1 were entered as covariates. The simple moderation model 1 was selected. The means were centred, 5000 bootstrap samples were used, and conditioning was set at -1 SD, mean, and +1 SD. The code for the data visualisation was also generated in order to produce the simple slopes.

The final analysis stage involved calculating descriptive statistics of variables associated with the nature of social conversations at work (i.e. assessing **RQ4** – no

²⁷ Described in Method section under 'Measures' > 'Social Conversations at Work' > 'Frequency'.

²⁸ Described in Method section under 'Measures' > 'Social Conversations at Work' > 'Conversational Features'.

²⁹ Calculated by computing Fisher's z score for each correlation between J-SCAW and F-SCAW at T1 and T2, calculating the mean z score, and back-computing from Fisher's z score to correlation coefficient.

³⁰ Described in Method section under 'Measures' > Acceptability of Social Conversations at Work Scale.

hypotheses set). No statistical tests were undertaken, because this was a descriptive research question.

Preliminary Analyses

i. Response Rates, Randomisation Check, and Sample Description³¹

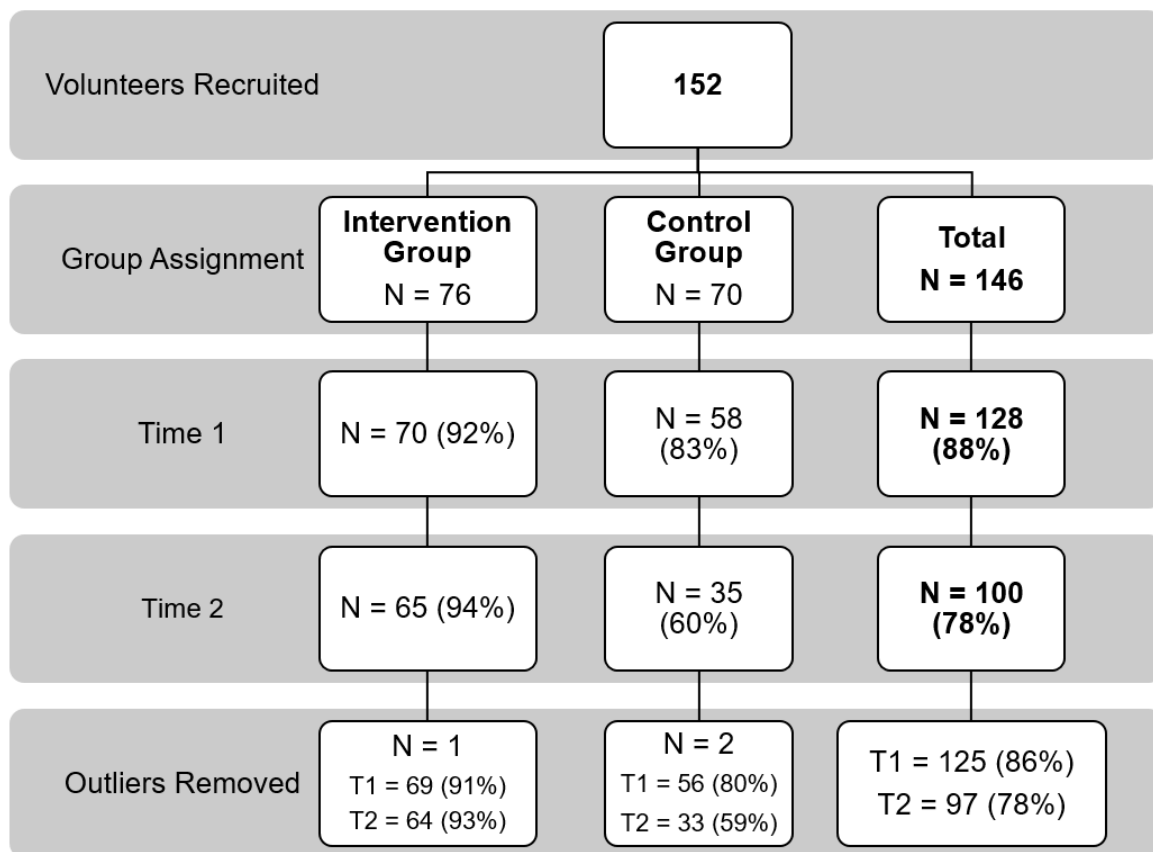
The total response rate was 88% at T1 and 79% at T2³². The number of participants at each research stage is shown in **Figure 1**. (See Data Inspection for an explanation of the removal of outliers.) Participant attrition resulted from participants failing to complete either questionnaires by the deadline. To check the impact of demographic variables on attrition, chi-square tests of independence were performed examining the relationship between T2 completion (yes/ no) and gender, ethnicity (White/ Non-white), and age (above mean/ below mean)³³. The relationships were not significant for gender ($\chi^2 = 0.21$, $df = 1$, $p = .643$); ethnicity ($\chi^2 = 2.14$, $df = 1$, $p = .143$), or age ($\chi^2 = 0.05$, $df = 1$, $p = .823$), suggesting demographic characteristics did not affect drop-out rates.

³¹ Percentages reported in this section are valid percentages, i.e. taking account three missing data points across the demographic variables.

³² Six volunteers withdrew before assignment to group (no reason given).

³³ Using the same demographic variables as in the randomisation checks.

Figure 1: Participant numbers at each research stage



To check the group assignment procedure, chi-square tests of independence were performed examining the relationship between group (Intervention or Control) and gender (Male/ Female)/ ethnicity (White/ Non-White)/ age (above mean/ below mean).³⁴ The relationships were not significant: gender ($\chi^2 = 0.38$, $df = 1$, $p = .539$) / ethnicity ($\chi^2 = 0.10$, $df = 1$, $p = 0.749$) / age ($\chi^2 = 0.06$, $df = 1$, $p = .810$), suggesting randomisation was achieved.

Participants' primary work location was England (98%); most were female (78.7%)³⁵, worked full time (84.4%), and were White (78.7%) with 11.5% Asian/ Asian British. The mean age was 44.45 years (SD = 10.50 years; min. = 20 years; max. = 62 years) and the mean number of years since leaving full time education was 24.35 years (SD = 11.40, min = 0 / max = 45). Further, 43.8% had graduated from a Further Education college or university, 16.5% finished secondary education

³⁴ To create 2x2 analyses variables were re-coded in the following ways: gender variable that removed the one 'prefer not to say' response, ethnicity variable of White/ Non-White, age variable of age high (mean and greater) and age low (mean and lower).

³⁵ One respondent (0.8%) selected 'prefer not to say'.

with GCSEs or equivalent, 15.7% finished secondary education with A' Levels or equivalent, 6.6% started Further Education without completing, 15.7% had a Masters qualification, and 1.7% had no formal qualifications. Participants were most commonly middle management (45.4%), 32.8% were upper middle management, 9.2% first level management, 7.6% entry level staff, and 5.0% were senior managers.

ii. Missing Data

Missing data were addressed at both design (previously described) and analysis stages. Missing data were visually inspected across the whole dataset. Whilst there were more missing data at T1 than T2 (possibly reflecting commitment to complete the research programme and item familiarity by T2), participants were careful to complete most of the questions. Most respondents (81.3%) had five or fewer missing values across the 79 items of the main questionnaire (i.e. excluding demographic questions). Exploring the key study variables (see **Table 2**) showed that the F-SCAW item had no missing data at T1 or T2. Further, the LAW items had the most missing data (at both time points); likely reflecting the sensitivity of the items. The TP and A-SCAW items had more missing data points at T1 than T2, due to three participants who omitted 50 – 100% of the items for these scales.

Table 2: Number of missing data points for key variables

Variable (Number of items)	Total Missing Data Points		N with % of Missing Data (T1)				N with % of Missing Data (T2)			
	T1	T2	1- 5%	6- 10%	11- 20%	20+%	1- 5%	6- 10%	11- 20%	20+%
HQWR (20)	2	11	2	-	-	-	1	-	-	1
LAW (16)	151	139	-	13	5	18	-	12	7	14
TP (7)	28	2	-	-	1	3	-	-	2	-
A-SCAW (12)	31	26	-	1	-	3	-	2	-	2
J-SAW (1)	5	4	N/A single item				N/A single item			
Total	217	182	2	14	6	24	1	14	9	16

Most participants had fewer than ten missing data points. An initial conservative benchmark of 30% missing per participant was set for further investigation. Four participants met/ nearly met the benchmark – two at T1 and two at T2 (range of 29%

– 56%). The next nearest percentage missing was 23%, suggesting the benchmark was reasonable. The impact of these participants was further explored through Little’s test of missing at random conducted on the item-level T1 and T2 data for the key study variables – except F-SCAW, which did not have any missing data. Results of the Little’s test are shown in **Table 3**. These show that missing data within HQWR T1 and T2, TP T2, and A-SCAW T1 were missing completely at random. The pattern of results is broadly consistent with the pattern of high missing values identified in the visual inspection. These tests were re-run excluding the four cases who met/nearly met the 30% benchmark. This did not change the results, suggesting participants with high missing data did not unduly influence the pattern of missing data. Further, deleting all but one missing data point on TP T1 did not change the Little’s test from significant to non-significant; likely due to the short length of the scale. All participants were, therefore, retained at this stage.

Table 3: Little’s test of missing completely at random

Scale	Little’s Test Results			
	T1	MCAR	T2	MCAR
HQWR	$\chi^2 (38) = 51.719, p>0.05$	✓	$\chi^2 (48) = 44.918, p>0.05$	✓
LAW	$\chi^2 (262) = 340.304, p<0.05$	✗	$\chi^2 (265) = 347.212, p<0.05$	✗
TP	$\chi^2 (6) = 29.463, p<0.05$	✗	$\chi^2 (12) = 3.056, p>0.05$	✓
A-SCAW	$\chi^2 (17) = 26.898, p>0.05$	✓	$\chi^2 (22) = 60.921, p<0.05$	✗

MCAR = Missing completely at random.

iii. Data Inspection

Mahalanobis distances for outliers were calculated. The scores for three³⁶ cases exceeded the cut-off for five dependent variables (20.52): 43.60, 34.01, and 30.01. These cases were removed. Means and standard deviations of key variables for the final paired sample are shown in **Table 4**. The mean scores improved over time for both groups across all variables except LAW, which improved (i.e. mean score decreased) only for the Intervention Group and actually slightly worsened for the Control Group. HQWR shows the greatest improvement and two measures of participating in social conversations at work (F-SCAW and J-SCAW) show the least.

³⁶ One of these cases was the respondent with 42% T2 missing data and another with 29%. Whilst these participants were not removed due to their missing data, they were removed as outliers.

Table 4: Means for key variables

	Intervention Group		Control Group	
	T1 Mean (SD)	T2 Mean (SD)	T1 Mean (SD)	T2 Mean (SD)
HQWR	57.89 (9.70)	61.09 (9.25)	53.00 (10.14)	56.76 (11.22)
LAW	39.06 (13.56)	38.29 (13.96)	40.52 (14.98)	41.63 (16.18)
TP	41.72 (6.41)	43.54 (5.89)	39.64 (6.44)	40.24 (5.67)
A-SCAW	70.14 (7.20)	72.29 (8.23)	70.18 (9.36)	71.73 (9.54)
F-SCAW	3.53 (1.17)	3.81 (1.10)	3.73 (1.11)	3.76 (1.17)
J-SCAW	3.69 (0.77)	3.92 (0.81)	3.66 (0.83)	3.76 (0.83)

T1 = Time 1. T2 = Time 2. Intervention Group $n = 64$. Control Group $n = 33$

Multiple imputation pooled data reported, except for F-SCAW for which original data are reported (multiple imputation was not applied, because no missing data). Maximum scale scores: HQWR = 100 (20 items x 5 scale points), LAW = 112 (16 items x 7), TP = 49 (7 items x 7), A-SCAW = 84 (12 items x 7), F-SCAW = 5 (1 item x 5; no one reported 0 option), J-SCAW (1 item x 5).

Table 5 shows the correlation matrix of the key variables and age, gender, and tenure. The key variables were significantly correlated with each other. Gender and tenure were not significantly correlated with any key variables, age was significantly negatively correlated with HQWR at both time points ($r = -.209$ (T1)/ $r = -.207$, $p < .05$). Given there was only one significant relationship between a demographic and a key variable, age was not used as a covariate when testing hypothesis 2 because all the dependent variables were entered together rather than independently.

To assess if assumptions regarding normality and linearity for the planned analyses were met, histograms, box plots, Q-Q plots, and skewness and kurtosis statistics were examined. Normality and linearity for all variables were within acceptable limits, with some evidence of a negative skew for A-SCAW T2. Removing the outliers addressed this and improved the normality and linearity of all the variables. The histogram for the TP Intervention Group had a high final column, in an otherwise normal distribution, suggesting a ceiling effect with a number of participants selecting the highest score. Removing the outliers did not correct this.

Table 5: Correlation matrix of key variables and age, gender, and tenure

Variable		1-1	1-2	2-1	2-2	3-1	3-2	4-1	4-2	5-1	5-2	6-1	6-2	7	8	9
1. HQWR	T1 (1-1)	-														
	T2 (1-2)	.738**	-													
2. LAW	T1 (2-1)	-.568**	-.530**	-												
	T2 (2-2)	-.519**	-.642**	.801**	-											
3. TP	T1 (3-1)	.521**	.544**	-.468**	-.476**	-										
	T2 (3-2)	.491**	.579**	-.471**	-.470**	.683**	-									
4. A-SCAW	T1 (4-1)	.343**	.442**	-.555**	-.592**	.675**	.436*	-								
	T2 (4-2)	.540**	.592**	-.662**	-.648**	.467**	.559**	.809**	-							
5. F-SCAW	T1 (5-1)	.333**	.248*	-.531**	-.469**	.320**	.306**	.469**	.596**	-						
	T2 (5-2)	.447**	.472**	-.570**	-.541**	.391**	.402**	.566**	.690**	.734**	-					
6. J-SCAW	T1 (6-1)	.311**	.294**	-.473	-.510**	.252**	.245*	.395**	.492**	.372**	.435*	-				
	T2 (6-2)	-.570**	.412**	-.490**	-.558**	.181	.336**	.466**	.555**	.425**	.564**	.603**	-			
7. Age		-.209*	-.207*	.084	.072	.027	.024	-.140	-.134	-.094	-.063	-.085	-.184	-		
8. Gender		-.048	.002	.074	-.031	.100	.116	-.100	-.047	.109	.007	-.123	-.062	-.060	-	
9. Tenure		-.166	-.063	.022	-.069	.099	.164	-.037	-.020	-.059	.012	.013	-.018	.908**	-.058	-

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

NB. Tenure is measured as number of years since leaving full time education.

It was further explored by removing each item in turn from the TP scale and replotting the histograms; they remained similar. On balance, it was decided not to transform the TP scale, because the anomaly only existed for the Intervention Group and transformation applies to the whole dataset. Further, the Q-Q and box plots were acceptable and the scale reliability was strong.

To check for significant differences in key outcome variables at T1 between the two groups a MANOVA was conducted. There was a statistically significant main effect of group on the combination of dependent variables at T1 ($F(6, 118) = 2.673, p = .018$; Wilks' $\Lambda = 0.880, \eta^2 = .120$). No significant effect of group on T1 outcomes were found for LAW ($F(1, 123) = 3.270, p = .073, \eta^2 = .026$), A-SCAW ($F(1, 123) = 0.007, p = .934, \text{partial } \eta^2 = .000$), TP ($F(1, 123) = 3.207, p = .076, \eta^2 = .025$), F-SCAW ($F(1, 123) = 0.157, p = .692, \eta^2 = .001$), or J-SCAW ($F(1) = 3.493, p = .064, \eta^2 = .028$). A significant between groups difference was found for HQWR T1 ($F(1) = 7.837, p = .006, \eta^2 = .06$). The impact of this was minimised by selected analytic strategy, which addressed change over time between groups rather than only group comparison.

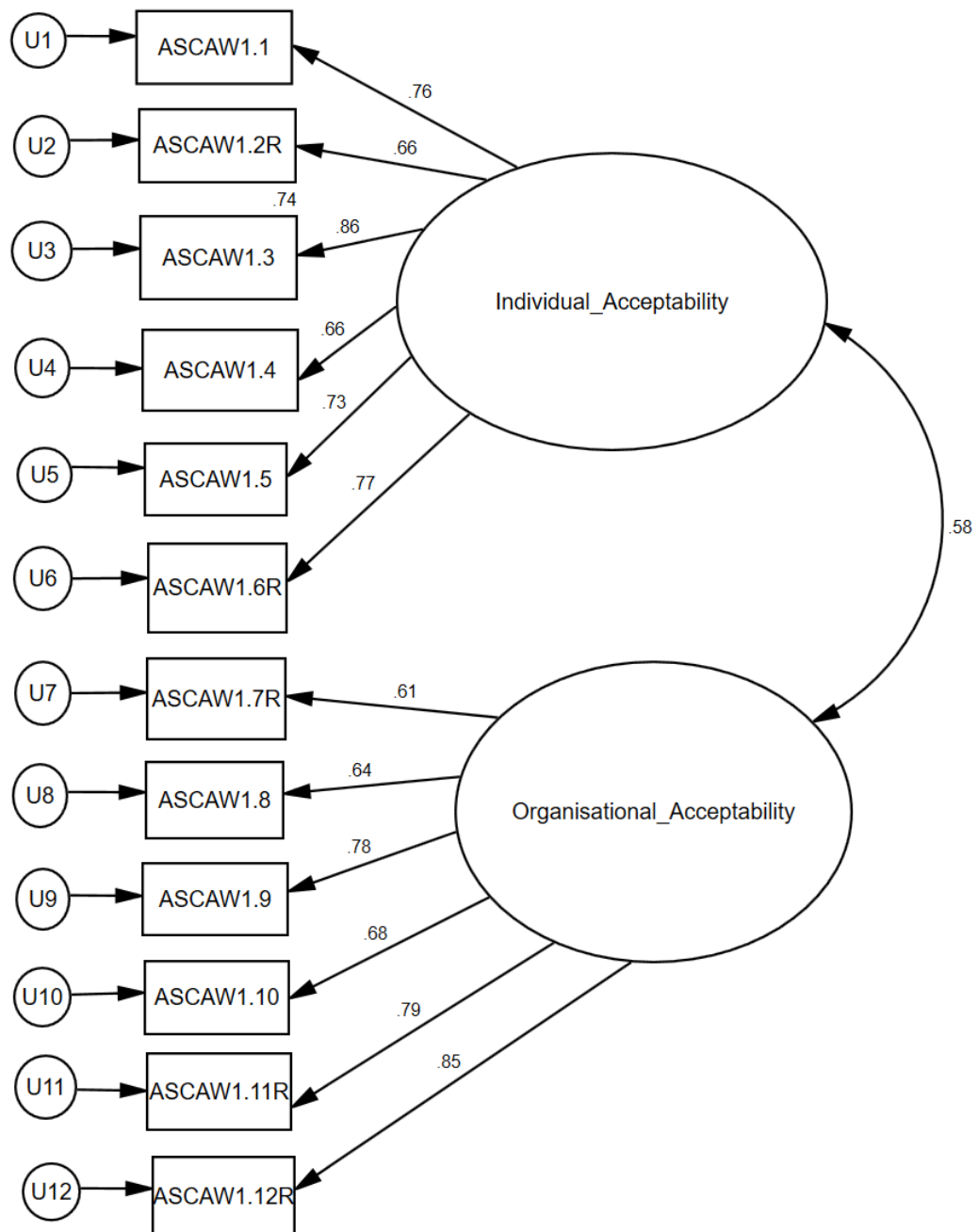
iv. Confirmatory Factor Analysis of Acceptability of Social Conversations at Work Scale

Confirmatory factor analysis (CFA) was conducted to investigate the factor structure of the newly developed measure of A-SCAW³⁷ using AMOS (Arbuckle, 2014). The model fit was assessed via the chi-squared, the Comparative Fit Index (CFI), Aggregated Goodness of Fit Index (AGFI), Tucker-Lewis Index (TLI), and the root-mean-square error of approximation (RMSEA). A non-significant chi-squared, CFI values of .90 or greater, AGFI values of .80 or greater, TLI values of close to .95, and RMSEA values of close to .06 indicate good fit (Hu & Bentler, 1999). The fit indices for the specified model were ($\chi^2 = 107.519, df = 53, p < .001$; CFI = .927, AGFI = .807, TLI = .909, RMSEA = .091). Chi-squared is preferred to be non-significant to indicate a good fit of the model, but the CFI and AGFI indices suggest a good fit, and TLI is approaching the good fit cut-off. Overall, these indices give

³⁷ T1 data was used to test the model so as to avoid any impact of familiarity when completed at T2.

reasonable indication of good construct validity of the A-SCAW scale. The factor loading values of all items in the CFA ranged from 0.61 to 0.86 (see **Figure 2**).

Figure 2: Confirmatory factor analysis standardised model for A-SCAW T1



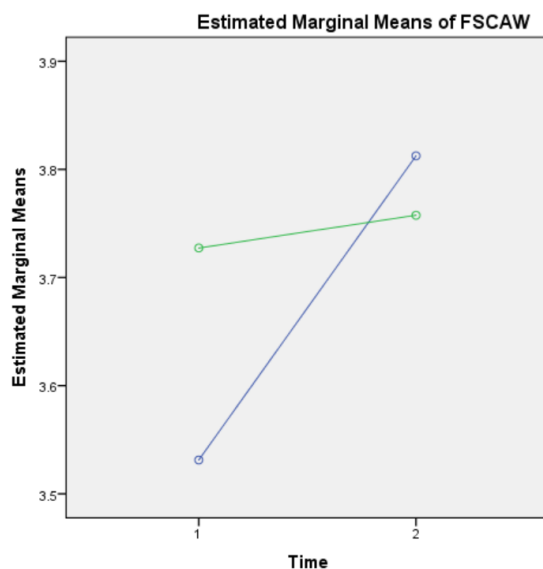
All paths significant at $p < .001$ level.

Research Question & Hypothesis Testing

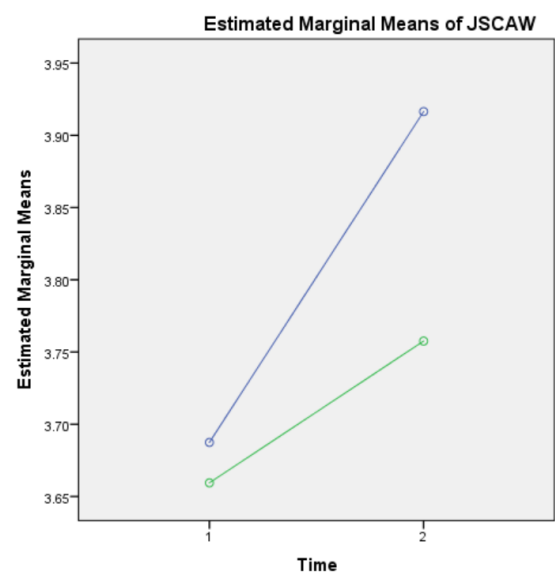
i. Hypothesis 1: Participation in Social Conversations at Work Analysis

H1 stated the intervention will lead to a significant increase in participation (as frequency, F-SCAW, and joining-in, J-SCAW) of social conversations at work for the Intervention Group when compared to the Control Group. A RM MANOVA was conducted to test this. Analyses revealed no significant overall group by time interaction when both participation variables were included ($F(2, 94) = 1.30, p = .277$; Wilks' $\Lambda = 0.973, \eta^2 = 0.027$). Univariate tests also indicated there was no significant main effect of group on the frequency of taking part in social conversations at work (F-SCAW; $F(1, 95) = 2.04, p = .157, \eta^2 = 0.021$) or level of joining-in social conversations at work (J-SCAW; $F(1, 95) = 0.73, p = .394, \eta^2 = 0.008$). There was a significant main effect of time on J-SCAW ($F(1, 95) = 4.58, p = .035, \eta^2 = 0.046$) and for F-SCAW it was approaching significance $F(1, 95) = 3.14, p = .080, \eta^2 = 0.032$). These are illustrated in **Graphs 1** and **2**. Therefore, H1 is partially supported. There was a significant change over time in J-SCAW scores and an approaching-significant change in F-SCAW scores. These scores, however, increased for both the Intervention and the Control Groups.

Graph 1: Profile plot for F-SCAW



Graph 2: Profile plot for J-SCAW

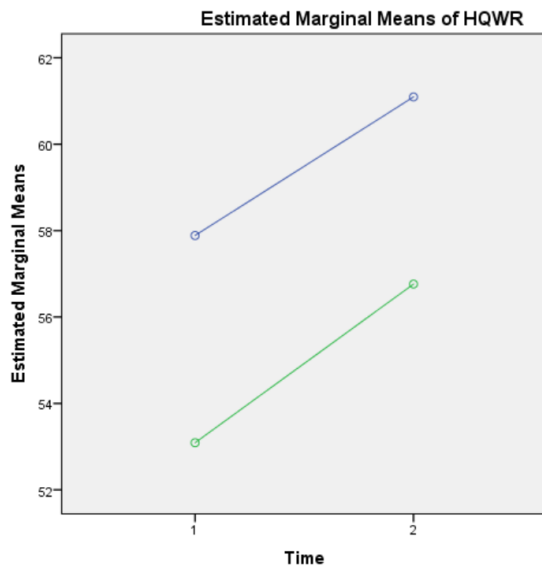


— Intervention Group — Control Group

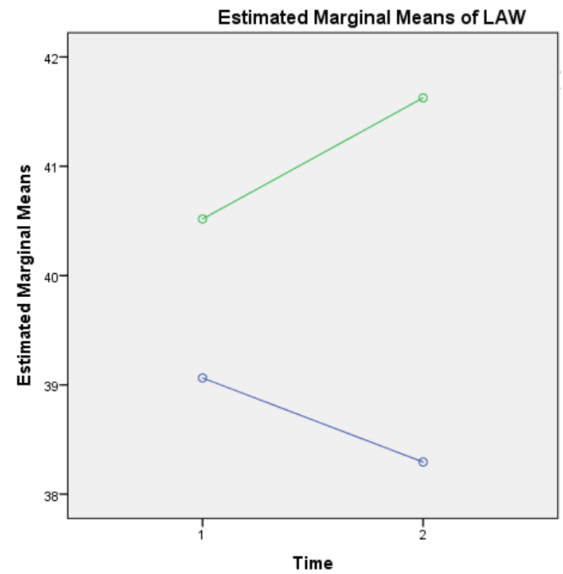
ii. Hypothesis 2a – d: Organisational Outcomes Analysis

H2 stated the intervention will lead to significantly higher high-quality working relationships (H2a), higher team performance (H2b), higher acceptability of social conversations at work (H2c), and lower loneliness at work (H2d) when compared to the Control Group. A RM MANOVA was conducted. Analyses revealed no significant overall group by time interaction when all dependent variables were included ($F(4, 92) = 0.86, p = .492$; Wilks' $\Lambda = 0.964, \eta^2 = 0.036$). Univariate tests indicated there was no main effect of group on HQWR ($F(1, 95) = 0.087, p = .769, \eta^2 = 0.001$), LAW ($F(1, 95) = 0.925, p = .339, \eta^2 = 0.010$), TP ($F(1, 95) = 1.298, p = .258, \eta^2 = 0.013$), or A-SCAW ($F(1, 95) = 0.290, p = .591, \eta^2 = 0.003$). There was a significant main effect of time on HQWR ($F(1, 95) = 19.105, p < .0001, \eta^2 = 0.167$), TP ($F(1, 95) = 5.188, p = .0001, \eta^2 = 0.167$), and A-SCAW ($F(1, 95) = 10.978, p = .001, \eta^2 = 0.104$). These are illustrated in **Graphs 3 – 6**. However, there was no significant main effect of time on LAW ($F(1, 95) = 0.030, p = .863, \eta^2 = 0.000$). Therefore, H2a, b, and c are partially supported in that there is a significant difference between T1 and T2 for high-quality working relationships (H2a), team performance (H2b), and acceptability of social conversations at work (H2c), but the difference exists for both groups, not just the Intervention Group as hypothesised. H2d is not supported. Based on these results, it seems both the target intervention and the active control intervention were effect in improving high-quality working relationships, team performance, and acceptability of social conversations (but not loneliness at work). However, the significant results need to be considered with caution because it cannot be ruled out that another variable or event was the main cause of this increase.

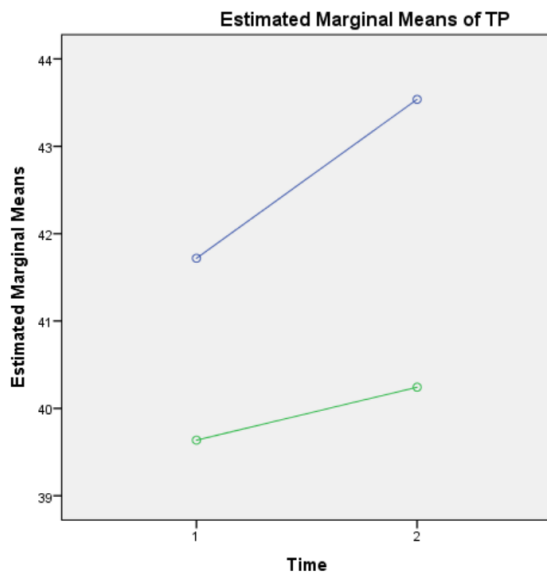
Graph 3: Profile plot for HQWR



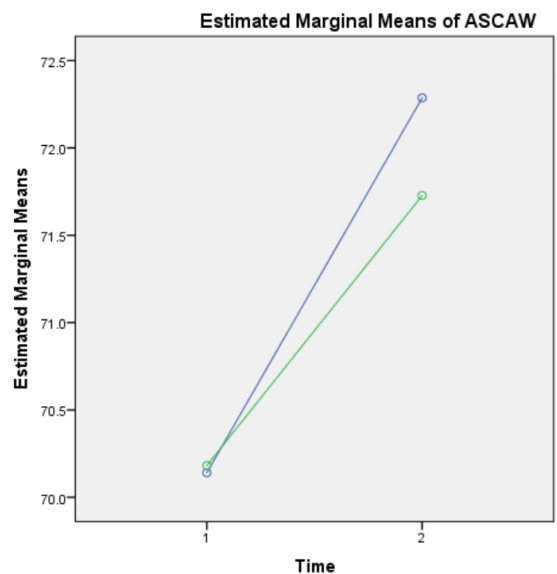
Graph 4: Profile plot for LAW



Graph 5: Profile plot for TP



Graph 6: Profile plot for A-SCAW



— Intervention Group — Control Group

iii. Hypothesis 3a – c: Moderation Analysis

H3 stated the higher the acceptability of social conversations at work the stronger the relationships between social conversations at work and the outcomes of high-quality working relationships (H3a), team performance (H3b), and workplace loneliness (H3c). PROCESS generates summary model and individual predictor model results (see **Table 6**). The simple slopes for all models are shown in **Graphs 7 – 12**. The summary model tests whether the three predictor terms (i.e. the

independent variable, moderator variable, and their interaction) predict the dependent variable better than chance. All model summaries were significant at the $p < .001$ level and showed 55+% of the variance in the dependent variables was due to the combination of the change in social conversations at work (at least one of the two variables), A-SCAW, and their interaction. In all six models, A-SCAW T2 was a significant predictor of the dependent variable, however, the change in social conversations at work variable was only significant in model 1. None of the interaction terms were significant. Therefore, H3a, b, and c are not supported – no evidence for a moderation effect of A-SCAW was identified.

Table 6: Moderation analysis model summary and individual linear predictor results

Model Number	DV	IV	Results
1	HQWR T2	F-SCAW_Change	Model summary: $F(4, 92) = 41.66, p < .001^{**}, R^2 = 0.64$ Individual model predictors: 1. F-SCAW_Change: $b = 2.64, t(92) = 3.41, p < .001^{**}$ 2. A-SCAW T2: $b = 0.30, t(92) = 3.44, p < .001^{**}$ 3. Interaction: $b = 0.03, t(92) = 0.31, p = .761$
2	HQWR T2	J-SCAW_Change	Model summary: $F(4, 92) = 35.29, p < .001^{**}, R^2 = 0.61$ Predictors: 1. J-SCAW_Change: $b = 1.20, t(92) = 1.28, p = .204$ 2. A-SCAW T2: $b = 0.31, t(92) = 3.37, p = .001^{**}$ 3. Interaction: $b = -0.04, t(92) = -0.41, p = .686$
3	LAW T2	F-SCAW_Change	Model summary: $F(4, 92) = 48.03, p < .001^{**}, R^2 = 0.68$ Predictors: 1. F-SCAW_Change: $b = -1.68, t(92) = -1.54, p = .126$ 2. A-SCAW T2: $b = -0.32, t(92) = -2.31, p = .023^*$ 3. Interaction: $b = -0.07, t(92) = -0.56, p = .575$
4	LAW T2	J-SCAW_Change	Model summary: $F(4, 92) = 46.07, p < .001^{**}, R^2 = 0.67$ Predictors: 1. J-SCAW_Change: $b = -0.48, t(92) = -0.38, p = .702$ 2. A-SCAW T2: $b = -0.36, t(92) = -2.61, p = .011^*$ 3. Interaction: $b = -0.06, t(92) = -0.46, p = .647$
5	TP T2	F-SCAW_Change	Model summary: $F(4, 92) = 27.19, p < .001^{**}, R^2 = 0.54$ Predictors: 1. F-SCAW_Change: $b = 0.24, t(92) = 0.46, p = .648$ 2. A-SCAW T2: $b = 0.21, t(92) = 3.77, p < 0.001^{**}$ 3. Interaction: $b = 0.00, t(92) = 0.06, p = .955$
6	TP T2	J-SCAW_Change	Model summary: $F(4, 92) = 28.15, p < 0.001^{**}, R^2 = 0.55$ Predictors: 1. J-SCAW_Change: $b = 0.81, t(92) = 1.37, p = .174$ 2. A-SCAW T2: $b = 0.20, t(92) = 3.72, p < 0.001^{**}$ 3. Interaction: $b = 0.03, t(92) = 0.48, p = .633$

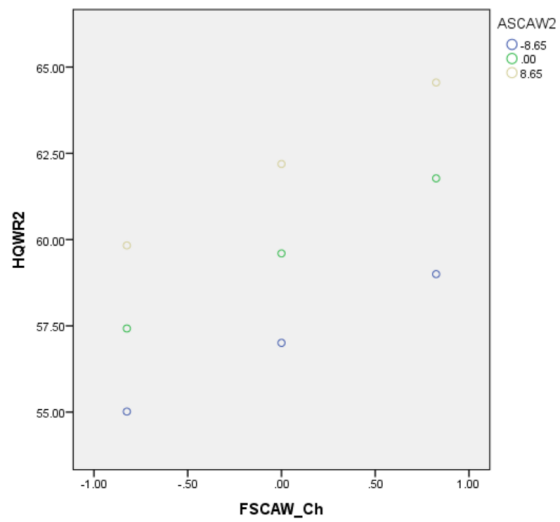
* Significant at the 0.05 level. ** Significant at 0.001 level.

DV = Dependent Variable (Y in *PROCESS*), IV = Independent Variable (X in *PROCESS*).

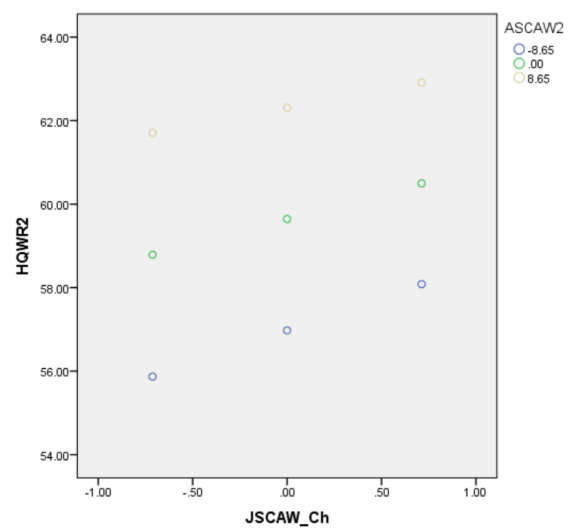
NB. *PROCESS* doesn't calculate beta; it calculates b.

Models have been centred.

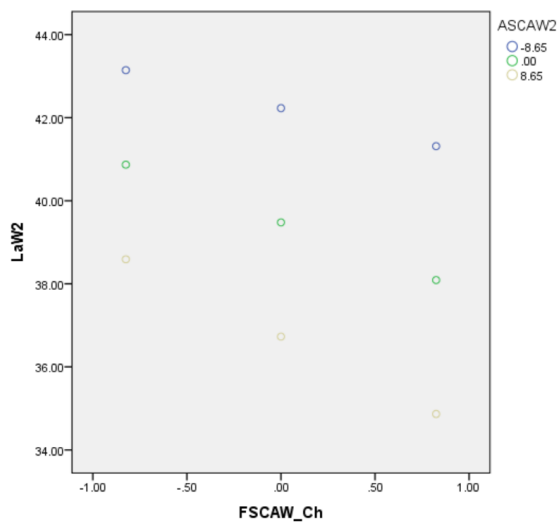
Graph 7: Simple slopes for model 1



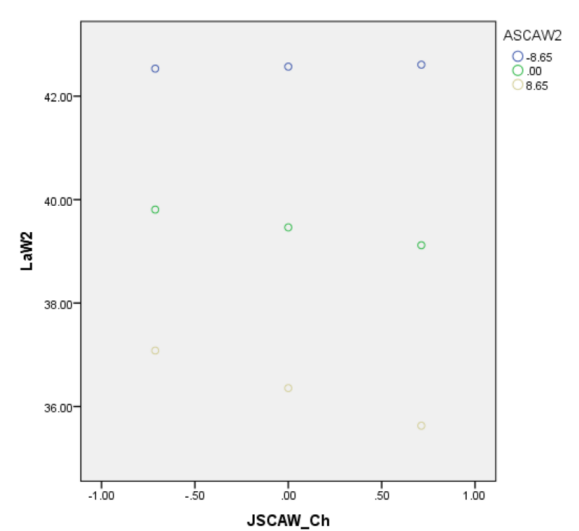
Graph 8: Simple slopes for model 2



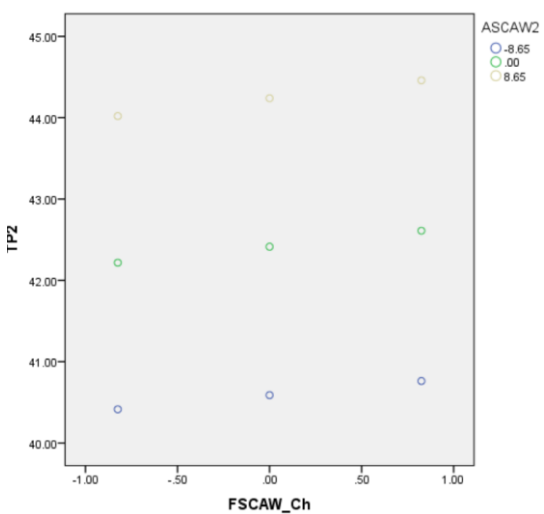
Graph 9: Simple slopes for model 3



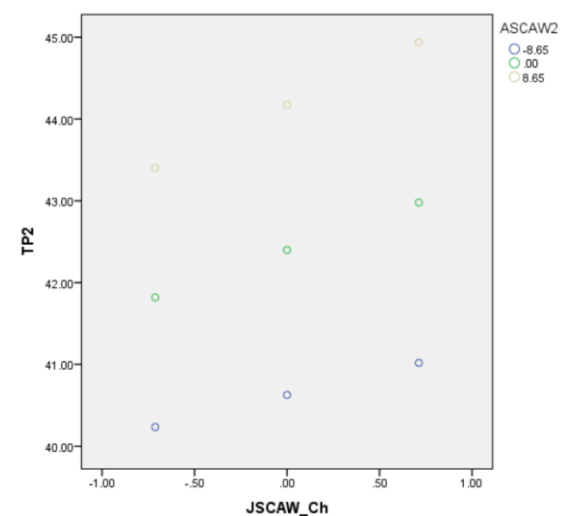
Graph 10: Simple slopes model 4



Graph 11: Simple slopes model 5



Graph 12: Simple slopes model 6



NB. Models have been centred. "Ch" stands for change in score and "2" after the variable name denotes T2.

iv. Research Question 4: Nature of Social Conversations at Work

RQ4 asked what is the nature of social conversations at work in terms of features such as the topics discussed, the conversational partner, time of day, and relationship to work-related conversations (no hypotheses were set). Overall, both groups rated the importance of social conversations at work³⁸ (I-SCAW) as ‘very important’ (see **Table 7**). Considering the previous two weeks, respondents were asked about the time of day of the social conversations (T-SCAW), who started the conversation (W-SCAW), and how the social conversation usually fits into work-related conversations (S-SCAW³⁹) (see **Table 8**). Participants in both groups most frequently said they engaged in social conversations at work at any time, the conversation is equally likely to be started by themselves or their colleague, and social conversations at work are intertwined with conversations about work – they can happen before or after work-relevant conversations.

Table 7: Means for I-SCAW

Intervention Group				Control Group			
<i>n</i>	T1 Mean (SD)	<i>n</i>	T2 Mean (SD)	<i>n</i>	T1 Mean (SD)	<i>n</i>	T2 Mean (SD)
66	3.98 (0.81)	61	4.18 (0.79)	55	4.08 (0.85)	33	4.03 (1.02)

I-SCAW rating scale: 1 = Not at all – 5 = Extremely.

³⁸ Described in Method section under ‘Measures’ > ‘Social Conversations at Work’ > ‘Importance’.

³⁹ ‘S’ stands for ‘sequence’ instead of ‘fits in’, because F-SCAW refers to frequency.

Table 8: Frequencies of T-SCAW, W-SCAW, and S-SCAW

Variable	Intervention Group				Control Group			
	<i>n</i>	T1 Valid %	<i>n</i>	T2 Valid %	<i>n</i>	T1 Valid %	<i>n</i>	T2 Valid %
T-SCAW								
Start of the working day/ shift	8	11.6	8	11.6	6	10.9	6	18.8
End of the working day/ shift	3	4.3	1	1.4	2	3.6	1	3.1
Break times (including lunch break)	9	13.0	7	10.1	1	1.8	2	6.3
Any time	49	71.0	48	69.6	46	83.6	23	71.9
W-SCAW								
Always started by me	0	0	1	1.4	2	3.6	1	3.0
Mostly started by me	4	5.8	15	23.4	10	18.2	2	6.1
Equally likely to be me or the other person	61	88.4	45	70.3	41	74.5	30	90.9
Mostly started by the other person	4	5.8	3	4.7	2	3.6	0	0
Always started by the other person	0	0	0	0	0	0	0	0
S-SCAW								
Completely separate	5	7.4	7	10.9	8	14.5	3	9.1
Social conversations happen before work conversations	2	2.9	5	7.8	7	12.7	5	15.2
Social conversations happen after work conversations	2	2.9	2	3.1	0	0	0	0
It's a mixture of the above	59	86.8	50	78.1	40	72.7	25	75.8

NB. Table does not include number of missing data per item. Therefore, valid percentages cannot be computed from *n* shown in the table.

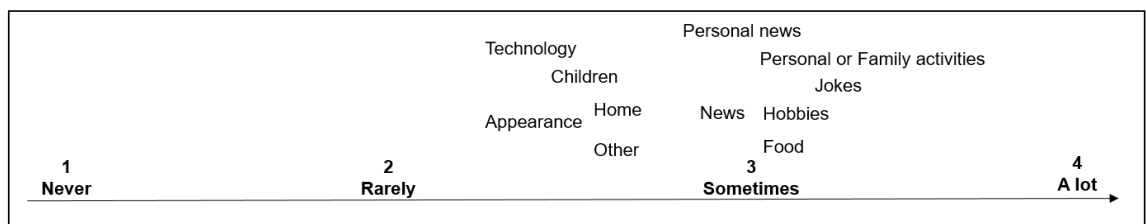
To explore the data on social conversation topics and partner, the pattern of mean responses across time and group was visually explored. Statistical tests of significant differences between means were not conducted given the small sample size and the high number of items at two time points and two groups. The pattern of responses for both the Intervention Group and the Control Group were consistent. Therefore, the graphs have been simplified and show just T1 data for the whole sample. See **Graph 13** for the mean ratings (1 – 4 scale⁴⁰) for the occurrence of ten social conversations topics (plus 'other'). See **Graph 14** for the mean ratings (1 – 4 scale⁴¹) for the six conversation partner options (plus 'other').

⁴⁰ 'Don't know option' coded as missing.

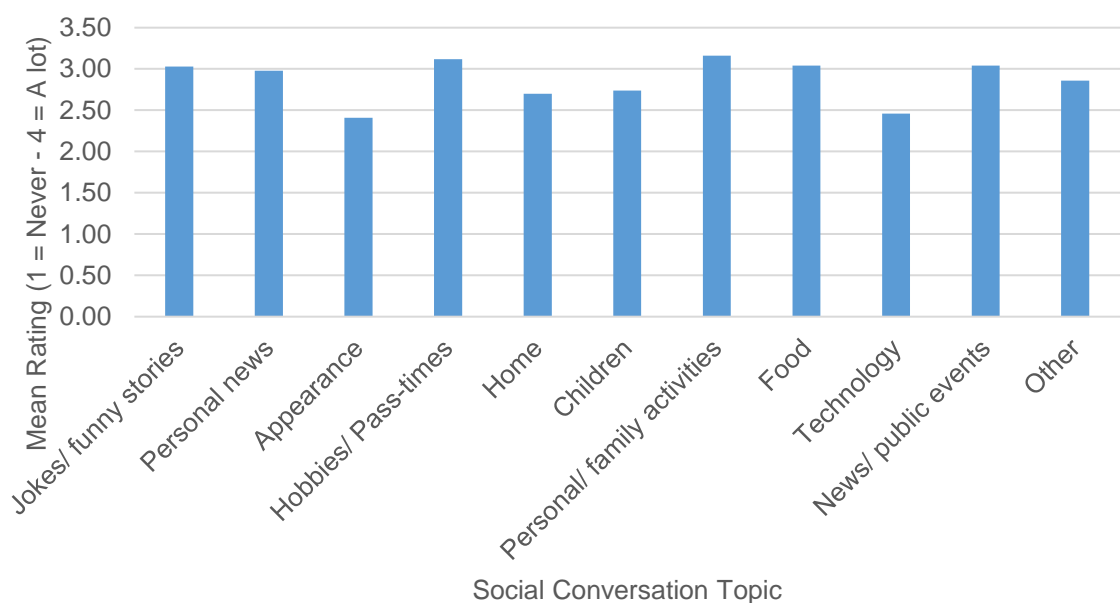
⁴¹ The 'don't remember' (0) option in the questionnaire was coded as missing in SPSS.

There was consistency across time and group in how frequently different conversation topics were used; most topics were used 'sometimes' (illustrated in **Figure 3**). Although the results suggested technology, children, and appearance were used less frequently – more towards 'rarely' than 'sometimes'. Jokes were used most often of all topics (between 'sometimes' and 'a lot'). Personal/ family activities, hobbies, and food were in a cluster just slightly less frequent than jokes. There was also consistency in the response patterns for conversation partner. The conversation partners from least to most frequent were superiors in general (whether inside or outside the line management chain), another person, line manager, peers outside the team, staff, and peers inside the team. However, despite gradations in mean scores, most responses were approximately 'some of the time'.

Figure 3: Infographic illustrating the pattern of occurrence of social conversation topics

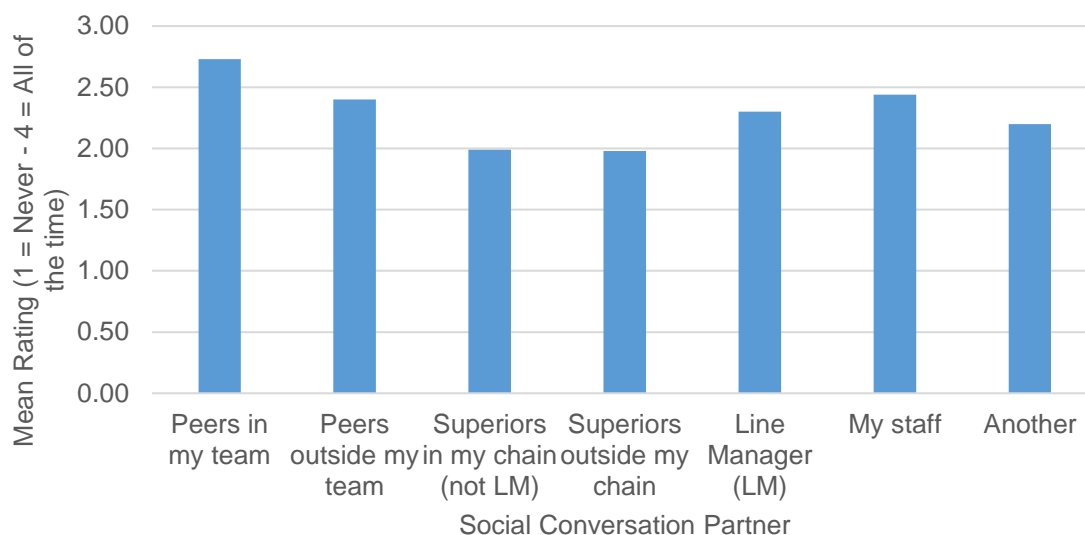


Graph 13: Mean rating for occurrence of social conversation at work topics



Data shown for whole sample at T1.

Graph 14: Mean rating for partner of social conversations at work



Data shown for whole sample at T1.

DISCUSSION

Overview

This study first investigated the impact of an intervention on employees' participation in social conversations at work and on organisational outcomes over a two week period. It further explored the nature of social conversations at work in a descriptive manner. The results showed the intervention successfully increased participation in social conversations at work. This was measured by two variables – how much participants joined in social conversations over the previous two weeks and how much they took part in social conversations at work. There was significant change over time in the former and the latter was approaching significance. This discrepancy could be due to the subtle variation in focus between the two questions. The 'joining in' item asked participants to consider the previous two weeks (i.e. the intervention period) and the 'taking part' item asked them to consider a typical two week period (asked before the questions about the intervention period). This difference in finding corroborates the decision to retain them as separate measures of participation in social conversations despite the significant correlation between the two. The sensitivity of these single items would have been lost had they been combined or one selected over the other. Whilst the intervention did increase participation in social conversations at work, contrary to prediction, this was

observed for both the Intervention and the Control Group. Therefore, hypothesis 1 was partially supported in that improved participation in social conversations at work was observed, but it was not limited to the Intervention Group. Further, it cannot be ruled out that an external event or variable not measured in this study caused the increase in participation in social conversations at work seen in both groups.

Considering now the organisational outcomes of social conversations at work. Hypothesis 2 predicted a significant improvement over time for the Intervention Group on high-quality working relationships (H2a), team performance (H2b), acceptability of social conversations at work (H2c), and loneliness at work (H2d). Significant differences between T1 and T2 were found for high-quality working relationships, team performance, and acceptability of social conversations at work, but the differences existed for both groups. This suggests both the target intervention and the active control intervention were inadvertently effective in improving these three outcomes. Therefore, H2a, b, and c are partially supported because the group difference was not identified. This is potentially an important finding – low-technology and low-cost interventions can have a measurable impact on improving working relationships, team performance, and acceptability of social conversations. This suggests small changes made by teams and managers could have important organisational benefits. The significant results do need to be considered with caution, because it cannot be ruled out that another variable not measured in this study or event was the main cause of this increase.

There were no significant differences between the groups on loneliness at work, i.e. rejecting H2d. It seems neither intervention was effective in reducing loneliness at work. It is worth noting the T1 mean loneliness scores for the Intervention Group was 39.06 and 40.52 for the Control Group. The total loneliness score possible was 112, with a higher score indicating greater loneliness at work. Therefore, both groups reported low start (T1) levels of loneliness at the start, suggesting a floor effect is likely occurring. These items were the most sensitive in the whole questionnaire and are potentially likely to elicit high social desirability. It is also conceivable that loneliness at work is such a complex and multi-faceted construct that the simple interventions used in this study could not affect it. Whilst Murthy (2017) challenged organisations to rethink their organisational design and structures, because they were limiting social interactions between employees and

creating lonely workplaces, the experience of loneliness is psychological (Weiss, 1973). Social conversations with colleagues might be necessary, but not sufficient, to reduce loneliness at work. The lonely employee must also perceive those conversations as bringing them closer to their colleague. As such, it may not be a linear relationship between social conversations at work and loneliness at work. Future research should explore other variables, including the relative importance of the two sub-scales of the loneliness at work scale (emotional deprivation of being lonely and social companionship).

The similar findings for both the target and control interventions suggest the content of each were too similar. The Control Group completed a workplace network map and reflected on their workplace relationships. Reflecting on their network in this way appears to have worked in a similar way to instructing people to have social conversations with their colleagues. A possible underlying theoretical mechanism could be social identity theory (Haslam et al., 2014). These authors argue in favour of the strong influence of employees' in-groups in organisations. Undertaking the networking tool might have reminded participants about those in-groups and the value they place in them. Further, the Control Group were instructed not to talk to colleagues about the *research*, i.e. they were not told to avoid or reduce their social conversations at work specifically. As such, they might have maintained (or even increased) their number of social conversations having been psychologically primed to consider their in-groups and networks.

It was theorised that implicit and explicit messaging in organisations would tell employees whether social conversations at work were acceptable or not. These messages could come from the organisation (e.g. official policies and role modelling by management) and individuals (e.g. personal value placed on finding out about colleagues). A new scale to investigate this was developed to address both organisational and individual acceptability of social conversations. It was hypothesised that acceptability of social conversations at work moderated the relationships between those conversations and outcomes: high-quality working relationships (H3a), team performance (H3b), and workplace loneliness (H3c). The moderation analyses did show acceptability of social conversations is an important variable in predicting these three outcome variables when assessed in combination

with participation in social conversations and the interaction term⁴². All the model summaries explored were significant at the $p < .001$ level and showed 55% or more of the variance in the dependent variables (i.e. high-quality working relationships, team performance, and loneliness at work) was due to social conversations at work, acceptability, and their interaction. Further, in all six models, acceptability of social conversations at T2 alone was a significant predictor of the dependent variable. However, none of the interaction terms were significant. Therefore, there is no evidence for a moderation effect of acceptability of social conversations at work and H3 is rejected. The results tentatively suggest there is an important role for acceptability of social conversations at work – or the concepts captured in the prototype measure – in high-quality working relationships, team performance, and loneliness at work.

The items designed to capture individual-level acceptability of social conversations at work also tap into how important people find these conversations. When asked directly, participants rated social conversations at work as ‘very important’. This question was asked before the detailed questions about social conversations over the last two weeks to elicit an unprimed response. Unfortunately, despite this perceived importance employees are not equally likely to have social conversations with everyone around them. The order of least to most likely conversation partner was: Superiors in general (inside or outside the line management chain), another person, line manager, peers outside the team, staff, and peers inside the team. Therefore, employees feel most comfortable having social conversations with the peers with whom they work every day. However, despite gradations in mean scores, most responses were approximately ‘some of the time’ so it is important not to over-emphasise the continuum of conversational partner.

Not only are social conversations at work deemed important, but employees actively take part in them. The mean rating⁴³ for how frequently participants take part in social conversations at work in a typical two weeks equates to 2 – 5 times each day. The mean rating for how much they joined in social conversations at work over the previous two weeks was 4 on a 1 (not at all) to 5 (extremely) scale. Participants said

⁴² Acceptability of Social Conversations at Work * Change in Frequency of Social Conversations at Work or Change in Taking Part in Social Conversations at Work.

⁴³ Taken as a whole rating scale score.

they engaged in social conversations at work at any time of day, i.e. it's not limited to the start or end of the working day/ sift, or break times, and these conversations are intertwined with conversations about work, i.e. can happen before or after work conversations. This is contrary to Holmes (2003) who found social conversations occur at the boundaries of work/ non-work time. The present study also found, according to the participants, they and their colleague are equally likely to start the social conversation. This echoes the finding that employees are more likely to receive the same type of conversation (work or social) from others as they give to others (Kirmeyer, 1988; Kirmeyer & Lin, 1987). Perhaps this pattern reflects the social norm of reciprocal self-disclosure (Altman & Taylor, 1973) as a mechanism for enabling relationship building. This is consistent with the finding that less sensitive or personal conversation topics (e.g. technology, home, 'other') and topics at high risk of sensitivity (e.g. children, and appearance) were used least frequently (towards 'rarely' rather than 'sometimes'). Jokes were most commonly used of all topics (between 'sometimes' and 'a lot'). Personal/ family activities, hobbies, and food were in a cluster just slightly less frequent than jokes. Again, it is important not to over emphasise the distinctions in occurrence of conversational topic and focus instead on the general pattern.

Social conversations at work are evidently a consistent and valued component of organisational life. They exist and line managers are unlikely to succeed in stopping them. Further, we recommend line managers and organisations actively encourage social conversations amongst employees. They appear to have a role to play in developing high-quality working relationships and team performance. Perhaps employees are conscious of this as reflected in the positive ratings for items such as "I value finding out about my colleagues" and "The people who do a good job do not talk about social topics at work" (reversed). A virtuous cycle is generated in terms of positive attitudes, engaging in more social conversations at work begets more positive attitudes towards them. This may facilitate breaking down any residual barriers held individually or collectively in the team.

Theoretical Implications

A primary implication of these findings is the contribution to the understanding of social conversations at work, building on earlier research. It corroborates findings

that social conversations are common in organisations (Lin & Kwantes, 2015; Tschan et al., 2004) and typically occur between peers (Kirmeyer, 1988); Kirmeyer & Lin, 1987). It challenges some findings about the temporal and physical occurrence of social conversations (Fay, 2011; Fay & Kline, 2012), perhaps reflecting the modern organisational environment in which this study was conducted compared to other research. Importantly this study expands the literature to give some evidence that social conversations at work can lead to positive workplace outcomes, namely high-quality working relationships and team performance. It advances the literature base by introducing the first field intervention study and simultaneously addressing a gap in the literature regarding repeated measures/longitudinal design with a generalised employment group in the UK. Further, it introduces the concept of organisational and individual acceptability of social conversations and offers a prototype scale. The findings show that A-SCAW significantly increases over time – suggesting that exposure to social conversations will make employees more positive towards them.

As discussed in the introduction, there is a lack of unifying theoretical academic framework in the previous literature of social conversations at work. This study advances this issue in a number of ways. The findings add further evidence to the role of social variables in key workplace outcomes. First, they give some insight into the concept of high-quality workplace relationships (Ragins & Dutton, 2007). These authors defined such relationships as “a reoccurring connection between two people that takes place within the context of work and careers” (p. 9). Social conversations at work contribute to this reoccurring connection, most likely eliciting increasing levels of self-disclosure as employees progress from ‘non-sensitive’ (e.g. technology) to more sensitive (e.g. personal/ family activities) social conversation topics. High-quality connections or relationships have three key features (Dutton & Heaphy, 2003): greater emotional carrying capacity (i.e. expressing more and a greater range of emotions); greater tensility (i.e. ability to bend and withstand strain); and greater connectivity (i.e. openness to new ideas and generativity, as well as the ability to rebuff behaviours that interfere with generativity). Future research might consider exploring the nuanced impact of social conversations at work on these aspects of high quality working relationships.

This study emphasises the collaborative nature of team performance by demonstrating the role of social conversations between colleagues in enhancing team performance. Successful team performance relies on successful individual performance, but is likely to be more than the sum of the individual parts. When colleagues share non-work information about themselves it could foster trust, shared meaning, and provide a solid foundation on which to build later successful team performance. Exploration of which elements of social conversations are necessary or sufficient to enable this to occur would be valuable.

Concern has been raised about the epidemic of loneliness in society and organisations (Murthy, 2017). This study suggests UK Civil Servants are not particularly lonely – approximately scoring 40 out of 112 on the loneliness at work scale (Wright et al., 2006). This is heartening given the UK Civil Service employs nearly 500,000 employees (Office for National Statistics, 2018) – the negative health impact of loneliness, if it were experienced, would be significant. It is interesting that small improvement in the other outcome variables over time were detected in this study, but not in loneliness. The beneficial impact of social conversations at work on loneliness at work needs further exploration and is likely to be more complicated than a linear relationship. It is possible that loneliness in the non-work domain spills over into the work domain and vice versa, further complicating the relationship between social conversations and loneliness.

Practical Implications

First and foremost, this research shows organisations that social conversations are a normal part of organisational discourse. If there was inclination to eliminate them, this study provides counter evidence and encourages organisations take Bethanis' (2007) advice to view social conversations at work as something that “can be put to work” (p. 17). Managers who might think they are a sign their employees are shirking and not working, can be reassured. Participants in this study described that their social and work conversations are mixed together, i.e. they are still talking about doing their job/ tasks, and they take part in social conversations on average between two and five times each day. There is still substantially more of the working day devoted to work conversations. Managers who do want to encourage social conversations amongst employees, but do not know where to start can use the

simple, low-cost techniques developed in the toolkits. This present study is the first to investigate if employees can be supported, via an intervention, to increase the number of social conversations at work. This could form the basis of future workplace training in this area. Such training would naturally support human resource organisation development interventions concerning team building and wider culture or organisational change. Further, the training could aid wider dialogue concerning sensitive topics in organisations such as loneliness and wider mental health issues. The digital nature of the intervention developed would complement modern working practices, including remote working and increased use of technology. It would be flexible enough to work within this organisational context.

Organisations are increasingly under resource pressure. This is particularly true in the UK Civil Service, which has experienced a reduction of 483,064 employees since the financial crisis in 2008 (Office for National Statistics, 2018). The Institute for Fiscal Studies (2015) states, between 2010 – 2015 total public spending has been cut by 3% in real terms and government departmental spending was cut by 9.1%. A review of published longitudinal empirical research on the impact of restructuring on employee well-being found organisational restructuring, with and without employee reductions, mainly has a negative impact on employee wellbeing (de Jong, Wiezer, de Weerd, Nielsen, Mattila-Holappa, & Mockaffo, 2016). Given the positive effect of social relationships on health and wellbeing (see Introduction), organisational efforts to build bonds between remaining employees are worthwhile. This study shows the powerful impact of a simple intervention to focus on the colleagues around you (either through self-reflection or talking to them) can improve the quality of working relationships between colleagues and team performance. Unfortunately, loneliness at work seems to be more pernicious and harder to affect. Managers should be alert to the signs of loneliness at work and find ways to support colleagues individually and collectively.

Limitations & Future Research

It is unfortunate not to have isolated positive organisational outcomes in the Intervention Group. As stated, the content of the target and the active control intervention appear to have been too similar despite best efforts to design unrelated activities. Perhaps they triggered the same underlying psychological processes

regarding connections with other people. It is also possible the target intervention was not directive enough. The task was kept deliberately simple: “Start and take part in as many social conversations at work as possible over the next two weeks”. Participants decided how to achieve it. There were a number of mechanisms within the toolkit to encourage task participation, e.g. visually appealing design, points challenge, and variety of resources using both text, imagery, and video content. Participants were also emailed two reminders.

It is possible an intervention about social conversations at work requires a verbal-based medium, e.g. video or face-to-face. A trial workshop delivered outside of the research framework generated good participant feedback. However, the benefits of online and digital training must be noted, including accessibility, timing saving, no travel (Krieger, Martig, van den Brink, & Berger, 2016), and being at ease in the learner’s own environment (Krusche, Cyhlarova, & Williams, 2013). For people more cautious about social conversations, the intervention used offered a low-threat means of trying new skills under their own terms. Nonetheless, the trial workshop could be worth developing and testing in future research, particularly in comparison to the digital training developed for this study. The concept of an intervention in this area has been shown to work, but a different approach to the active control and target intervention is needed in future research.

It is also a possibility that an external event or additional variable affected both groups, resulting in the observed changes in outcome variables. To assess this, the study design could be modified to include a third arm, i.e. a wait-list control, to compare both interventions with no intervention. One of the strengths of this study is its field study nature. It is likely that improvement in design with a wait-list control would generate practical challenges in an applied context, particularly in terms of maintaining participation. Nonetheless these results show simple interventions can be effective in improving important organisational outcomes such as high-quality working relationships, acceptance of social conversations, and team performance.

Given the potential variability of interpretation of the intervention task the items measuring participation in social conversations should have been more nuanced. The two key variables were joining in and taking part in social conversations at work. The differences in wording and timeframe participants were asked to focus on has

been discussed above. As such, it would have been valuable to standardise the timeframe between the two questions and use response options with greater sensitivity to record the exact number of social conversations undertaken each day. This would be challenging for participants to recall and future researchers might consider the value of a diary study, none of which were identified by Dietmann et al.'s (in preparation) review.

The acceptability measure was a novel thread of research in the social conversations literature. The confirmatory factor analysis demonstrated the model was a reasonably good fit, but some of the indices were not at levels recommended by Hu and Butler (1999). Reviewing the items themselves they are likely to elicit a degree of social desirability, e.g. "It's important to get to know my colleagues/ If I hear people talking about social topics at work, I think badly of them (reversed). Hypothesis three, regarding the moderation effect of acceptability of social conversations at work, was the only hypothesis unsupported in its entirety. Practicalities prevented more in depth developing and testing of the prototype measure. Further development work on a measure of acceptability of social conversations at work and the construct's role in participation in social conversations at work is required.

Finally, the assignment of participants to Intervention and Control Group was not true randomisation. All participants from one organisation were assigned to the Intervention Group and participants from other organisations to the Control Group. The rationale for doing so was to avoid cross contamination of groups by putting people within teams and within an organisation into different groups. Far more volunteers were received from one organisation. This being said, there was no evidence that groups differed on demographic variables. The practicalities of organisational research meant recruitment was harder than anticipated. Conducting a field experiment in organisational research is challenging. This study demonstrates that much can be learned from doing them and the intervention does not need to be complicated.

Conclusion

Social conversations at work are an important part of organisational life. Their existence does not signal that employees are shirking their duties. In this study employees reported engaging in social conversations throughout the working day, drawing from a range of topics. Findings suggested social conversations play a role in high-quality working relationships and team performance. Further, organisations may be able to harness the benefits of social conversations at work by addressing any implicit or explicit negative messages about them. The findings indicate that an intervention designed to develop social conversation skills shows promise. Considering the benefits of the digital training, alongside a face-to-face intervention and a waitlist control, would help us more fully understand how to support employees to develop their social conversation skills.

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ANNEX A: TEXT FOR RESEARCH EMAILS

Email 1: Time 1 Survey (via Qualtrics)

To: All volunteers

From: K1731185@kingston.ac.uk

Subject: Working Relationships Research: Please Complete 1st Survey by 8 March

Dear [Insert Participant's Name],

Thank you for taking part in my research to understand what makes good working relationships. Your contribution will help us make the Civil Service a great place to work – part of the [brilliant Civil Service](#) strategy.

Below is the link to the first survey. Please complete it as soon as possible – it will only take approximately 20 minutes. The deadline is **8 March 2019**.

The survey starts with information about the research, which is required by Kingston University's ethics committee. After that are some statements – you are asked to confirm all of them before moving onto the survey.

Many thanks for your time supporting this research.

Kind regards,

Antonia

Antonia Dietmann, C.Psychol

Doctoral Student

Business School,

Kingston University

NB. A reminder email was sent out after two days to respondents who had not yet completed the time 1 questionnaire.

Email 2: Intervention Group and Control Group Toolkits (via Outlook)

From: K1731185@kingston.ac.uk

Subject: Working Relationships Research: Your 2-week activity

Attachments: Toolkit A for Intervention Group / Toolkit B for Control Group

Dear Colleagues,

Thank you for continuing to be involved in my research to understand what makes good working relationships in the Civil Service.

By now, you should have completed the first survey sent to you last week. The next stage is to do a **2-week activity from 11 – 24 March**. Everything you need to know is in the attached slideshow. It contains the activity instructions, and resources/ support to help you.

All the links should work from your government IT account, but if not, please forward the slideshow to your personal email and click on the links from there.

I hope you enjoy the activity.

What happens after the 2-weeks?

Second survey: On 25 March I will email you a personal link to the second survey. It repeats the questions in the first one, but complete it afresh, you do not need to remember any answers. Again, you will have 5 days to complete it (deadline 29 March).

Many thanks,

Antonia

Antonia Dietmann, C.Psychol

Doctoral Student

Business School

Kingston University

NB. Two reminder emails were sent out during the intervention period at day four and day 10.

Email 3: Time 2 Survey (via Qualtrics)

To: All volunteers

From: K1731185@kingston.ac.uk

Subject: Working Relationships Research: Please Complete 2nd Survey by 29 March

Dear [Insert Participant's Name],

You have been extremely kind to do the first survey and the workplace activity over the last two weeks. You can **stop the activity now**. I hope you enjoyed it and found the slideshow pack useful.

It's now the last stage of the research. Below is the link to the second survey. Please complete it as soon as possible – it will only take approximately 20 minutes. The deadline is **29 March 2019**.

It's the same as the first one, but please complete it afresh. I'm interested in how your experiences have changed over the past two weeks. Again, the survey starts with information about the research, which is required by Kingston University's ethics committee. After that are the same statements you saw in the first survey. You are asked to confirm all of them before moving onto the survey.

I am extremely grateful for everything you have done to support my research. I would not have been able to complete my professional doctorate without your help. If you are interested in the findings, please let me know - I will be holding webinars and can send you a brief report.

Many thanks for your time.

Kind regards,

Antonia

Antonia Dietmann, C.Psychol

Doctoral Student

Business School,

Kingston University

NB. A reminder email was sent out after two days to respondents who had not yet completed the time 2 questionnaire.

ANNEX B: EXAMPLE VOLUNTEER RECRUITMENT POSTER

What makes good working relationships between employees?

Have you ever wondered . . .

- why some teams work better than others?
- why you communicate more openly with some colleagues than others?
- how you build working relationships that bring out the best in everyone?

Take Part

Make a difference by taking part in an innovative research project to help find out

Email **Antonia Dietmann** to join in

Join in by 31 January 2019

How to join in

Email 'join in' to Antonia at k1731185@kingston.ac.uk by 31 January 2019

Include your

- ♦ name
- ♦ organisation
- ♦ building name/ location

The email address you use must be one you'll regularly check in Feb & March 2019

Key Facts

- ♦ [Senior leader's name] supports this research and employees taking part
- ♦ This research is part of Antonia's studies at **Kingston University**
- ♦ Your participation and results will be **confidential and anonymous**
- ♦ Particularly want to hear from colleagues in [HQ location name] (any function)
- ♦ Complete 1 **questionnaire** (takes approximately 20 minutes)
- ♦ Do a simple activity for 2 weeks to help you focus on your workplace relationships (instructions and support will be given). Then complete the same questionnaire
- ♦ Receive **unique resources & webinar** on building workplace relationships

Kingston University London

ANNEX C: QUESTIONNAIRE

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Information about this project – Please read before completing the questionnaire

My name is Antonia Dietmann. Thank you for agreeing to take part in my research project, which is part of my professional doctorate in Occupational Psychology at the University of Kingston.

What is it about? This project investigates what makes some relationships between employees stronger than other relationships, and how important these relationships are for getting your work done. You will be asked questions about your working relationships with your colleagues, your experiences of working with them, the conversations you all have at work, and how well you achieve your work tasks together. I am particularly interested in how these relationships change over time.

There are two parts to this project:

Part 1
<ul style="list-style-type: none">• You will complete this questionnaire today. This will give a baseline measurement.• You will be asked to an activity for 2 weeks that help you focus on your workplace relationships. Different participants will be asked to do different activities, because I am investigating which ones work best.• You will be emailed about your task at the email address you gave me when you agreed to take-part in this research.
Part 2
<ul style="list-style-type: none">• You will complete this same questionnaire again in two weeks' time. This will help see if there are changes in working relationships over time.• You do not need to remember your answers from the first questionnaire when you complete the second one. Answer all questions honestly at the time you are answering them.

You will be asked to enter your email address at the start of each questionnaire. This is only to match up the first and second questionnaires – when this is done, the email addresses will be deleted from your completed questionnaires. Your responses will be assigned a unique identifier. The code for this information will be held in a password protected file separate to the main data file. If you want to withdraw your data from the project at any time, please email me and I will use the unique identifier to remove your data.

How long it will take? The questionnaire will take you approximately 20 minutes to complete. It must be completed in one sitting as there is no save function. If you would like to ask any questions before completing the questionnaire please email me at k1731185@kingston.ac.uk.

Ethical approval: The research has received a favourable ethical opinion from the Research Ethics Committee of the Faculty of Business and Social Sciences at Kingston University, London. If you wish to complain about any aspect of how you have been treated in this research, please contact Professor Jill Schofield who is the Dean of the Faculty of Business and Social Sciences at Kingston University London. Professor Schofield's contact details are as follows: Address: Dean's Office, Faculty of Business and Social Sciences, Kingston University London, Penrhyn Road, Kingston upon Thames KT1 2EE. Email: j.schofield@kingston.ac.uk Tel: 020 8417 9000 (ext 65229).

Thank you for taking part in my research project. I really appreciate your time.
Antonia Dietmann

Getting started: In accordance with Kingston University ethics procedures, please read the statements on the next page. Please click '**confirm**' to **each statement on the next page** to give your consent to participate in the research. You will then be taken onto the questionnaire.



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Please click 'confirm' to **each statement** to give your consent to participate in the research. You will then be taken onto the questionnaire.

- | | Confirm |
|---|-----------------------|
| a. I confirm I have read and understood the above information and have had the opportunity to ask questions if I wanted. | <input type="radio"/> |
| b. I understand that taking part is voluntary and that I am free to withdraw at any time, without giving a reason. | <input type="radio"/> |
| c. I understand that my email address will only be used to match up the Part 1 and Part 2 questionnaires. Once the questionnaires have been matched up, the email addresses will be deleted and my responses will be anonymised and held in a secure, password-protected file. | <input type="radio"/> |
| d. I understand that my data will be given a unique identifier and the code for this information will be held in a secure, password-protected file separate to the main data file. I understand that my data will be combined with other data and reported in research reports, presentations, and journal articles. I understand I can request to access my personal data held and to correct or remove my personal data. | <input type="radio"/> |
| e. I agree that data gathered in this research, after it has been anonymised, will be stored safely and indefinitely for the purposes of this research and within the limits of the law, accessed only by members of the research team, and disposed of securely. For the purposes of this research, the researcher (Antonia Dietmann) is the Data Controller and the University Data Protection Officer can be contacted at dpo@kingston.ac.uk or Data Protection Officer Vice Chancellor's Office Crescent House, Penrhyn Road Kingston upon Thames, Surrey KT1 2EE. I know I have the right to lodge a complaint with the Information Commissioner's Office (ICO). | <input type="radio"/> |
| f. I agree that any text comments I provide can be quoted when anonymised in research outputs. | <input type="radio"/> |
| g. I agree to take part in the research. | <input type="radio"/> |

I hope you have been able to confirm all the statements. If not, please exit the survey.

To match up your first and second questionnaires, please enter the email address that you gave when you signed up for this research.



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About General Working Relationships

Thinking generally about working relationships amongst co-workers (peers, superiors, or subordinates) in your current job. Please rate the accuracy of the following statements.

1 = Not at all

5 = Extremely

	1	2	3	4	5
We are not afraid to express unpleasant feelings at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whenever anyone at work expresses an unpleasant feeling, she/he always does so in a constructive manner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My co-workers and I do not have any difficulty expressing our feelings to each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If someone gets upset with other co-workers, she/he knows they will try to understand her/him	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to express my frustrations without offending anyone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We cope well with the conflicts we experience at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We cope well with the tensions we experience at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We cope well with the pressures experienced at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Even during times of stress and pressure, we always manage to find effective solutions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are always open to listening to our co-workers' new ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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About General Working Relationships (continued)

Thinking generally about working relationships amongst co-workers (peers, superiors, or subordinates) in your current job. Please rate the accuracy of the following statements.

1 = Not at all

5 = Extremely

	1	2	3	4	5
We are very open to diverse opinions, views, and beliefs even if they come from unconventional sources, such as new employees, customers, etc	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are open to new opportunities that can make our work more efficient and effective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We know how to accept people who are different	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that my co-workers like me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that my co-workers and I try to develop meaningful relationships with one another	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that my co-workers understand me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The relationship between my co-workers and myself is based on reciprocity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are committed to one another at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a sense of empathy among my co-workers and myself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that my co-workers and I do things for one another	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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About Your Working Relationships

Thinking specifically about your working relationships with co-workers (peers, superiors, and subordinates) in your current job. Please rate your agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

I feel included in the social aspects of work

There is someone at work I can talk to about my day to day work problems if I need to

I often feel abandoned by my co-workers when I am under pressure at work

I often feel alienated from my co-workers

I feel myself withdrawing from the people I work with

I often feel emotionally distant from the people I work with

I feel satisfied with the relationships I have at work

I often feel isolated when I am with my co-workers



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About Your Working Relationships (continued)

Thinking specifically about your working relationships with co-workers (peers, superiors, and subordinates) in your current job. Please rate your agreement with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

I often feel disconnected from others at work

I experience a general sense of emptiness when I am at work

I have social companionship/ fellowship at work

There is no one at work I can share personal thoughts with if I want to

I have someone at work I can spend time with on my breaks if I want to

I feel part of a group of friends at work

There are people at work who take the trouble to listen to me

There is a sense of camaraderie in my workplace



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About Workplace Communication

Much communication at work consists of simply chatting, small talk, or social conversations with other members of the company/ organisation during work time. This communication is not about your job or tasks you have to do, and isn't about the organisation you work for. It is about non-work topics.

This type of communication can range from simple greetings, to sharing a joke, to catching up. It is typically done face-to-face, but can be done via technology (e.g. telephone, instant messenger, email). It must be done with other members of the company/ organisation during work time.

These are '**social conversations at work**'.

How important are social conversations at work to you?

Extremely important	Very important	Moderately important	Slightly important	Not at all important
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In a **TYPICAL** 2 week period at work, how frequently do you take part in **social conversations** with **other members** of the company/ organisation **during work time** (no matter how long or short the conversations are)?

I take part in social conversations . . .



Drop down options:

5+ times each day

2 – 5 times each day

Once a day

3 or 4 times a week

1 or 2 times a week

Never

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About Your Social Conversations at Work

Think of your **last 2 working weeks**. How often did you talk about the following topics with **other members** of the company/ organisation **during work time**? (It doesn't matter how long or short the conversations were or if they were face-to-face or via technology.)

Drag and drop the **ALL** the topics on the **LEFT** into the relevant boxes on the **RIGHT**. You can put more than one topic in a box.

Jokes and funny stories	A lot
Personal news (e.g. illness, divorce, new baby, new job)	Sometimes
Appearance (e.g. clothing, hair, make-up, jewellery)	Rarely
Hobbies and past-times (e.g. sport, movies, TV programmes, books)	Never
Home (e.g. house renovations, moving, home appliances)	Don't remember
Children (e.g. childcare, achievements, activities, education)	
Personal or family activities (e.g. birthdays, holidays, shopping)	
Food (e.g. cooking, eating out)	

Technology (e.g.
mobile phones,
computers)

News and public
events (e.g. natural
disasters, politics,
celebrities)

Other



Respondents who dragged all topics into either never or don't remember were routed to the 'About Social Conversations at Work in General' section.

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About Your Social Conversations at Work (continued)

In your **last 2 working weeks**, who were those social conversations at work with?

Never	Some of the time	Most of the time	All of the time
1	2	3	4

Peers (i.e. someone who has no authority over you) IN MY TEAM



Peers (i.e. someone who has no authority over you) OUTSIDE MY TEAM



Superiors inside my line management chain (but not my line manager)



Superiors outside my line management chain



My line manager



My staff/ subordinates (i.e. someone you have authority over)



Another member of the company/ organisation



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About Your Social Conversations at Work (continued)

In your **last 2 working weeks**, when did you usually have those social conversations at work?

- At the start of the working day/ shift
 - At the end of the working day/ shift
 - At break times (including lunch break)
 - At any time
-

In your **last 2 working weeks**, who usually started those social conversations at work?

- Always started by me
- Mostly started by me
- Equally likely to be started by me or the other person
- Mostly started by the other person
- Always started by the other person



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About Your Social Conversations at Work (continued)

In your **last 2 working weeks**, how much did you usually join in those social conversations at work?

1 = Not at all

5 = Extremely

1 2 3 3 4 5

I joined in . . .



In your **last 2 working weeks**, how did those social conversations usually fit into conversations about work/ job/ tasks?

- The social and the work conversations are completely separate
- The social conversations happen before we talk about work
- The social conversations happen after we talk about work
- It's a mixture of the above



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About Social Conversations at Work in General

Thinking about social conversations at work **in general**. Please rate your agreement with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I value finding out about my colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People who talk about social topics at work are avoiding work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's important to get to know my colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I hear people talking about social topics at work, I think badly of them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Talking about social topics at work makes work more enjoyable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The people who do a good job do not talk about social topics at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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About Social Conversations at Work in General (continued)

Thinking about social conversations at work **in general**. Please rate your agreement with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
My organisation has a policy against social conversations (or chatting) at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see/ hear my boss talking about social topics at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are encouraged to get to know each other at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My team makes time to learn about each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wouldn't talk about social topics with colleagues in front of my boss for fear of being negatively judged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Talking about social topics at work is not done around here	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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About Your Team

Think about the team you most regularly work with or, if you regularly work independently, think about the team you are part of in the organisational structure. Please rate your agreement with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The team I'm part of is very competent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The team I'm part of gets its work done very effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This team I'm part of has performed its job well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The team I'm part of makes use of the skills of the different team members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The team I'm part of is effective in generating ideas for projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The team I'm part of is effective at coordinating activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The team I'm part of is effective in developing its projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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Last section: About your job and about you

Which sector best describes your organisation?

Select option

Roughly, how many people are employed in your organisation?

Select option

What is your current employment status?

Select option

Do you work part-time or full-time?

Select option

How many years have you been working in total since leaving full-time education?

What is your organisational seniority level?

Select option

In which country are you based for your work?

Select option

Drop-down menu options:

Which sector best describes your organisation? Primary (farming, fishing, mining, etc.)/ Manufacturing/ Selling, distribution and retailing/ Finance and banking/ Transportation/ Other service industries/ Civil Service and local government/ Armed Forces/ Professions in private practice/ Education.

Roughly, how many people are employed in your organisation? Fewer than 50/ 51 – 150/ 151 – 250/ 250 – 1,000/ more than 1,000.

What is your current employment status? Self-employed/ Employed.

Do you work part-time or full-time? Part-time/ Full-time.

What is your organisational seniority level? Top (Chief Executive, Chairperson, President)/ Senior Executive (Departmental Head, Managing Director, Director, Vice President, Board Level, Professionals)/ Upper Middle (Departmental Executives, Factory Managers, Senior Professional Staff)/ Middle (Office Managers, Professional Staff, Mid-Level Administrators)/ First Level (Forepersons, Supervisors)/ Entry Level.

In which country are you based for your work? England/ Northern Ireland/ Wales/ Scotland/ Other [please list].

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How old are you in years?

What best describes your gender?

Select option

If appropriate, self-describe your gender here

How would you describe your ethnic origin?

Select option

What was your highest level when you finished your education?

Select option

Drop-down menu options

What best describes your gender? Female/ Male/ Prefer not to say/ Prefer to self-describe [open field].

How would you describe your ethnic origin? Asian or Asian British/ Black or Black British/ Mixed or multiple ethnic groups/ White/ Other ethnic group

What was your highest level when you finished your education? Secondary education - graduated without formal examination qualifications/ Secondary education - graduated at ordinary or lower examination level (e.g. GCSEs)/ Secondary education - graduated at advanced or higher examination level (e.g. A'Levels)/ Uncompleted further education (college or university)/ Graduate of any further education college or university/ Masters/ Post Doctorate.

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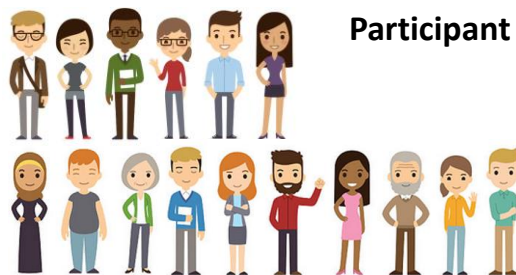
Final Comments

Please write 2 – 5 sentences to describe a recent social conversation at work in which you have taken part. You can include what you talked about, who was involved (e.g. colleague, line manager, another superior), the time of day, how you ended the conversation.



Information & Resources Pack

Developing Your Working Relationships



Participant Instructions



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Research Supervisors:
Dr. Joanna Yarker & Dr. Rachel Lewis

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Overview



Section 1 is the key information to read

- Section 1**
 - What you need to know & do:
 - Your **key activity** for the next 2 weeks (see next slide)
 - About social conversations at work
- Section 2**
 - Background information:
 - Reminder of the research
 - Research activities
- Section 3**
 - Support if you need it:
 - Opportunities, Beginnings, Endings
 - Resources
 - Goal setting
 - Daily challenge



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2

Your key activity for the next 2 weeks



Section 1

This is what you need to do

Your Key Activity: Start and take part in as many social conversations at work as possible over the next 2 weeks

- Social conversations at work are just chatting. That's all
- And here's the thing – you have been chatting all your life. It's nothing new to you. You are more than equipped to give this challenge a go
- If at any point you feel apprehensive just remember, human beings are social animals. This means, if you start a conversation, your colleague is most likely to chat back. And if they don't, that's ok too. Really, it is . . .
- Come back to this pack for support and ideas any time over the next 2 weeks
- Then complete questionnaire #2 when you get it via email

Social conversations at work:

- involve **other members** of the company/organisation
- take place during **work time**
- are about **non-work topics** (i.e. not about your job or tasks you have to do, or about the organisation you work for)
- are **typically done face-to-face**, but can be done via **technology** (e.g. telephone, instant messenger, email)

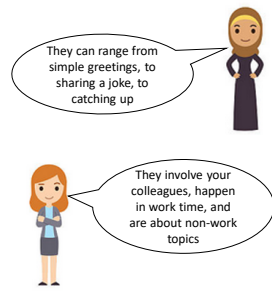


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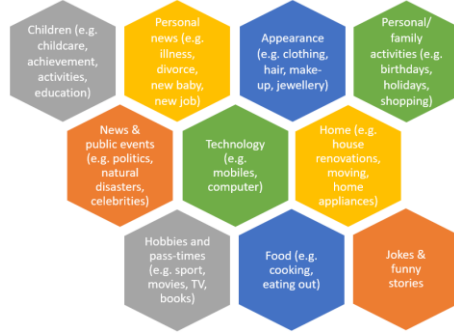
3

About social conversations at work

Section 1



Example Conversation Topics



Reminder of the research

Section 2



About me

- I'm a Civil Servant working at HM Courts & Tribunals Service
- For the past year, I've been studying for a professional doctorate in Occupational Psychology at the University of Kingston
- This research is part of my course

About the research

This research investigates what makes some relationships between employees stronger than other relationships. I'm also interested in how important these relationships are for getting your work done and how they change over time.

There are only two research activities left



Research Activities

- Volunteer & give your contact details
- Complete online questionnaire #1
- Read this pack & find out what you need to do
- Do your key activity for the next 2 weeks
- Complete online questionnaire #2



End of section 1 & 2

You have finished **Section 1** – the main information you needed to read for your Key Activity. And you have also read Section 2 – a reminder of the research



Coming up is Section 3 - it contains support for your Key Activity if you need it. It is not mandatory to read or complete, but you might find it helpful

Section 3

- Support if you need it:
- Opportunities, Beginnings, Endings
 - Resources
 - Goal setting
 - Daily challenge



Opportunities, beginnings, & endings



Section 3

Opportunities

When is a good time to chat?

- Start and end of the day
- Meal or break times
- When someone has returned to work from being away
- Before a meeting
- In the lift
- On the stairs
- At the photocopier
- Waiting for something
- Walking somewhere
- Anywhere and any time

Beginnings

What is a good way to start chatting?

- “Hi, how are you?”
- “What’s new?”
- “Did you see/ hear . . .?”
- “What did you do . . .?”
- “Let me help you”
- “Let me show you”
- “Going my way?”
- “That’s a nice . . .”
- “That looks interesting”
- “I’ve not seen that before”
- “I could use some advice”
- Follow up your beginning statement/ question soon after to continue the social conversation

Endings

What is a good way to finish chatting?

- “Best get off now/ get going”
- “I’m going to love you and leave you”
- “Thanks for chatting”
- “That’s been really interesting”
- “I hope things work out”
- “I’ll look into that”
- “I’m late for something”
- “See you soon”
- “It was nice to catch up”
- Create opportunities for a social conversation another time to build on this conversation



Resources



Section 3

The best resource you have for chatting at work is a lifetime of experience of talking to other people

Just strike up a conversation



- [5 ways to strike up a meaningful interaction with someone](#) (click ‘yes’ to continue if prompted)
- [Great conversation starters for the workplace](#)



- [TED Talk: 10 ways to have a better conversation](#) (11 mins)
- [Video: The art of chit chat](#) (3 mins)



- [Workplace social network mapping tool](#) (download pdf)

Here are some things to read, watch, and write that you might find useful. You do not have to use them



Goal setting



Section 3

If it will help you, please take 10 minutes to write down your goals



Setting goals might help you achieve your key activity

Your goals could be about the **OPPORTUNITY** for social conversations
the **TOPICS** of social conversations
the **PEOPLE** you will talk to

e.g. *Opportunity goal: I will start a social conversation with at least 2 people when I make a cup of tea*

e.g. *Topic goal: I will join in a social conversation about people’s weekend activities*

e.g. *People goal: I will start a social conversation with the neighbouring team*



Type goal here

Type goal here

Type goal here

Social conversations challenge



Section 3

- The **social conversations challenge** can be used to help you develop your skills in social conversations at work
- You **do not** have to take part or complete the challenge – you can do the **key activity** without it. Some people will find it a helpful way to get ideas
- If you complete the Challenge, email Antonia your PowerPoint file with the ✓ boxes completed to be entered into a prize draw



"I've thought of a few ideas of how I can do the **key activity** over the next 2 weeks."
You might find the challenges on days 4 – 5 a good place to start



"I'm a bit worried about doing the **key activity** over the next 2 weeks, but I'll give it a go."
You might find the challenges on days 1 – 3 a good place to start



"I'm looking forward to doing the **key activity** over the next 2 weeks. It's going to be fun."
You might find the challenges on days 6 – 9 a good place to start



However you're feeling, the social conversations challenge is meant to support you over the next two weeks not be something to concern you. You can find your own ways to complete the key activity

Social conversations challenge



Section 3

Days 1 - 3

- Access at least two of the resources on [slide 8](#)
- Smile at and make eye contact with someone at work who you hardly know
- Say hello and/ or comment on the weather to someone at work
- Start a conversation about a TV programme, sports, or public event
- Try out 1 or 2 new ways to start a social conversation at work (see [slide 7](#) for ideas)

Days 4 - 5

- Find 2 new opportunities to start a social conversation (see [slide 7](#) for ideas)
- Use some of the hints and tips you learned from the resources on [slide 8](#)
- Use 3+ different conversation topics (see [slide 4](#) for ideas)
- Have a social conversation with 3+ exchanges (back and forths) with the other person
- Re-open an earlier social conversation you had with someone; build on it

Days 6 - 9

- Have a social conversation with someone you don't know
- Try out some less familiar conversation topics (see [slide 4](#) for ideas)
- Encourage a 3rd person to join a social conversation you are having
- Find 2 new opportunities to start a social conversation (see [slide 7](#) for ideas)
- Have a longer social conversation than you've had recently

Social conversations challenge



Section 3

Days 10 - 12

- Use a new opportunity (see [slide 7](#) for ideas) + a new topic (see [slide 4](#) for ideas)
- Re-open an earlier social conversation you had with someone; build on it
- Try out 2 new ways to end a social conversation at work (see [slide 7](#) for ideas)
- Re-try an earlier challenge that you found difficult

Days 13 - 14

- Talk to someone you don't know and find out about them
- Try out that social conversation topic that you've been least keen on
- Before the end of day 14, complete your goals from [slide 9](#)

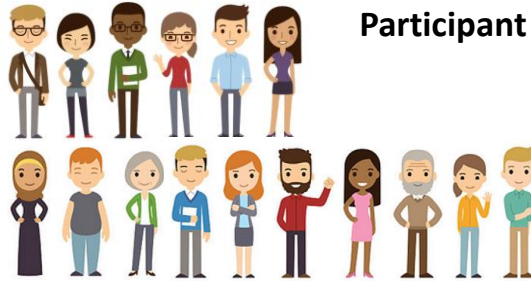
Well done for doing the challenge. Email Antonia your PowerPoint file with the ✓ boxes completed to be entered into a prize draw



You will be emailed questionnaire #2 on 24 March
Please book 20 mins in your diary to complete it

Information & Resources Pack

Developing Your Working Relationships



Participant Instructions



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Email: k1731185@kingston.ac.uk

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 - Research activities
- Section 3**
 - Resources (for general interest):
 - Videos
 - Blogs/ articles
 - Research reports

Your key activity (complete in 2 weeks)



Section 1

This is what you need to do

Your Key Activity: Complete the workplace social network mapping tool & the reflection questions

About social network mapping

- This tool helps you review who is in your workplace social network and show gaps
- The reflection questions start you thinking about how you might need to expand your network to include a wider range of people
- By developing working relationships with new people, you will have more people to collaborate with or ask for advice or support

- Download and print out** the workplace social network mapping tool (pdf) – [Google drive link](#) or [DWP internal link](#)
- You have 2 weeks to do your **key activity**
- Follow steps 1 – 4 on the tool to complete your social network map (takes appx 15 minutes)
- At step 5, answer the reflection questions to help you understand your social network (takes appx 20 minutes). You can make notes on the back of your map by hand or electronically on the next two slides
- Think about your notes over the next 2 weeks** – don't discuss them yet with others or take any action to change your network
- Complete questionnaire #2 when you get it via email & then take action to address any gaps in your network

Your notes on your social network map

Section 1

Reflection Questions

- What are the gaps and overlaps in your map?
- Do a few (or one person) appear to hold your network together?
- Is there a high number of one type of person in your network (e.g. by gender, ethnicity, department, professional function, friendship group, team)?
- What would it take to move someone from one wedge to another?
- How could you expand your network?

Type your notes here



Use this space to make your notes on the reflection questions printed on the social network map tool



Your notes on your social network map

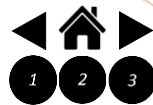
Section 1



Additional space for your notes



Use this space to make your notes on the reflection questions printed on the social network map tool



Reminder of the research

Section 2



About me

- I'm a Civil Servant working at HM Courts & Tribunals Service
- For the past year, I've been studying for a professional doctorate in Occupational Psychology at the University of Kingston
- This research is part of my course

About the research

This research investigates what makes some relationships between employees stronger than other relationships. I'm also interested in how important these relationships are for getting your work done and how they change over time.

There are only two research activities left



Research Activities

Volunteer & give your contact details

Complete online questionnaire #1

Read this pack & find out what you need to do

Do your key activity during the next 2 weeks

Complete online questionnaire #2





Below are resources on social networks that might help you reflect on your workplace social network map



- [How ideas spread: the role of social networks](#)
- [Fully connected: a look ahead to working and networking in 2020](#)
- [Predicting career success: open networks](#)



- [The hidden influence of social networks](#) (18 mins)
- [How to hack networking](#) (13 mins)

You might find these resources interesting. You do not have to use them



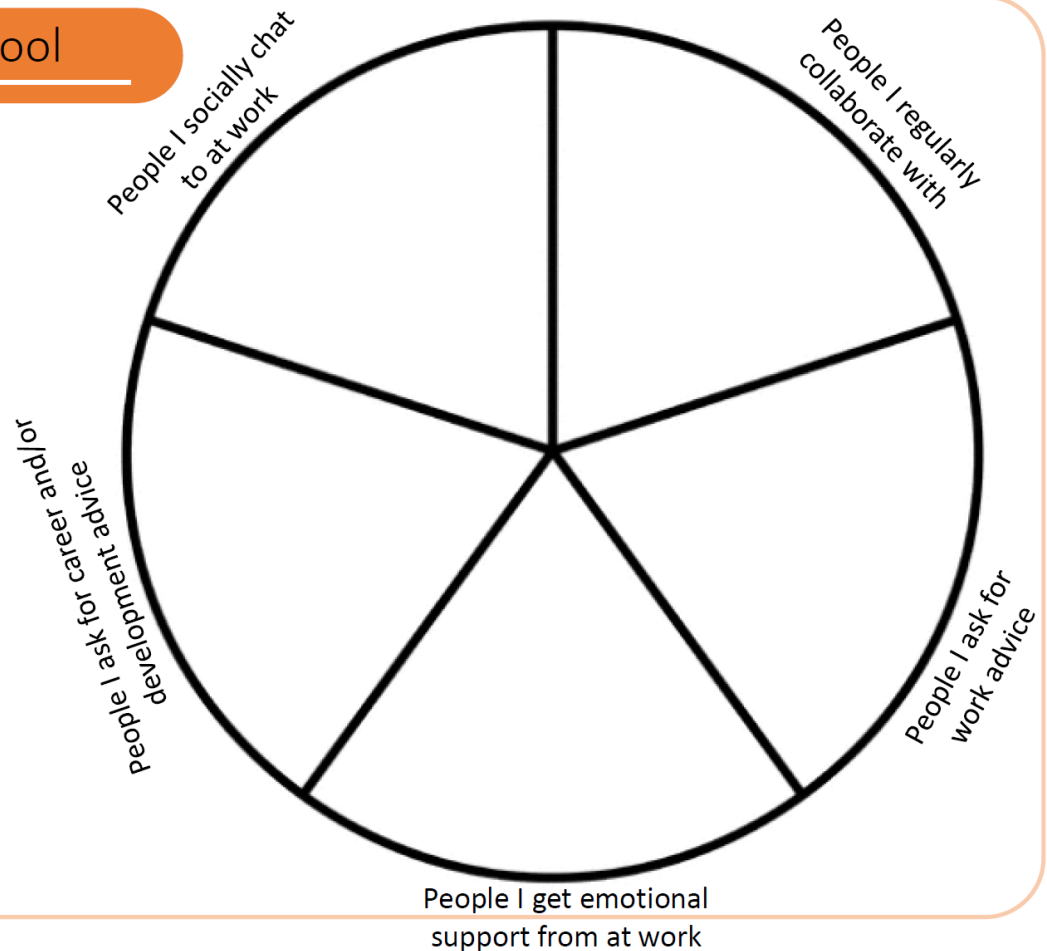
You will be emailed questionnaire #2 on 24 March
Please book 20 mins in your diary to complete it

ANNEX F: ACTIVE-CONTROL EXERCISE

Workplace social network mapping tool

1. Print out this slide and the next one.
2. Write names that most readily come to mind in each wedge. If someone belongs in more than one wedge, choose the one that best fits them.
3. Start with one person on the map, draw a line to someone else they interact with (can be in the same or different wedge). Repeat using a name in each wedge.
4. Eventually the map will look like it has lines drawn either primarily inside wedges (bonding social networks) or between different wedges (bridging social networks).
5. When you have completed the your map, consider the following reflection questions. You might like to make notes on the next page.

- What are the gaps and overlaps in your map?
- Do a few (or one person) appear to hold your network together?
- Is there a high number of one type of person in your network (e.g. by gender, ethnicity, department, professional function, friendship group, team)?
- What would it take to move someone from one wedge to another?
- How could you expand your network?



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PART 4 – RESEARCH PROCESS REVIEW

SCOPING OUT YOUR RESEARCH IDEA

Background

For about 1.5 years prior to starting my Professional Doctorate I had a growing interest in chatting at work. During this time I had been working to develop my leadership skills to help me become more successful with my increasing work responsibilities, including managing geographically dispersed teams. A key component of my leadership development included breaking down the distinction between the outside work and the inside work persona I had created over 15 years of work. And a key tool to being more authentic was socialising more with my colleagues . . . just chatting. The more I did this the happier I felt, the better my team worked together, and the easier it was to get things done.

First Course Session

At our first course session (21.9.17), I retold this story in a pair conversation with a course-mate. She helped me explore some of the key facets of what interested me (see **Annex A** for a mind map produced during our conversation). From this discussion, I listed out the following aspects that I'm interested in:

- The importance of conversations in the workplace and how they are the basis of building and maintaining strong relationships that support 'getting things' done at work.
- The fact that we seem to think that we need to build relationships in different ways at work, we don't use the same approaches as we would to social/ non-work relationships, we offer more of ourselves outside work, and we hold part of us back inside work. I think this inhibits relationships at work, limits the scope and depth of the leadership behaviours displayed, and is detrimental to employee engagement.
- This relates to authenticity, 'whole self' (including diversity and inclusion), emotional intelligence, social identity, and perhaps even emotional labour.

- Bringing a sense of humanity back to organisations and feel that is what's often missing from them. This connects with my fundamental beliefs in positivity, human agency, strengths, and humans as social beings.

Challenges

My challenges at this early stage was that there were a lot of aspects of social conversations at work that I was interested in. I could tie a lot of constructs and issues to it in a narrative form, but with very little empirical research to back it up. Most of my connections were based on intuition and practical experience of being an organisational leader and manager. In September 2017 I found it very daunting to think about being able to reduce the scope and target my research. I had a concern that it all seemed so obvious to me that it must already be a well-researched area. I knew that there was a lot of research on social support and friendship at work, but I wanted to purely focus on social conversations at work; on chatting. Repeating the word 'chat' or 'chatting' to myself over the next 3 months really helped as I uncovered a lot of interesting research side avenues (e.g. social capital, social support, social relationships a work, friendships at work, team cohesion), but they were all taking me away from chatting. I remained optimistic that I was on to something, because everyone I talked to about it connected with the ideas and could relate their own experiences. By the end of October 2017 I was starting to get drawn into the general social relationships at work and friendships literature. This was overwhelming and refocusing on social conversations really helped to re-target my general reading. In November 2017, I was able to write an infographic to capture my key points and interests (see **Annex B**).

My second challenge early on was not having any ideas how I might conduct primary research into social conversations at work. I struggled initially to find anything on the topic, because there didn't seem to be any one term that had been used in the literature. This made me excited, because I would be doing something truly new, but also worried because I wouldn't have anything on which to base a systematic literature review (SLR) or subsequent primary research. I read up on conversation analysis. The first article I read was hard to follow and the method itself seemed very complicated. The more I read the more I realised I didn't want to analyse conversations in detail . . . the pauses, the sub-meaning, the emphasised words . .

. I wanted to understand the nature of social conversations (e.g. topics, how often they happen, who does them) and their role in building strong workplace relationships.

Formative Reading

In October 2017 I did a simple PsychInfo search and found Lin and Kwantes (2015). This would eventually be one of my SLR papers. It was a great article to start with and definitely one of the stronger ones in the limited field. I noted down at the time that I was excited to read in the paper that the value of non-work/ social conversations is an under researched area. As well as excitement, it was also frustrating at how long it took me to identify and read this one article. But I was generating a long list of notes from everything I was reading, which I felt sure would help me later on. Some questions that I noted from this article:

Q: How do people change from considering social conversations at work as only being about building relationships ('relationship motivation') to being about doing your job better ('job facilitation motivation')? This idea would eventually morph into understanding the individual and organisational barriers to social conversations in my primary research)

Q What's the impact of technology in terms of the medium that is more appropriate for social/ private interactions? I would eventually park the idea of technology-mediated communication preferring to focus on face-to-face.

Q. How many of daily interactions are social in nature and does this change over time or with seniority? Some of this would eventually be answered by the SLR papers.

Also around this time I read Patricia Shaw's book *Changing Conversations*. This book hit me like a ton of bricks. I really felt that she expressed perfectly my concerns about over structuring organisational life, which hinders spontaneous and social conversations. She had a beautiful way of describing that we need to look underneath the surface of organisational communication. I wrote in my notes at the time, "De-load the term 'chit chat'. Feel exhilarated thinking about this."

Reflections on this Stage

At the time I noted down that it felt slow and very individual. Looking back, I'm amazed at how quickly I went from our first course meeting to a finished SLR protocol. I really valued exploring my ideas with course-mates, my supervisors, and friends. I need the connection and the process of verbalising my thoughts. It was a boost to my confidence when I found a series of relevant articles, otherwise it felt like you couldn't find anything and it could feel overwhelming with all the possibilities. I also felt more confident and motivated when ideas started to form pictures in my mind and when I could put them down on paper.

In Spring 2018, I changed my approach to the time I could devote to my professional doctorate. I was extremely busy at work and we were moving house. I initially had put the pressure on me to do 7-8 hours a week and would feel bad when I couldn't. I reframed this to 'every little helps' – even an hour is an hour further forward. This made me much more positive. I also let myself relax more into the process and goals set by the Course Directors. I was moving forward so I didn't worry too much about whether I could or couldn't do the next stages yet; I'd get there.

There were one or two moments of real exhilaration during this stage when things came into sharp focus. Often chance conversations with people were instrumental, which illustrates my central thesis: informal conversations, particularly those about non-work topics, are vital to success at work. In coaching this would be called a parallel process. It was a surreal experience in the moment. These conversations are where creativity exists. It was important to me to keep talking to a wide range of people – even those who might not be an 'expert'. Most people works, everyone talks to people, everyone build relationships. The chance insights they offer can help.

If I were doing this stage again, I would not worry about the amount of time I'm studying each week, I would enjoy the random reading more, and I would not worry about how I was going to turn it all into an SLR protocol – just trust that I would get there.

THE SYSTEMATIC REVIEW: DEVELOPING A PROTOCOL

Timelines

Between October 2017 and January 2018 I was spending about 3 – 5 hours a week on my professional doctorate. I read widely, just letting my interests wander down rabbit-warrens and talking to anyone who would listen about it. In January 2018 my SLR protocol was starting to take shape. I took a three week break in February 2018 to go on holiday and we were buying a house. I finalised my SLR protocol in March 2018. It felt great to have achieved this deliverable and really understand the process for doing the SLR. Little did I know that understanding the process was entirely different from the practicalities of doing it.

Challenges

I didn't really know what a SRL was or how to do it. I spent time reading examples and using the academic databases to understand what the process would mean in practice. I noted down at the time that I thought the structured process fits my logical thinking approach and how I structure my work. Therefore, I felt optimistic about doing the actual review when it came to it.

It really helped me to think of the SLR as a traditional research (data gathering) project where the articles were the participants. I 'got' what it meant to do the data extraction stage – that was akin to the participants completing a questionnaire. I also clung onto the hope that even if I get 1000s of results initially that the final number of SLR papers will be much fewer.

Deciding the search terms, databases, and inclusion/ exclusion criteria was not initially too challenging. My first draft of my protocol from January 2018 is similar to my final version two months later. I had identified alternative terms for social conversations at work from my general literature reading (see **Annex C**). I selected the three most common psychology databases. I decided not to include Web of Science because a preliminary search generated 10,000s of returns, which were nearly all irrelevant because they came from all scientific disciplines. I set my inclusion criteria deliberately broad to try to include as much as possible given the

limited research available and the inconsistency of the terms used. Unfortunately, my decisions on search terms and criteria caused two challenges later on during my actual search.

- Inclusion/ Exclusion Criteria: In approximately May 2018 after abstract review it became clear that too many irrelevant papers were being included. These papers were typically about general interaction, communication, or social support at work, rather than specific to social conversations. Therefore, I decided to refine the inclusion and exclusion criteria and conduct a second abstract review against the expanded criteria.
- Search terms: In approximately June/ July 2018 when I was at the full paper review stage (i.e. nearly finished) I found another relevant term ('small talk'). I was so tired of doing the searches by that point that I just wanted to ignore it. But I knew that it would annoy me to know that I was potentially missing out on relevant literature and my SLR was incomplete. So I re-ran my database searches using this term.

My final challenge in developing my protocol was writing my rationale succinctly and tightly enough so the argument flowed. I had gathered a lot of interesting and useful material in my initial reading of the literature, which was relevant and I wanted to use. It felt like it took me a long time to finesse the background section. However, I'm glad that I started out with a much longer document, because this turned into the introduction for my SLR report.

Reflections on this Stage

It was extremely helpful to have a structured protocol template to use. Without it I would not know where to have started. This really helped structure my thinking and hone in on exactly what I wanted to address. I realised that there was likely to be so little research and what I had found used very different methods, that a more general SLR was needed. I wanted to bring together what we knew about the nature of social conversations at work, the outcomes that have been investigated, what predicts people's involvement, and any barriers to employees' involvement in such conversations. From this I would be able to better identify the gaps, which would help me plan my primary research project.

In hindsight, I wish I had included 'small talk' in my search terms and the narrower inclusion/ exclusion criteria from the start. Re-doing my database searches and abstract sift took a lot of time and was very demotivating. Annoyingly I had come across the New Zealand study that prompted me to include 'small talk' early on in the process, but had forgotten about it.

THE SYSTEMATIC REVIEW: CONDUCTING SEARCHES

Timelines

I did my three database searches between the middle of March to the middle of April 2018. They took me about three hours each to do and export into RefWorks. From then on it took me hours (approximately 10) to combine the separate RefWorks folders into one folder, run the de-duplication check, and export the 13,083 titles into a spreadsheet. From May – July 2018 I conducted the title, abstract (x 2), and full paper review stages. In July I did my 'small talk' database search. In parallel, I wrote my method section.

Challenges

On the one hand this stage appealed to my preference for structure, but on the other hand it was very repetitive and boring. I remember feeling that I wasn't 'doing' any psychology and that it was taking a long time. I didn't expect it to feel like that. I thought that the searches and inclusion/ exclusion process was the 'main' part of the SLR. It was only as I moved on into the data extraction and report writing that I realised those were the main parts. I found those a lot more enjoyable.

I also had a lot of technical trouble – possibly because I had so many titles to export. We had to toggle between using old and new RefWorks and it was extremely slow at handling such large volumes of results. I did my searches in old RefWorks, but we were told that the newer one would be better at de-duplicating so I exported all my titles into new Refworks. It didn't seem to work the first few times, but I left it overnight and everything transferred. Then it took ages again to combine my three separate folders into one folder. I chose to do some of these extra stages, because

I was worried about losing my search results, but the processing speed of RefWorks was very limiting.

I also had technical problems exporting the de-duplicated list out of RefWorks into another file that I could use to record the inclusion/ exclusion decisions. In the end my husband helped me create an html file and from that an Excel spreadsheet. It was happenstance that we used a spreadsheet, but in the end I found it invaluable. I had columns to for my decision, the second reviewer's decision, and the moderator's decision using 'true' and 'false' operators. The other two reviewers felt that recording the decisions in the spreadsheet added in a step, when they could have just been recorded in highlighted text in a Word document. However, I liked the functionality of a spreadsheet to count the number of 'trues' and being able to easily see across a row where a discrepancy was to highlight that row for moderation. I have gone back to the spreadsheet so many times especially when I had to add in a new 'small talk' search and did a second abstract sift. I would have found it hard to reconcile the numbers at each stage by the end. I know that all the data for my SLR review decisions are in one place rather than multiple Word documents.

Reflections on this Stage

If I were doing the search stage again, I would know how long and boring it will be and I'd better prepare myself for it. I wish I had spoken to course-mates more during this time. It felt very isolating and like we were all just heads down trying to get through it. We seemed to all share the same problems with RefWorks, which would have been good to discuss together.

I did actually enjoy the surprise element of seeing if the second review and the moderator came to the same conclusions as I did. I felt that my application of my inclusion/ exclusion criteria improved. I learned a lot about the practicalities of doing an SLR and have a new found respect for other people who have done them. As explained above, I had to do another database search and a second abstract sift. That extended my process and was challenging to remain motivated. But it was the right thing to do and I'm glad I did. I realised that I had become very attached to my research and wanted to do the best I could.

I was happy to move on to extracting data from my final 12 studies. Although it did take me a long time to do this part. This is because the papers varied considerably in their style and layout, which made it hard to easily find the right information. I remained positive by focusing on achievements of 'getting through' half a paper or a full paper. Eventually I got through them all, which was very satisfying. By the end, I definitely felt that I was better at identifying the relevant information, critiquing the study, and summarising the main points. My data extraction spreadsheet has been extremely useful as I've written up the SLR report to check the source data.

THE SYSTEMATIC REVIEW: ASSIMILATION AND WRITE UP

Timelines

From July to October 2018, I extracted my data, wrote my introduction, results, and discussion, and then brought all the sections together to review my final report. I was probably spending 10 hours a week on my studies. My introduction was largely done from my earlier work on the SLR protocol and I'd done my method section in parallel to the database searches. In July 2018 I got a new job, which I will return to in my reflections.

Challenges

Writing the results section of my SLR was fun and interesting, but also extremely hard work. There was so much data and it was hard to know where to begin. I started off relatively confidently and was creating tables and describing the results, but I knew I was picking off the 'easier' aspects. I was avoiding the key findings from the 12 papers, because I couldn't really see how to bring them out. I did find it helpful to just start grouping the data into tables and moving the content about.

I knew I wanted to bring out the variety in the papers – in terms of the social conversation at work term they had used, the methods, and the range of academic backgrounds that they had come from. I had a feeling that the academic background explained some of the methodological variation. In the end, I took out the academic background of the authors, but doing it in the first place helped me shape my thinking

about the study methods. In the tables, I first I tried to bring out the aims and the variables investigated together, but that didn't work well and was too big. I then had a large table of just the variables. Through discussion with my supervisors I began to see the features that would work together. I opted for more ticks/ crosses than narrative tables, which seemed to work well.

I was really struggling with a huge table on the variables investigated and the findings. At the end of September I had a light bulb moment. The only data that I needed to report was about social conversations at work. The rest of the variables/ findings were not relevant to my SLR. It sounds simple and silly to say now, but when I realised that something clicked in my brain. Within four days I had done the three key tables and brought my introduction, method, results sections together. My key tables captured the social conversation variable, participants, method, and findings. I separated out the direct findings about the nature of social conversations from the outcome and mechanism (mediator/ moderator findings). This worked lent itself to a mixture of narrative with a few small tables and a couple of larger tables. I was particularly pleased to be able to group the findings on social conversation topics into a tick/ cross table – finding the commonality between the studies, which I hadn't originally been able to see.

My final challenge from this stage was writing too much. It felt wonderful to bring all the individual sections of my SLR report together for the first time. It was a great achievement. But unfortunately, it was too long. Over the following 3 – 4 weeks I reviewed the entire document and cut it down. I found this very hard to do.

Reflections on this Stage

This stage was the one filled with the most highs and lows. It was initially so hard to see the patterns in the data and the story that I wanted to tell. But chipping away at it combined with a major light bulb moment enabled me to make progress. I felt such a sense of achievement bringing my whole SLR report together. I had been working in separate Word documents for the introduction, method, and results sections. It had also been a while since I had read my own introduction. I was pleased that it did all flow from top to bottom. Once the results section was done I found it relatively easy to write the discussion. The ideas often just need time to marinade in my brain

and then they pop out and I can write something down. I have learned to trust that process a little bit more.

Finally, as I mentioned, I got a new job in July 2018 just as I was starting to write up my report. I found the volume of work and trying to combine it with my studies very overwhelming. I was committing a lot of my evenings and all day Sundays to the SLR report, which required a lot of support from my husband. It felt like I was doing a part-time job on top of a demanding full time job. I was definitely close to tears some times. The support and encouragement from Jo and Rachel was invaluable. They knew just when to say that I could put one thing to one side and helped me focus on what I needed to do.

RESEARCH STUDY: DESIGN

Timelines

For approximately four weeks from the end of September to the end of October 2018 I worked on my research proposal. I finished it on the 2 November. This time overlapped with writing up my SLR report. I found it useful to do the two in parallel. The conclusions I was drawing about what the literature-base said and what its gaps were helped me to shape my research study. During November and December 2018 I developed my questionnaire items, wrote the draft text for emails to send to participants during the study, designed the resource packs for the Intervention Group and Control Group, and designed the volunteer recruitment flyer. I also submitted for ethical approval in November and had a response in late December. I made amendments in early January and final approval was received almost immediately. Everything was ready for when I started to recruit volunteers after clearance was received,

Challenges

i. Research Proposal

It took five or six iterations to finalise my research proposal. The early drafts of my proposal largely repeated the conclusion section from my SLR report. One of the

key challenges I found was to step away from the SLR detail to focus on the gaps in the literature and where I wanted to add a unique contribution. It was useful finishing the SLR report first before I could finalise my research proposal. It was also challenging to turn the ideas into a coherent, logical argument thread – how one idea linked to another – especially as some ideas didn't feature in my SLR (e.g. loneliness).

I also focused too heavily on critiquing the methodologies used by the 12 SLR studies. I wanted to fill too many gaps that their issues left. Feedback on an early version of my methodology was that it included two or maybe three studies and it needed to be much tighter. I had suggested an intervention study and also including an element of a diary study. I wasn't clear whether the diary study was part of the intervention or itself data to analyse, which would have been extremely challenging as well as survey data. Looking back now, I can see how unfeasible this was. By developing the proposal I identified that I was really interested in an intervention study – can people be encouraged and supported to increase their social conversations at work, and does this increase positively impact outcomes? I focused my study design on an intervention study with a Control Group.

ii. Variables

Another challenge was getting the high-quality working relationships variable right and the associated measurement scale. The author Jane Dutton is a key name in research in this area. However, there confusion on the papers by her and her colleagues about terms, i.e. positive relationships at work (e.g. Ragins & Dutton, 2007) or high-quality workplace relationships (e.g. Heaphy and Dutton, 2003; Carmeli et al., 2009). Heaphy and Dutton actually talk about connections within the context of work and careers, which are fleeting/ momentary, whereas I was more interested in something more enduring. There does seem to be a huge conceptual overlap between the two, which is further suggested by the fact that it is the same researchers collaborating on the papers. This exploration helped me clarify that I want the relationships to be ones at work/ with work colleagues, even if the conversations that contributed to them are about non-work topics. This enabled both a social-based independent variable (social conversations at work) and a work-based dependent variable (high-quality workplace relationships). I finally decided to

use the measure of high-quality workplace relationships developed by Carmeli et al. (2009) - one of the co-authors is Dutton.

The other variables didn't have the same level of ambiguity and identifying associated scales was easier. There was only one empirically developed scale of loneliness at work and I combined the scales from two studies to measure team performance. Given the limited literature on social conversations at work (as identified in my SLR), there were obviously no relevant scales. I used some of the introductory text from one previous study, but created bespoke questions for the questions on social conversations at work. I found this quite an enjoyable process. The gaps in the literature led to identify which areas I wanted to focus on.

iii. Resource Packs

I spent a lot of time during November and December 2018 developing the intervention for the Intervention Group and the active-control for the Control Group. Whilst the task for the Intervention Group is simple to say/ write – have more social conversations for two weeks – I knew that this task would be easier for some people than others. So I decided to create an e-learning-style resource pack using PowerPoint to give people guidance, support, and ideas on how to achieve this task. This was reasonably technically challenging for me to embed all the hyperlinks, make the icons for different buttons, and inserting text boxes that could be completed on screen. It also took a lot of time and helpful feedback from a colleague on the course and my husband to get the look of this pack right. One of the points of feedback was that the task was entirely about making a connection with people, but the pack felt cold. I introduced cartoon images of people and changed the colour scheme. This all seemed to help. I was careful to choose online resources, e.g. TED talks, internet articles, that were simple and gave specific advice. If there was a choice, I also opted for resources by psychologists or researchers to add face-validity.

It took some thinking to get the task for the Control Group right. I knew it couldn't involve talking to colleagues, but I wanted it to be plausibly related to building high-quality working relationships (the premise of the research that I told volunteers). I had the idea of a social network analysis – somehow mapping people's workplace

relationships. I started to explore proper online social network mapping tools, but these all rely on members of a network completing a questionnaire. The data are plotted to form a map with connecting nodes. This seemed much more complicated than I needed and would involve colleagues talking. I somehow found a coaching tool, which I adapted and added reflection questions. I was happy with the final mapping tool, and both the interactive packs for the groups.

Reflections on this Stage

There was a lot to do during this stage to be ready to gather data in March 2019 (see next stage). I had to develop the research proposal first. I found it hard to focus my study design at first, but once I had finished it everything else flowed well from it. From that point I had to do several things to be ready to recruit volunteers: questionnaire items, draft the text for the emails to send to participants during the study, ethical clearance, design the resource packs for the Intervention Group and Control Group, and design the volunteer recruitment flyer. I found it helpful to create a project plan for the whole empirical study process. I set a target of completing data collection by April 2019 and allowing for a complete break on holiday in February 2019.

Working backwards from April concentrated a lot of activity between November and December 2018, but I really enjoyed a lot of it. I also found the ethical clearance process speedy and helpful. I have done a lot of questionnaire design in my career and enjoyed planning my questionnaire – both researching different scales, creating my own items, and deciding on the order. I will talk about my experience of using Qualtrics below. I loved developing the resource packs for the Intervention Group and the Control Group, including developing the social network mapping tool. I enjoyed the creative side and incorporating psychology-based techniques (e.g. goal setting, competitive games) to make a useful and user-friendly toolkit. It was invaluable to have the input of a colleague on the course and my husband – their critical eyes really improved the products. There were some technical challenges, e.g. making the hyperlinks and buttons in the slides, creating text boxes and tick boxes for completion in PowerPoint slideshow mode, and testing links worked on government IT systems. I'm very proud of the final resource packs.

RESEARCH STUDY: GATHERING DATA

Timelines

I gathered data in March 2018. The time 1 survey went out on 4 March for five days, then the two week intervention period, and the time 2 survey went out on 25 March for five days.

Challenges

The main challenge for this stage was learning how to use Qualtrics. I had only ever designed surveys for paper and pencil distribution. So whilst I felt very comfortable designing the items, I had never used such a sophisticated online survey platform. Most of it was intuitive, but creating skip-logic and setting up email distribution was new. I enjoyed experimenting with different question layouts. I purposefully used a variety of layouts to add variety to the survey. The feedback from the pilot stage specifically complimented this aspect. For the question about conversation topics I decided to use a drag and drop format. I really liked the way it looked. However, when I worked through each question I realised that if a respondent dragged all 11 topic options into either 'never' or 'don't know' then the subsequent questions about their social conversations at work over the last two weeks wouldn't apply to them, because they had effectively said they hadn't discussed any social topics in the previous two weeks. It took me a long time and several discussions with Qualtrics tech support to figure out the skip-logic for this question. It involved me working out a lot of 'if/ not' logic processes. It was great achievement when it was finally working. I don't think the challenge was particularly due to the drag and drop layout, it would have been the same for a normal Likert scale layout, but it was the former that made the need for it obvious.

The time 1 questionnaire was distributed fine. There were a few errors in the emails data file that I had uploaded to Qualtrics, which meant some emails didn't get through. I was able to set up separate distributions for these participants and learned how to check for these errors for my time 2 questionnaire. I was really impressed that Qualtrics downloads all the distributions sent out for one questionnaire together in a single datafile. Downloading the data was easy. It took some time to clean the

data file and recode text answers to numerical values, but it wasn't difficult. Something went wrong with the time 2 distribution. I checked the email several times, but something within it became corrupted and it was sent out to participants without the embedded survey link. With the help of Qualtrics tech support I was able to identify the issue and I just re-sent the distribution, apologising to respondents for the second email. Given that I had approximately 50 emails telling me that the link was missing I thought it boded well for their level of commitment to completing the survey.

Recruiting volunteers was a challenge at this stage. I asked volunteers to email my Kingston email with the subject 'join in', the name of their organisation, and the name/ location of their office. I had originally planned to recruit from my current organisation and my previous organisation – neatly splitting them into the Intervention Group and the Control Group. I reasoned that people would be most willing to engage in research conducted by someone they knew/ a name they recognised. I had approval to recruit within my current organisation almost immediately in early January and volunteers were slowly coming in. I did a couple of pushes during January and ended up with 76 volunteers from my organisation. Unfortunately, the senior leader who I contacted in my previous organisation was very busy and then went on holiday. By the start of February 2019, when I went on holiday, I had written-off access in my previous organisation.

The 76 volunteers from my current organisation was great, but if I put them all in the Intervention Group then I wouldn't have enough in the Control Group. So I explored how I could randomly allocate groups, e.g. alternating allocation in order of volunteering, but putting members of one office in the same group. This wasn't satisfactory, because people within an organisation (even outside the same office) could talk to each other and contaminate groups. So I had contacted two other organisations to gain access. Permission was slow to come in, but eventually did and generated volunteers. By the time of my holiday I was a little worried about the numbers and spent my holiday wracking my brains for other senior contacts across government. I identified three other organisations and quickly prepared recruitment information for them. Two of the organisations agreed. On advice from Rachel, I extended my recruitment window until early March and delayed my time 1

questionnaire from mid-February to mid-March. This delay didn't actually impact my aspiration to collect all the data by April.

When I got back from holiday at the end of February I had an unexpected email from my previous organisation – the senior leader had agreed to allow me to recruit. I prepared recruitment material within an hour and that afternoon her secretary emailed it to contacts in the entire organisation for distribution to their teams. I set a short response deadline for volunteers, but quickly had more than enough. In the end I had 152 volunteers, which I was pleased with. It was stressful in early March and meant I had to keep the volunteers who had signed up in January engaged, but generated a respectable number of volunteers in the end.

Reflections on this Stage

It was challenging to recruit a decent number of volunteers and I was almost too focused on my project plan and the time 1 date I had set myself. It was good advice from Rachel to delay it and keep pushing on volunteer recruitment. Without doing that I would have already distributed my first survey whilst on holiday and would have missed out on the rich source of volunteers via my previous organisation. The problem with the questionnaire link in the time 2 email and making the skip-logic right were annoying, but eventually resolved. I feel like I have really learned a lot about using Qualtrics and the importance of repeated pushes to secure volunteers.

RESEARCH STUDY: ANALYSING DATA

Timelines

By early April my data collection was completed. Over the next two weeks created my combined dataset in Excel. At the end of April I was able to start exploring the data. At this point I started a separate stats diary. I finished all the analysis on 5 July 2019. It took a long time to understand how to address missing data and then finalise my analytical approach, then there were a few wrong turns in running the analyses, I also had to learn two new statistical programmes, and I did a lot of reading about statistics.

Challenges

Creating the combined dataset in Excel involved recoding the text data downloaded from Qualtrics into numbers, linking up participants' T1 and T2 data, and reverse coding relevant scale items. I realise now that Qualtrics would have done some of this for me and some of these tasks would have been easier in SPSS, but I was very daunted at the time about even opening up SPSS and felt much more comfortable using Excel. However, figuring out how to do it all in Excel really helped me understand the dataset and connect all the data columns with the corresponding questionnaire items. It was then straight forward to copy the data from Excel into SPSS and label the variables.

Once I moved over to using SPSS it opened up a new challenge – (re)learning how to use SPSS after 15 years. I couldn't remember how it worked, the layout, or how to use the syntax window. I was nervous about using it initially, but diving straight in with the help of a textbook and YouTube videos has increased my confidence and competence. I began to be able to spot little things that just didn't make sense with my data – especially when compared to what I'd learned through using the Excel file. For example, the compute variable function, 'sum' adds all valid data points (skipping over missing points) and will return a value in the new variable column. Unless you know it has done that you might make erroneous judgements about one person's scale score being greater than another person's when they didn't actually answer all the items. The '+' function, however, returns a blank in the new variable column if any of the data points are missing. Another example is the importance of assigning missing variable codes in SPSS otherwise the descriptives or scale scores aren't correct.

I spent four weeks trying to get to a point where I could run my main analyses. This was extremely frustrating and very challenging to understand some new, complex concepts. First, I spent a lot of time exploring my missing data in my five key variables. I read extensively about missing data, how to analyse the patterns, and what action to take on it. This became quite confusing as there is conflicting advice and I spent many hours trying new things including running a lot of Little's MCAR tests. Eventually I read about SPSS' multiple imputation method and decided to use it. The newer advice suggests it is a superior approach to other techniques for

addressing missing data (e.g. Tabachnick & Fidell, 2013; van Ginkel, Linting, Rippe, & van der Voort, 2019) – see the results section of the empirical study for more information. MI unfortunately proved really hard to get to run – there was limited advice available about the parameters to set in the function. I finally got it to work – the key was to change the variables’ roles within the MI model to ‘impute only’.

Eventually I had a MI dataset I thought SPSS would be able to use it easily. This did not prove to be the case. The first indication that it wasn’t straight forward was when I tried to review the linearity, normality, and outliers of my outcome variables. Mahalanobis distance for outliers identified different outlier variables for different imputed datasets and didn’t do it for the pooled data. This left me very confused about which cases were outliers. Another indication was when I calculated scale means. SPSS will do this on MI data, but does not generate SDs on the pooled dataset, only on the original dataset and the five imputations. I knew eventually I would need to run a variation of a (M)ANOVA for my proper analyses. SPSS has a little spiral symbol for the functions that can work on the MI dataset and generate a result on the pooled data. But even when it has the symbol, it doesn’t always run the required statistical test on the pooled data. MANCOVA has the symbol, but doesn’t run the test on pooled data. SPSS doesn’t seem to handle MI datasets very well. So the only solution to that was to create a pooled dataset, which just looks like a ‘normal’ dataset to SPSS. This is not easy to do. Thankfully, I found an invaluable YouTube video ([link](#)). Using it, I created the pooled dataset and re-ran my checks on the data and could start my analyses.

Another challenge at this stage was deciding on the correct statistical tests to investigate my research questions. The reading I did on assessing data assumptions led into exploration on what to do about them. Andy Fields recommends using more robust analyses through the R plug-in for SPSS and downloading R packages within SPSS. This made a lot of sense, but opened up the need to understand a new statistical package, R, and the challenges of correctly downloading the plug-in and packages. The statistical advice from my third supervisor was invaluable throughout this time. I decided to use mainstream SPSS analytical tests, but did end up learning how to use AMOS and PROCESS during my analysis. I have watched a lot of YouTube videos and read a lot of statistical theoretical papers, and example intervention studies, to up-skill myself in this area.

Reflections on this Stage

I needed to have a lot of certainty on what the correct next step was before taking it. Unfortunately, a lot of the advice is contradictory and subject to personal opinion of the statistician writing it. Therefore, it comes down to your own judgment, knowledge of your dataset, and understanding of your subject area. My confidence in making these decisions grew over the time. I also found the practice of keeping my stats diary, making new dataset version, and recording all output and syntax in a Word document really helpful. It meant I could unpick the decisions I had made, understand the variables that had been used to create output, and cut and paste syntax into a new syntax window to re-run it without using the SPSS menus. During this stage I was very frustrated at how long everything took. Running analyses in SPSS seems to take longer than anticipated and I hadn't factored in time waiting for advice. On reflection, I was unrealistic in my expectations, but I do feel like I lost about two weeks getting MI to run and then re-running analyses on the pooled data. It then took a lot of time to finesse my analytical approach, run the analyses correctly, and re-do them when I had gone wrong. I also found it surprising how interested I was to get it right, do more than the bare minimum, and really understand my dataset so I could do right by the participants who had given me their time. I'm very proud of much more confident I am in analysis and using statistical programmes. If someone had told me just a few months ago that I would have learned to use SPSS, AMOS, and PROCESS I would not have believed them. I am also impressed at my ability to spot things that don't make sense in my approach and self-correct.

RESEARCH STUDY: WRITING UP

Timelines

I wrote my introduction, method, and limitations sections at the end of April/ early May 2019, before I did my statistical analyses. I wrote my results section up between mid-May and early July. I wrote parts of it (e.g. the preliminary analyses) and the descriptive content for research question 4 as I completed it. I added more sections as more analyses were completed. The results section built up over six or seven weeks and was a constant work in progress as I corrected mistakes and conducted

new analyses. The main content of the discussion section was quick to write – over two days in early July once all the results were completed. I had a complete first draft of my empirical study for review ready on 6 July 2019 and it felt amazing. By this point, I had received feedback on several versions of the introduction, method, and results sections, but some of the content of the results section and the discussion section was new.

Challenges

I found writing most of the empirical study relatively straight forward and enjoyable. It did take a few revisions to get the storyline completely straight in my introduction and explain the intervention approach. But the content was there, it just needed a cleaner flow. I found the very structured and standardised way of writing up a results section very hard. I had to re-learn some of it and learn some from scratch, because some of my analytical techniques were new to me. I had to do a lot of research on how to write up those elements.

I also needed to find a clearer way to sign-post the reader through my results section, because there is a lot of information in there. It was important to me to show the depth of preparation I had done in the preliminary analyses, but this section needed to be clearly differentiated from the main analyse. My third supervisor helpfully advised me to start off by describing my analytical approach, sign-post throughout the preliminary analyses, and simplify the main analyses sections to the findings (because the description of what was done is in the analytical strategy). I was pleased with the flow of the results section in the end.

Reflections on this Stage

By the time I'd finished the first complete draft of the empirical study it felt like I'd written the introduction and method so long ago. It was over three months earlier. I felt like I'd been through an ordeal getting my statistical analyses right since then that time had stretched out. I enjoy writing the narrative sections more than the results sections, but equally I have a lot of satisfaction from my completed results section. It wonderful to be able to confidently explain what I've done, the choices I'd made, and demonstrate how far my learning has come in just those three months.

OVERALL DOCTORAL PROCESS

The professional doctorate has been an incredible learning experience – more so than I thought. I have a richer understanding of all stages of the research process and the challenges of crafting two tightly-focused projects (particularly the empirical study) that are generated from the literature base. I've gained a strong understanding of the literature about social conversations at work, but also many other related areas, e.g. loneliness, human relationships, language and our evolutionary history, and the physical organisation of work and workspaces. I can talk confidently about these areas – drawing up key facts from the literature. I have also learned very practical skills in using research databases, statistical tests and packages, Excel, Qualtrics, interactive PowerPoint presentations. I think I expected to get those skills, but I didn't appreciate the depth of experience I'd get. It became clear to me how deep I've learned those skills when I designed a randomised controlled trial for a wellbeing intervention at work. I used everything I learned on the professional doctorate to do that and it was so satisfying to know what I was doing was right and having the courage of my convictions when challenged.

As well as being able to directly apply my learning to deliver research projects at work, the doctorate has changed my practice in a number of other ways. I've been more challenging about the evidence I offer to support my ideas and also more challenging of the evidence I will accept from others. At the end of the professional doctorate my role was leading our learning and development function. I am constantly told that someone has identified a learning gap and we must develop training immediately. I challenge where they have got their evidence, ask more targeted questions to help them identify the key issues, and bring together other insight to give a more rounded picture. I am also able to explain what makes good evidence, support people to develop useful evaluation metrics, and bring in relevant literature.

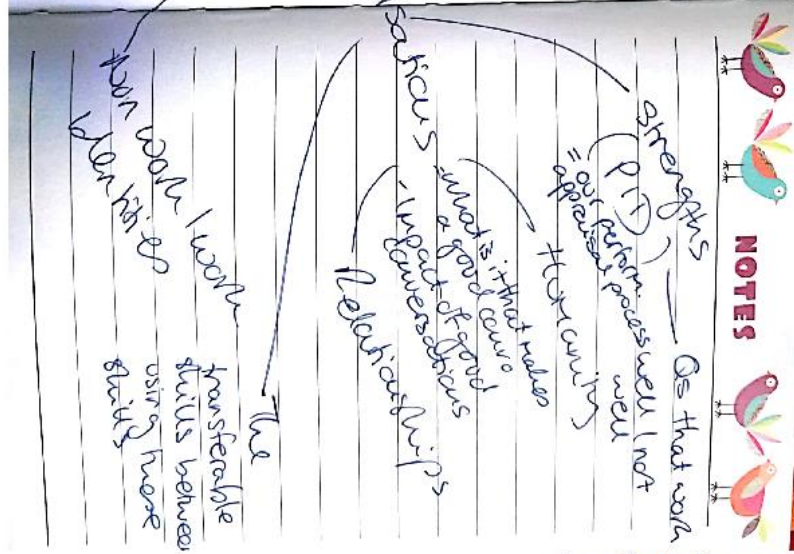
Overall, the most useful and rewarding element of the process has been realising how far and fast I can push my own learning. Even when I really didn't think I would ever 'get something', e.g. how to make the research databases work, how to synthesise 12 studies for my SLR, how to do my statistical analyse, I did eventually get it through patience, being systematic, and doing some more research. I've also

found YouTube is an amazing resource. I'm incredibly grateful for all the statisticians who make 'how to' videos. I have found my natural style of being very organised and logical – documenting along the way – incredibly helpful. It did sometimes feel laborious, but there were also so many times when I had to unpick what I had done that my notes helped me retrace my steps and understand the new path

It really is incredible how much you can achieve in essentially evenings and weekends. I work full time so there isn't much 'spare time' to go around. It's important to call out, achieving this doctorate does entirely rely on having a support network. I would not have had the time to do it without the support of my husband taking on my share of the childcare and household responsibilities so I could study. He's been a constant source of encouragement. I've been extremely touched to hear how positively he's spoken with our daughter about "mummy's science" and "mummy's studying". We've used it as an opportunity to promote women in science, the importance of hard work, and the enjoyment of learning.

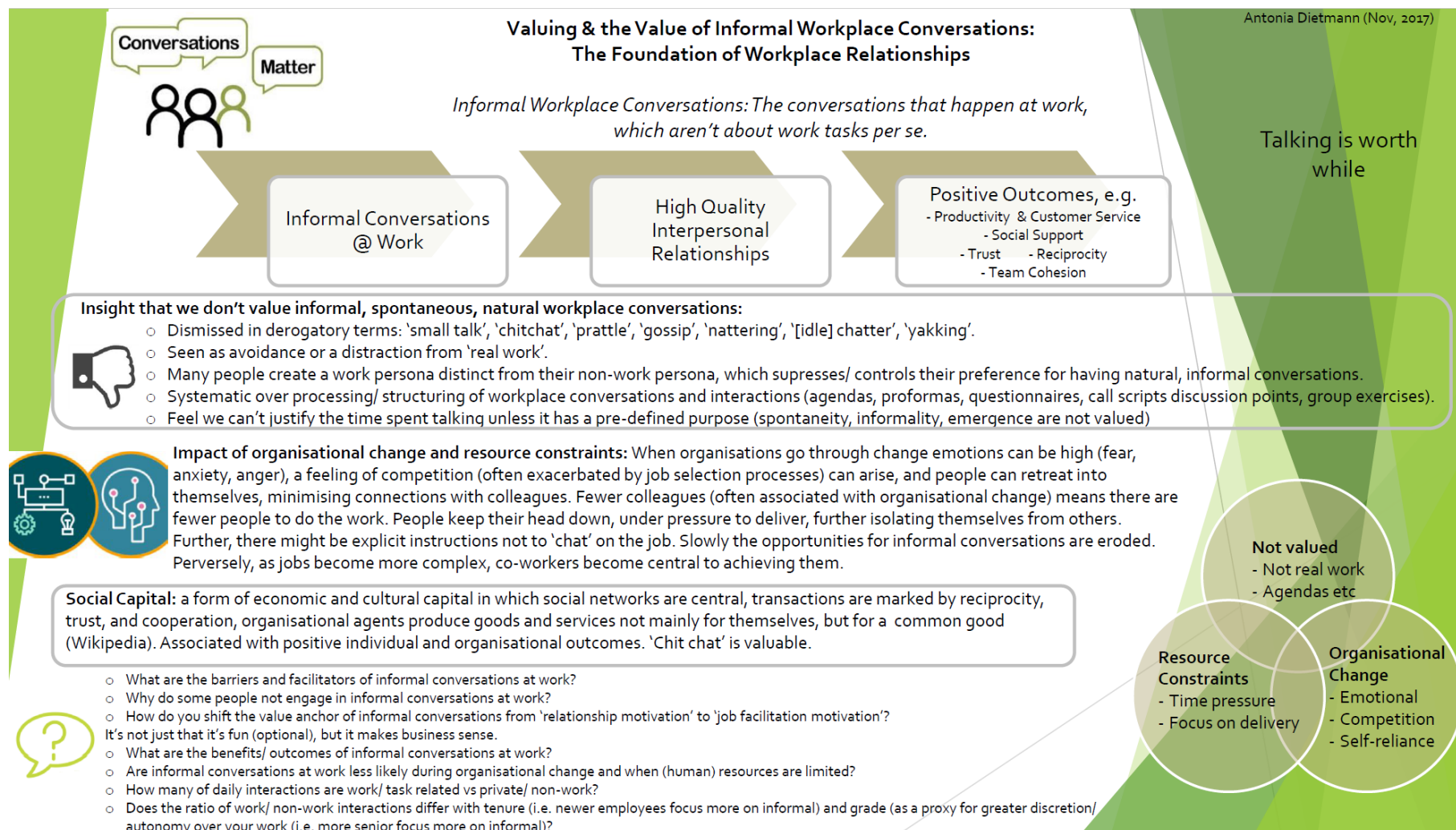
Whilst it is amazing how much we've all achieved in just two years, there is a weird distortion of time that has happened during this period. There were times when progress felt incredibly slow, when I was making just incremental decisions and doing lots without a lot of written output to show for it. Getting the SLR spreadsheet right and the statistical analyses both felt like that. Early on in the doctorate I decided that any small step, any small amount of time I can work, is all a bit forward. So I wouldn't be too hard on myself if I hadn't been able to dedicate several hours – something was always better than nothing. I also decided early on to trust the process that Jo and Rachel had designed. If they said, try something next or deliver something else then I just went with it. I just kept following the master plan and the processes, and eventually I've finished. These two would be two of my three pieces of advice for subsequent cohorts: 1) A bit forward is still forward – don't be too hard on yourself. 2) Trust the process. And 3) You need the agreement and support of those closest to you – especially of those you live with.

ANNEX A: MIND MAP 21 (SEPTEMBER 2017)



Scanned by CamScanner

ANNEX B: INFOGRAPHIC OF RESEARCH AREA (NOVEMBER 2017)



ANNEX C: BRAINSTORMING SEARCH TERMS (FEBRUARY 2018)

THOUGHTS
Terms Continued

Jobs with high social intensity

Social vs Task Interactions

Workplace social inclusion (social capital literature)

Informed conversations

THOUGHTS

Small talk
chance interactions

workplace social inclusion

Free-flowing conversations

Casual conversations

THOUGHTS
Terms Related to Conversations & Relationships

Private Interactions

Social Interactions at work

Non-work conversations

Water cooler conversations

THOUGHTS

Lateral relationships (co-workers)

Interpersonal interaction

Relationship Motivation vs. Job Facilitation Motivation

Social exchange theory
athletes
family managers